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Table 4-3. SVOC Analysis Method Detection Limits and Reporting Limits

No.	Chemical	MDL (μg/kg)	Report Limit (µg/kg)
1	Acenaphthene	14.2	313
2	Acenaphthylene	13.2	313
3	Anthracene	13.9	313
4	Benzo[a]anthracene	17.2	313
5	Benzo[a]pyrene	17.7	313
6	Benzo[b]fluoranthene	18	313
7	Benzo[g,h,i]perylene	11.2	313
8	Benzo[k]fluoranthene	11.1	313
9	Benzoic Acid	45.9	313
10	Bis(2-chloroethoxy)methane	14.1	313
11	Bis(2-chloroethyl)ether	6.62	313
12	Bis(2-chloroisopropyl)ether	9.94	313
13	Bis(2-ethylhexyl)phthalate	15	313
14	4-bromophenyl phenyl ether	12.2	313
15	Butylbenzylphthalate	11.7	313
16	4-Chloroaniline	25	313
17	4-Chloro-3-methylphenol	15.6	313
18	2-Chloronaphthalene	10	313
19	2-Chlorophenol	16.6	313
20	4-Chlorophenyl phenyl ether	13.7	313
21	Chrysene	13	313
22	Di-n-Butylphthalate	14.8	313
23	Di-n-octylphthalate	17.3	313
24	Dibenzo[a,h]anthracene	14.1	313
25	Dibenzofuran	11.1	313
26	1,2-Dichlorobenzene	15.6	313
27	1,3-Dichlorobenzene	21.1	313
28	1,4-Dichlorobenzene	7.08	313

Table 4-3. SVOC Analysis Method Detection Limits and Reporting Limits

No.	Chemical	MDL (μg/kg)	Report Limit (µg/kg)
29	3,3'-Dichlorobenzidine	15	313
30	2,4-Dichlorophenol	18.1	313
31	Diethylphthalate	16.9	313
32	2,4-Dimethylphenol	22.9	313
33	Dimethylphthalate	12	313
34	2,4-Dinitrotoluene	15.8	313
35	2,6-Dinitrotoluene	22.4	313
36	Diphenylamine	14.1	313
37	Fluoranthene	10.5	313
38	Fluorene	16.6	313
39	Hexachlorobenzene	29.6	313
40	Hexachlorobutadiene	18.7	313
41	Hexachlorocyclopentadiene	94.7	313
42	Hexachloroethane	18	313
43	Indeno(1,2,3-c,d)pyrene	9.7	313
44	Isophorone	14.2	313
45	2-Methylnaphthalene	9.94	313
16	2-Methylphenol	17.3	313
47	3-, 4-Methylphenol	20.3	313
48	N-Nitrosodi-n-propylamine	89.6	313
49	Naphthalene	9.7	313
50	2-Nitroaniline	20.6	313
51	3-Nitroaniline	14.1	313
52	4-Nitroaniline	18	313
53	Nitrobenzene	18	313
54	2-Nitrophenol	15	313
55	Pentachlorophenol	25	313
56	Phenanthrene	9.7	313

Table 4-3. SVOC Analysis Method Detection Limits and Reporting Limits

No.	Chemical	Report Limit (µg/kg)		
57	Phenol	13	313	
58	Pyrene	13.2	313	
59	1,2,4-Trichlorobenzene	10.9	313	
60	2,4,5-Trichlorophenol	20.9	313	
61	2,4,6-Trichlorophenol	21.2	313	

Table 4-4. Metals Analysis Method Detection Limits and Reporting Limits

No.	Chemical	MDL(mg/kg)	Report Limit(mg/kg)
1	Arsenic	0.365	4.0
2	Barium	0.388	3.5
3	Cadmium	0.0764	0.5
4	Chromium	0.797	0.5
5	Lead	0.099	0.4
6	Mercury (μg/kg)	0.0101	0.02
7	Selenium	0.24	5.0
8	Silver	0.112	0.5

Table 4-5. Organochlorine Pesticide Analysis Method Detection Limits and Reporting Limits

