

TABLE 5-1
Groundwater Data Of Select Wells Within Potential Scour Area Inboard Area
Hamilton Army Airfield BRAC Property

Well Identification ►	WQG 08/ 2000 mg/L †	RMP 1999 mg/L‡	BKG-MW-2 mg/L	BKG-MW-4 mg/L	BKG-MW-5 mg/L	RV-MW-101 mg/L	RVT-MW1 mg/L	RVT-MW2 mg/L	RVT-MW3 mg/L
Chemical ▼									
INORGANICS									
ALUMINUM				6.0	12.4	<0.112U			
ANTIMONY				<0.06U	<0.06U	<0.06U			
ARSENIC	0.036	0.00195	<0.005U	<0.005U	<0.005U	0.00728	0.0067	0.0068	<0.005U
BARIUM				0.047	0.042	0.0705			
BERYLLIUM	0.0088		<0.002U	0.0022	0.0027	<0.00112U	<0.002U	<0.002U	<0.002U
BORON			0.97	1.5	1.7		0.83	0.76	0.85
CADMIUM	0.0093		<0.005U	<0.005U	<0.005U	<0.00678U	<0.005U	<0.005U	<0.005U
CALCIUM				101	127	230			
CHROMIUM			<0.01U	0.011	0.026	<0.0168U	0.048	0.066	0.013
CHROMIUM (VI)	0.05					<0.025U			
COBALT			0.066	0.11	0.16	0.0309	0.024	0.013	0.012
COPPER	0.0031	0.0042	<0.02U	<0.02U	0.021	0.489	0.024	0.032	<0.02U
CYANIDE	0.001					0.0126			
IRON				5.9	11.1				
LEAD	0.0081	0.00129	<0.0032U	0.0084	0.0051	0.00823	0.007	0.0077	<0.0032U
MAGNESIUM				148	241	680			
MANGANESE			3.8	6.1	10.3	1.05	2.2	0.98	1.3
MERCURY	0.00094	0.0155	<0.0002U	<0.0002U	<0.0002U	<0.0001U	<0.0002U	<0.0002U	<0.0002U
MOLYBDENUM				<0.02U	<0.02U				
NICKEL	0.0082	0.0082	0.47	0.66	0.88	<0.0321U	0.11	0.079	0.058
POTASSIUM				53.8	69.9	201			
SELENIUM	0.071	0.00009	<0.005U	<0.005U	<0.005U	<0.00253U	<0.025UJ	<0.025UJ	<0.005UJ
SILVER		0.0000110	<0.01U	<0.01U	<0.01U	<0.01U	<0.01U	<0.01U	<0.01U
SODIUM				524	914	4500			
THALLIUM				<2U	<2U	<0.125U			
TIN				<0.1U	<0.1U				
VADIUM			<0.01U	<0.01U	0.021	<0.0276U	0.04	0.057	0.012
ZINC	0.081	0.0063	0.086	0.16	0.21	<0.018U	0.071	0.093	0.043

† Water Quality Goals (WQG), Values are 4-Day Average Continuous Concentration for Salt Water Aquatic Life Protection in Enclosed Bays and Estuaries, California Toxics Rule Criteria (USEPA) A Compilation from Jon B. Marshack, D.ENV, California EPA, Regional Water Quality Control Board, Central Valley Region.

‡ Regional Monitoring Program (RMP), Total values collected in 1999 from Station BD20 San Pablo Bay for trace metals, PCBs, PAHs, and Pesticides, San Francisco Estuary Institute.

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Note Where data are not presented, analysis for these chemicals was not performed.

