HYDRO GeoLogic INC.

Project No: MCC001901030201
Project: Final Remediation Investigation
Client: AFCEE
Location: Site 24 - Vandenberg AFB
Northing: 639961.402

Borehole ID: HGL33(24MW13B)
Date: 11/15/2002
Geologist: M. Jackson
Checked By: D. Smith, R.G.
Ground Surface Elevation(ft msl): 460.14
Easting: 1768194.838

24-PMW-13
24-MW-13A

SUBSURFACE PROFILE					SAMPLE				
Depth	Symbol	Description	USCS	Elevation	Recovery %	Blow Counts	PID (ppm)	Water Level	Remarks
		Fill	Fill	458					
2		***Poorly graded sand*** Moderate reddish brown, moist, soft, 100% medium grained sand							
4									
6					95	7/9/15	0.8		
8									
10				450					
		Clay Pale yellowish brown, moist, soft, 100% medium grained sand	CL	449	100	8/8/24	0.9		
12			SC						
14		***Sandy clay*** Moderate yellowish brown, soft, moist, 80% clay, 40% sand		445					
16			SP		70	30/38/50	1.0		
18		***Poorly graded sand*** Pale yellowish brown (90%) mottled with light brown (10%), soft, moist, 100% medium grained sand unit becomes saturated at 19.5'							
20				440	80	19/38/30	0.6	▼	Set temporary well at approximately 19'.
22			SC						
24		***Sand with clay*** Pale yellowish brown (90%) mottled with light brown (10%), saturated to very moist, soft, 85% sand, 15% clay		435					
26			CL		95	24/18/17	0.8		
28		***Clay with silt*** Pale yellowish brown mottled with dark yellowish orange (15%), stiff, moist, moderate plasticity, 95% clay, 5% silt lense of clayey silt from 29.5' to 30' lense of sandy silt from 30' to 30.5'							
30			ML SM	430	90	22/38/36	0.6		
32			SP						
34									
36		***Poorly graded sand*** Pale yellowish brown, moist, soft, trace gravel (subangular, 5 mm x 3 mm) lense of gravelly sand from 36.5' to 38.5'			90	15/24/15	0.9		
38				422					No intermediate zone water encountered.
40			SM		90	15/24/25	0.5		

Drilled By: Layne Christensen
Drill Method: Dual Tube Percussion
Drilling Equipment: AP-1000
Sampling Equipment: CA Mod Split Spoon

HydroGeoLogic, Inc.
4600 Northgate Blvd., Suite 207
Sacramento, CA 95834
(916) 614-8770 FAX (916) 614-8775

Boring Diameter: 10"
Total Depth Drilled: 69.5'
Sheet: 1 of 2

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SUBSURFACE PROFILE					SAMPLE				
Depth	Symbol	Description	USCS	Elevation	Recovery %	Blow Counts	PID (ppm)	Water Level	Remarks
		Sand with silt Pale yellowish brown, moist, soft, medium sand, 95% medium grained sand, 5% silt, trace gravel (subrounded, 2 mm x 1 mm), lenses of clayey silt (3 mm thick)	SM	418	90				
42			ML						
44				415					
46			SW		80	19/47/46	1.0		
48		***Clayey silt*** Pale yellowish brown, moist, slightly stiff, 80% silt, 20% clay							
50					70	18/50 for 5"	0.9		Angular gravel sized pieces of Monterey formation observed at 50'.
52		***Well graded sand with gravel*** Pale yellowish brown and with iron oxide staining, moist, interstitial water at gravel contacts, 60% coarse grained sand, 30% gravel (variegated, angular to subrounded)							
54									
56					70	35/50/50	0.9		
58		unit becomes very moist at 50'							
60					60	40/50 for 3"	2.2		
62		at 53' cobble zone encountered (6 mm x 3 mm x 2 mm, subrounded) 60% coarse sand, 25% gravel, 10% silt, 5% cobbles		397					
64			CL	396					
		Silty clay Greenish gray, moist, plastic, slightly stiff, 60% clay, 40% silt	SW	395					
66			rock		60	40/50 for 5"	1.7		
68		***Gravelly sand*** Greenish gray, moist, 60% well graded sand, 30% gravel, 10% cobbles		391					1420 Set deep well at 69.5'. 11/18/02 0725 Collect groundwater sample (HGL33-GW66).
70									
72		***Mudstone*** Black, slightly moist to moist, 1 cm bedding, weathered to 69.5'							
74									Converted boring to deep well 24MW13B. Wells 24MPMW13 and 24MW13A placed adjacent to this boring.
76									
78									
80									

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