No.	Chemical	MDL (μg/kg)	Report Limit (µg/kg)
1	4,4'-DDD	0.2150	7.81
2	4,4'-DDE	0.2920	7.81
3	4,4'-DDT	0.2710	7.81
4	Aldrin	0.3240	7.81
5	alpha-BHC	0.2920	7.81
6	alpha-Chlordane	0.2960	7.81
7	beta-BHC	0.2550	7.81
8	Chlordane	3.9400	31.3
9	delta-BHC	0.2730	7.81
10	Dieldrin	0.3060	7.81
11	Endosulfan I	0.3000	7.81
12	Endosulfan II	0.3120	7.81
13	Endosulfan sulfate	0.3470	7.81
14	Endrin	0.2220	7.81
15	Endrin aldehyde	0.3400	7.81
16	Endrin ketone	0.3710	7.81
17	gamma-BHC (Lindane)	0.2890	7.81
18	gamma-Chlordane	0.2970	7.81
19	Heptachlor	0.3610	7.81
20	Heptachlor epoxide	0.3000	7.81
21	Methoxychlor	0.3270	7.81
22	Toxaphene	3.7400	31.3

Table 4-6. Organophosphorus Pesticide Analysis Method Detection Limits and Reporting Limits

No.	Chemical	MDL (μg/kg)	Report Limit (μg/kg)
1	Azinphos methyl	17.0	66
2	Bolstar (Sulprofos)	17.0	66
3	Chlorpyrifos	17.0	66
4	Coumaphos	17.0	66
5	Demeton, O and S	33.0	130
6	Diazinon	17.0	66
7	Dichlorvos	17.0	66
8	Dimethoate	17.0	66
9	Disulfoton	17.0	66
10	EPN	17.0	66
11	Ethoprop	17.0	66
12	Fensulfothion	17.0	66
13	Fenthion	17.0	66
14	Malathion	17.0	66
15	Merphos	17.0	170
16	Mevinphos	17.0	66
17	Monocrotophos	66.0	170
18	Naled	17.0	66
19	Parathion-ethyl	17.0	66
20	Parathion-methyl	17.0	66
21	Phorate	17.0	66
22	Ronnel	17.0	66
23	Sulfotep	17.0	66
24	Терр	66.0	66
25	Stirophos (Tetrachlorovinphos)	17.0	66
26	Tokuthion (Protothiofos)	17.0	66
27	Trichloronate	17.0	66

Table 4-7. Chlorinated Herbicide Analysis Method Detection Limits and Reporting Limits

No.	Chemical	MDL (μg/kg)	Report Limit (μg/kg)
1	2,4-D	7.12	15.6
2	2,4-DB	6.97	15.6
3	2,4,5-TP (Silvex)	4.31	15.6
4	2,4,5-T	4.41	15.6
5	Dicamba	4.8	15.6

Table 4-8. Dioxin and Furan Analysis Method Detection Limits and Reporting Limits

No.	Chemical	MDL (μg/kg)	Report Limit (μg/kg)
1	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	0.180	0.5
2	1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	0.299	2.5
3	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.336	2.5
4	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	0.264	2.5
5	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	0.405	2.5
6	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	0.603	2.5
7	1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	2.877	5.0
8	2,3,7,8-Tetrachlorodibenzofuran (TCDF)	0.091	0.5
9	1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	0.328	2.5
10	2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	0.241	2.5
11	1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.131	2.5
12	1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	0.215	2.5
13	1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	0.250	2.5
14	2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	0.768	2.5
15	1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF	0.267	2.5
16	1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	0.611	2.5
17	1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)	0.642	5.0

APPENDIX IV. SOIL BORING LOGS

EXPLORATION LOG HOLE NO. E11-114



LOCAT	ION:	<u>Camp</u>	Carrol	oil Samp I 12 Jul		G&EE NO.: 11-032E FINISHED: 12 Jul 11	INSPECTOR: DRILLER:	
DRILLII DRILLII OVERE	NG MI NG AC BURDI DINAT ND CC	ETHOD SENCY EN THI 'ES: N: OVER:)/EQUIF : CKNES <u>3,983,5</u> <u>Grass</u>	PMENT: BI SS: 549.4 E	BEC: EC: 447,6		TOTAL DEPTH: 8.4 m WATER DEPTH: No Water DATUM: MSL MSL Direct push sampling hole	;; AD
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED		SPT N-VALUE	USCS / STRATA	DESCRIPTION OF MATERIALS	FIELD DATA LAB D	IATA
501	S1 S2				FILL.	SILTY SAND: brown; moist; about 70% fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; fill material (SM). CLAYEY SAND: brown; about 3% subangular fine gravel (max.2cm); about 67% fine to coarse Sand (max.4.8mm about 30% Fines; fill material (SC).	%Recovery = 100 PID = 0.9ppm FC = F3 %Recovery = 100 PID = 1.4 - 2.2ppm FC = F3	
492						About 70% fine to coarse Sand; about 30% Fines.	%Recovery = 79 PID = 3.1 - 5.4ppm	
474	53					About 3% subangular fine gravel (max.2cm); about 67% to coarse Sand; about 30% Fines.	îne	
45					CL	CANDY FAN OLAY	%Recovery = 69 PID = 0 - 6.7ppm	
447	34			7	SC	SANDY LEAN CLAY: gray; moist; about 30% subangular fine to coarse Sand (max.4.8mm); about 70% Fines; medium plasticity; alluvial soil. CLAYEY SAND: brown; moict; about 60% cubangular fine to coarse Sand (max.4.8mm); about 40% Fines; medium plasticity; alluvial soil. Wet.		
438	Associate independent			-	SM	SILTY SAND: brown; moist; about 75% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; residual so Hard pushing of sampler at 8-8.4 m; HDP (Hydraulic Dor Pressure)= 700 psl. Penetration refusal depth = 8.4m (Penetration speed = 5	il. Vn	