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Chemical ▼									
1,2,3-TRICHLORO BENZENE						<0.0058U			
1,2,4-TRICHLORO BENZENE						<0.0024U			<0.01U
1,2-DICHLORO BENZENE						<0.0012U			<0.01U
1,3-DICHLORO BENZENE						<0.0034U			<0.01U
1,3-DIMETHYL BENZENE						<0.001U			
1,4-DICHLORO BENZENE						<0.0015U	<0.0024U	<0.0024U	<0.0024U
2,3,6-TRICHLOROPHENOL						<0.0017U			
2,4,5-TRICHLOROPHENOL						<0.0028U			<0.01U
2,4,6-TRICHLOROPHENOL						<0.0036U			<0.01U
2,4-DICHLOROPHENOL						<0.0084U			<0.01U
2,4-DIMETHYLPHENOL						<0.0044U			<0.01U
2,4-DINITROPHENOL						<0.18U			<0.01U
2,4-DINITROTOLUENE						<0.0058U			<0.01U
2,6-DINITROANILINE						<0.0088U			
2,6-DINITROTOLUENE						<0.0067U			<0.01U
2-CHLOROPHTHALENE						<0.0026U			<0.01U
2-CHLOROPHENOL						<0.0028U			<0.01U
2-METHYLPHTHALENE						<0.0013U			<0.01U
2-METHYLPHENOL						<0.0036U			<0.01U
2-NITROANILINE						<0.031U			<0.05U
2-NITROPHENOL						<0.0082U			<0.01U
3,3'-DICHLORO BENZIDINE						<0.005U			<0.02U
3,5-DINITROANILINE						<0.021U			
3-NITROANILINE						<0.015U			<0.05U
3-NITROTOLUENE						<0.0029U			
4,6-DINITRO-2-METHYLPHENOL									<0.05U
4-BROMOPHENYL PHENYL ETHER						<0.022U			<0.01U

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Chemical ▼									
4-CHLORO-3-METHYLPHENOL						<0.0085U			<0.01U
4-CHLOROANILINE						<0.001U			<0.01U
4-CHLOROPHENYL PHENYL ETHER						<0.023U			<0.01U
4-METHYLPHENOL						<0.0028U			<0.01U
4-NITROANILINE						<0.031U			<0.05U
4-NITROPHENOL						<0.096U			<0.05U
Sum PAHs		1.6E-6							
ACEPHTHENE		ND	<0.01U	<0.01U	<0.01U	<0.0058U	<0.01U	<0.01U	<0.01U
ACEPHTHYLENE		ND				<0.0051U			
ANTHRACENE		0.18E-6	<0.01U	<0.01U	<0.01U	<0.0052U	<0.01U	<0.01U	<0.01U
ATRAZINE						<0.0059U			
BENZO(A)ANTHRACENE		4.3E-6	<0.01U	<0.01U	<0.01U	<0.0098U	<0.01U	<0.01U	<0.01U
BENZO(A)PYRENE			<0.01U	<0.01U	<0.01U	<0.014U	<0.01U	<0.01U	<0.01U
BENZO(B)FLUORANTHENE		3.4E-6	<0.01U	<0.01U	<0.01U	<0.01U	<0.01U	<0.01U	<0.01U
BENZO(G,H,I)PERYLENE						<0.015U			
BENZO(K)FLUORANTHENE		1.1E-6	<0.01U	<0.01U	<0.01U	<0.01U	<0.01U	<0.01U	<0.01U
BENZOIC ACID						<0.0031U			<0.05U
BENZYL ALCOHOL						<0.004U			<0.01U
BIS (2-CHLOROETHOXY) METHANE						<0.017U			<0.01U
BIS (2-CHLOROETHYL) ETHER						<0.0068U			<0.01U
BIS (2-CHLOROISOPROPYL) ETHER						<0.005U			<0.01U
BIS (2-ETHYLHEXYL)PHTHALATE						<0.0077U			<0.01U
BROMACIL						<0.0029U			<0.01U
BUTYL BENZYL PHTHALATE						<0.028U			<0.01U
CHLORDANE	4E-6	115E-6				<0.037U			<0.01U
CHRYSENE		1.8E-6	<0.01U	<0.01U	<0.01U	<0.0074U	<0.01U	<0.01U	<0.01U