EXPLORATION LOG HOLE NO. E11-115



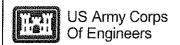
PROJE LOCAT				oil Samp I	oling	G&EE NO.:	11-032E	_ INS	PECTOR: _	b
DATES		_		13 Jul	<u> 111 </u>	FINISHED:			LLER:	MARK THE STREET
DRILLI										
DRILLI					EC	HOLE DIAMETE			TAL DEPTH:	
OVERB				***************************************	. 117 6	DEPTH DRILLER 14.0 GROUND ELEV		_	TER DEPTH: _ TUM:	7.0 m; AD MSL
GROUN				339./ C	. 44/,0	CONTAMINATIO		_ DAI		MSL
TYPE C				neter	☐ Moni	toring Well Test Pit	☐ Auger Hole	X c	ther <u>Direct push s</u>	ampling hole
- (TYPE/	ED	片							
ELEVATION / DEPTH (meters)	ا بر ۳	GRAPHIC LOG CONTAMINATED	BLOW COUNT	l w		DESCRIPTION (OF MATERIALS		FIELD DATA	LAB DATA
YAN] TH (ters)	SAMPLE	GRAPHIC LOG CONTAMIN	M(SPT N-VALUE	USCS / STRATA	DECOMM NOW				
	S S	8 28	BLC	g 2 2 3	STS					
-0	S1	***			FILL	SILTY SAND: brown; moist; ab gravel (max,2cm); about 65% s	out 5% subangular fine		%Recovery = 100 PID = 5,7ppm	
-	51					Gand; about 30% Fines; no pla			LC = L3	
50—									%Recovery = 100 PID = 0 - 1.3ppm	
1					FILL	CLAYEY SAND: brown; moist;	about 10% subangular t	ine	FC = F3	
	52					to coarse gravel (max.3cm); ab coarse Sand; about 30% Fines	out 60% subangular fin	e to		
49						material (SC).	, , , ,			
2										
						About 3% subangular fine to co 67% subangular fine to coarse	arse gravel (max.3cm); Sand; about 30% Fines	about .	%Recovery = 98 PID = 3.7 - 8.4ppm	
48—										
- -3						Reddish brown.				
47	S3									
47										
4										
46					SM	SILTY SAND: brown; moist; abo coarse Sand (max.4.8mm); abo	out 70% subangular fine	to		
-5						residual soil.	ut 30% Fines; low plast	icity,		
1 "		44							%Recovery = 86 PID = 1.4 - 10.5ppm	
45—										
	Ì									
6										
	•				MI	SANDY SILT: brown; moist; abo Sand; about 70% Fines; mediur				
44										
7	¥			-	SM	SILTY SAND: light brown; moisi	· phora 90% pubangula			
	\$4				OW	fine to coarse Sand (max.4.8mm				
43	{					plasticity, residual soil.				
	Ī				Ì			***************************************		
42										
+2-										
9	ŀ					Hard pushing of sampler at 9-9	.4 m; HDP (Hydraulic D	own		
	ļ					Proscure) = 1000 paí.				
						Penetration refusal depth = 9.4 / 5min).	n (Penetration speed =	5cm		