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Chemical ▼									
DI-N-BUTYL PHTHALATE						<0.033U			<0.01U
DI-N-OCTYL PHTHALATE						<0.0015U			<0.01U
DIBENZ(A,H)ANTHRACENE			<0.01U	<0.01U	<0.01U	<0.012U	<0.01U	<0.01U	<0.01U
DIBENZOFURAN						<0.0051U			<0.01U
DIETHYL PHTHALATE						<0.0059U			<0.01U
DIMETHYL PHTHALATE						<0.0022U			<0.01U
FLUORANTHENE			<0.01U	<0.01U	<0.01U	<0.024U	<0.01U	<0.01U	<0.01U
FLUORENE		0.43E-6	<0.01U	<0.01U	<0.01U	<0.0092U	<0.01U	<0.01U	<0.01U
HEXACHLORO BENZENE						<0.012U			<0.01U
HEXACHLOROBUTADIENE						<0.0087U			<0.01U
HEXACHLOROCYCLOPENTADIENE						<0.054U			<0.01U
HEXACHLOROETHANE						<0.0083U			<0.01U
INDENO(1,2,3-CD)PYRENE			<0.01U	<0.01U	<0.01U	<0.021U	<0.01U	<0.01U	<0.01U
ISOPHORONE						<0.0097U			<0.01U
N-NITROSO-DI-N-PROPYLAMINE						<0.0068U			<0.01U
N-NITROSODIPHENYLAMINE						<0.0037U			<0.01U
PHTHALENE			<0.01U	<0.01U	<0.01U	<0.0005U	<0.01U	<0.01U	<0.01U
NITROBENZENE						<0.0037U			<0.01U
PENTACHLOROPHENOL						<0.0091U			<0.01U
PHENTHRENE						<0.0099U			<0.01U
PHENOL						<0.0022U			<0.01U
PYRENE		5.6E-6	<0.01U	<0.01U	<0.01U	<0.017U	<0.01U	<0.01U	<0.01U
1,3-DIMETHYLBENZENE						<0.00132U			
BENZENE			<0.0005U	<0.0005J	<0.0005J	<0.00105U	0.0005R	0.0005R	<0.0005UJ
CHLOROBENZENE			<0.0005U	<0.0005J	<0.0005J		0.0005R	0.0005R	<0.0005UJ
ETHYLBENZENE			<0.0005U	<0.0005J	<0.0005J	<0.00137U	0.0005R	0.0005R	<0.0005UJ
TOLUENE			<0.0005U	<0.0005J	<0.0005J	<0.00147U	0.0005R	0.0005R	<0.0005UJ
XYLENES (TOTAL)			<0.0005U	<0.0005J	<0.0005J	<0.00136U	0.0005R	0.0005R	<0.0005UJ
OIL AND GREASE			<1U	<1U	<1U	<0.1U	<0.1U	<0.1U	<0.1U
AVIATION FUEL (JP4)			<0.1U	<0.1U	<0.1U	<0.1U	<0.1U	<0.1U	<0.1U
DIESEL FUEL			<0.05U	<0.05U	<0.05U		<0.05U	<0.05U	<0.05U
UNKNOWN HYDROCARBON-DIESEL			<0.05U	<0.05U	<0.05U		<0.05U	<0.05U	<0.05U
GASOLINE				0.05R	<0.05UJ		<0.05U	<0.05U	<0.05U
UNKNOWN HYDROCARBON-GASOLINE				0.05R	<0.05UJ		<0.05U	<0.05U	<0.05U

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R Data with the R qualifier were rejected.

J Data with the J qualifier were estimates.

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Chemical ▼									
1,1,1-TRICHLOROETHANE			<0.0003U	<0.0003U	<0.0003U	<0.012U	<0.0003U	<0.0003U	<0.0003U
1,1,2,2-TETRACHLOROETHANE			<0.0005U	<0.0005U	<0.0005U	<0.0015U	<0.0005U	<0.0005U	<0.0005U
1,1,2-TRICHLOROETHANE			<0.0005U	<0.0005U	<0.0005U	<0.001U	<0.0005U	<0.0005U	<0.0005U
1,1-DICHLOROETHANE			<0.0005U	<0.0005U	<0.0005U	<0.001U	<0.0005U	<0.0005U	<0.0005U
1,1-DICHLOROETHENE			<0.0005U	<0.0005U	<0.0005U	<0.001U	<0.0005U	<0.0005U	<0.0005U
1,2-DIBROMOETHANE			<0.002U	<0.002U	<0.002U		<0.002U	<0.002U	<0.002U
1,2-DICHLOROETHANE			<0.0015U	<0.0015U	<0.0015U		<0.0015U	<0.0015U	<0.0015U
1,2-DICHLOROETHANE			<0.0003U	<0.0003U	<0.0003U	<0.001U	<0.0003U	<0.0003U	<0.0003U
1,2-DICHLOROPROPANE			<0.0004U	<0.0004U	<0.0004U	<0.005U	<0.0004U	<0.0004U	<0.0004U
1,3-DICHLOROETHANE			<0.0032U	<0.0032U	<0.0032U	<0.001U	<0.0032U	<0.0032U	<0.0032U
1,3-DICHLOROPROPANE						<0.0048U			
1,4-DICHLOROETHANE			<0.0024U	<0.0024U	<0.0024U	<0.001U			
2-CHLOROETHYL VINYL ETHER			<0.0013U	<0.0013U	<0.0013U	<0.0048U	<0.0013U	<0.0013U	<0.0013U
BROMODICHLOROMETHANE			<0.001U	<0.001U	<0.001U	<0.012U	<0.001U	<0.001U	<0.001U
BROMOFORM			<0.002U	<0.002U	<0.002U	<0.0015U	<0.002U	<0.002U	<0.002U
BROMOMETHANE			<0.005U	<0.005U	<0.005U	<0.001U	<0.005U	<0.005U	<0.005U
CARBON TETRACHLORIDE			<0.0005U	<0.0005U	<0.0005U	<0.001U	<0.0005U	<0.0005U	<0.0005U
CHLOROETHANE			<0.002U	<0.002U	<0.002U	<0.001U	<0.002U	<0.002U	<0.002U
CHLOROETHANE			<0.005U	<0.005U	<0.005U	<0.008U	<0.005U	<0.005U	<0.005U
CHLOROFORM			<0.0005U	<0.0005U	<0.0005U	<0.001U	<0.0005U	<0.0005U	<0.0005U
CHLOROMETHANE			<0.001U	<0.001U	<0.001U	<0.0012U			
CIS-1,2-DICHLOROETHENE			<0.0005U				<0.0005U	<0.0005U	<0.0005U
CIS-1,3-DICHLOROPROPENE			<0.0005U	<0.0005U	<0.0005U	<0.005U	<0.0005U	<0.0005U	<0.0005U
DIBROMOCHLOROMETHANE			<0.0009U	<0.0009U	<0.0009U	<0.001U	<0.0009U	<0.0009U	<0.0009U
DICHLORODIFLUOROMETHANE			<0.01U	<0.01U	<0.01U		<0.001U	<0.001U	<0.001U
METHYLENE CHLORIDE			<0.0045U	<0.0045U	<0.0045U	<0.001U	<0.0045U	<0.0045U	<0.0045U
STYRENE						<0.005U			
TETRACHLOROETHANE			<0.0003U	<0.0003U	<0.0003U	<0.001U	<0.0003U	<0.0003U	<0.0003U
TRANS-1,2-DICHLOROETHENE			<0.0005U	<0.0005U	<0.0005U		<0.0005U	<0.0005U	<0.0005U
TRANS-1,3-DICHLOROPROPENE			<0.0005U	<0.0005U	<0.0005U	<0.005U	<0.0005U	<0.0005U	<0.0005U
TRICHLOROETHENE			<0.0005U	<0.0005U	<0.0005U	<0.001U	<0.0005U	<0.0005U	<0.0005U
TRICHLOROFLUOROMETHANE			<0.01U	<0.01U	<0.01U	<0.001U	<0.001U	<0.001U	<0.001U
TRICHLOROTRIFLUOROETHANE			<0.005U	<0.005U	<0.005U		<0.005U	<0.005U	<0.005U
VINYL ACETATE						<0.01U			
VINYL CHLORIDE			<0.0005U	<0.0005U	<0.0005U		<0.0005U	<0.0005U	<0.0005U

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Chemical ▼									
4,4'-DDD		188E-6				<0.018U			
4,4'-DDE		239E-6				<0.014U			
4,4'-DDT	1E-6	49E-6				<0.018U			
ALDRIN						<0.013U			
ALPHA-BHC						<0.0053U			
ALPHA-CHLORDANE									
PCB TOTAL	30E-6	0.398E-6							
AROCLOR-1016						<0.0091U			
AROCLOR-1221						<0.0072U			
AROCLOR-1232						<0.0099U			
AROCLOR-1242						<0.0052U			
AROCLOR-1248						<0.038U			
AROCLOR-1254						<0.033U			
AROCLOR-1260						<0.013U			
BETA-BHC						<0.017U			
DELTA-BHC						<0.033			
DIELDRIN	1.9E-6	98E-6				<0.026U			
ENDOSULFAN I	8.7E-6					<0.023U			
ENDOSULFAN II						<0.042U			
ENDOSULFAN SULFATE						<0.05U			
ENDRIN	2.3E-6	13E-6				<0.018U			
ENDRIN ALDEHYDE						<0.005U			
ENDRIN KETONE						<0.006U			
GAMMA-BHC (LINDANE)						<0.0072U			
GAMMA-CHLORDANE						<0.038U			
HEPTACHLOR	3.6E-6	4.04E-6				<0.028U			
HEPTACHLOR EPOXIDE	3.6E-6	3E-6							
METHOXYCHLOR						<0.011U			
MIREX						<0.024U			
N,N-DIMETHYLANILINE						<0.0097U			
N-NITROSO-DI-N- PROPYLAMINE						<0.0068U			
N-NITROSODIPHENYLAMINE						<0.0037U			

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6.0 References

Allied Technology Group, Inc. (ATG), 1995, Contract for the Removal and Disposal of Underground Storage Tanks and JP-4 Fuel Lines, Final Closure Report, Hamilton Army Airfield, Volumes 1 through 3, Fremont, California.

Engineering-Science, Inc. (ESI), 1993, Final Environmental investigation Report, Hamilton Army Airfield, Volumes I and II, Alameda, California.

IT Corporation (IT), 1999, Comprehensive Remedial Investigation Report, BRAC Property, Hamilton Army Airfield, Novato, California, Revision 0, Volumes 1 and 2, Martinez, California.

Regional Water Quality Control Board (RWQCB), 1995, Water Quality Control Plan, San Francisco Bay Basin Region (2), Oakland, California.

Woodward-Clyde Federal Services (WCFS), 1996, Additional Environmental Investigation of BRAC Property, Final Report, Hamilton Army Airfield, Volumes 1 through 7, Oakland, California.

Woodward-Clyde Federal Services (WCFS), 1995, Lot 7 and Outparcels A5 and A6 Remedial Investigation, GSA Phase I Sale Area, Hamilton Army Airfield, Novato, California, Final Report, Oakland, California.

Woodward-Clyde Federal Services (WCFS), 1987, Confirmation Study for Hazardous Waste, Hamilton AFB, Novato, California, Final Report, Omaha, Nebraska.

U.S. Army Corps of Engineers (USACE), 2001, Fate and Transport Analysis, Hamilton Army Airfield, Novato, California, Sacramento, California.

U.S. Army Corps of Engineers (USACE), 1994, Supplemental to the Final Environmental Investigation Report, Hamilton Army Airfield, Novato, California, Sacramento, California.