ENVIRO-EXPLORATION LOG 11-032E.GPJ USACE SKOREA.GDT 7/22/11

EXPLORATION LOG HOLE NO. E11-116



PROJE	CT: Ph	ase I S	ite So	il Samp	oling	G&EE NO.:	11_032F	INSPECTOR:	6
DATES	STARTE	D:	arron	13 Jul	11	FINISHED:	13 Jul 11	DRILLER:	4
DRILLIN OVERE COORD GROUN	DINATES	NCY: THICI S: N: <u>3,</u> ER: <u>G</u>	(NES 983,5 Tass	BI S: 38.9 E	EC : <u>447,6</u>	60PM-1 HOLE DIAMET! DEPTH DRILLE 17.6 GROUND ELEV CONTAMINATI toring Well	ED: 9.7 m /.: 50.73 m ON:	DATUM:	7,24 m; AD MSL
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER GRAPHIC	LOG	BLOW COUNT	SPT N-VALUE	USCS / STRATA	DESCRIPTION	OF MATERIALS	FIELD DATA	LAB DATA
50	S1 S2				FILE	SILTY SAND: brown; moist; a gravel (max.2cm); about 72% Sand (max.4.8mm), about 25 material (SM). About 10% subangular fine gr subangular fine to coarse Sar Fines. About 5% subangular fine gra subangular fine to coarse Sar Fines.	subangular fine to coarse % Fines, no plasticity, lill ravel (max.2cm); about 65 nd (max.4.8mm); about 25 ovel (max.1cm); about 65%	## FC - F3	
483	S3			THE PROPERTY OF THE PROPERTY O	FILL	CLAYEY SAND: brown; moist to coarse Sand (max.4.8mm); plasticity, fill material (SC).	; about 70% subangular fi : about 30% Fines; mediui	me %Recovery = 92 PfD = 0 - 4.6ppm	
46				THE PART OF THE PA	SM	SILTY SAND: brown; moist; at coarse Sand (max.4.8mm); at residual soil. Sandy silt layer encountered a	pout 30% Fines; no plastic	%Recovery = 85 PID = 0.4 - 2.6ppr	n
44	₩ S4			***************************************	Account of the second of the s				
-8 - - 42- -9 -				1 17771111		Hard pushing of sampler at 9- Pressure) ≈ 1000 psi.	-9.7 m; HDP (Hydraulic Do	nwo	



HOLE NO. E11-117



				oil Samp				
LOCAT		-			4.4		NSPECTOR: _	A SAME AND A
DATE S				14 Jul		***************************************	ORILLER:	h(
				PMENT:			TOTAL DEPTH:	
							NATER DEPTH:	
							DATUM:	
GROUN							5/(1 O VI	HIGE
							X other Direct push	sampling hole
	1	1 1		7				
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS / STRATA	DESCRIPTION OF MATERIALS	FIELD DATA	LAB DATA
10	S1				FILL	SILTY SAND: brown; moist; about 75% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity;	%Recovery = 100 PID = 0.9ppm	
		XXX				fill material (SM).	FC = F3 %Recovery = 96	
						About 10% subangular fine to coarse gravel (max.3cm); about 65% subangular fine to coarse Sand (max.4.8mm); about 25% Fines.	PID = 2.0ppm	
)1	S2					About 23% rines. About 3% subangular fine gravef (max.1cm); about 67% subangular fine to coarse Sand (max.4.8mm); about 30%		
	52	‱ l				Fines.		
7		‱ I						
<u>-</u> 2					FILL	CLAYEY SAND: brown; moist; about 3% subangular fine	%Recovery = 97	
		XX				gravel (max.2cm); about 67% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; medium plasticity, fi	PID = 0.1 - 3.5ppm	
+		⋙ I				material (SC).	ŧI	
		‱ I						Í
)—"		XXX						
	\$3	⋙ l						
		XXX			İ			
74		XXX				Reddish brown; about 3% subangular fine gravel (max.2cm about 57% subangular fine to coarse Sand (max.4.8mm););	
		XXX				about 57% subangular fine to coarse Sand (max.4.8mm); about 40% Fines.		
1					SC	CLAYEY SAND: reddich brown; moist; cubangular fine to coarse Sand (max.4.8mm); medium plasticity; residual soil		
5						coalse Sand (max.4.5mm), medium plasticity, residual sun		
							%Recovery = 86 PID = 0 - 2.3ppm	
-								
					SM	SILTY SAND: light brown; moist; about 70% subangular		
				ĺ		fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil.		
]								
7							***************************************	
		441						
+	54 💆	# []						
_ ₈		141		İ				
						Dark brown.		
 9		## L				Brown.		
						Hard pushing of sampler at 9,7-10.0 m; HDP (Hydraulic	1	
† !		半科				Down Pressure) = 1000 psi. Penetration refusal depth = 10.0m (Penetration speed =		
L ₁₀		313				10cm / 30sec).		

ENVIRO-EXPLORATION LOG 11-032E.GPJ USACE SKCREA.GDT 7/22/11

EXPLORATION LOG HOLE NO. E11-118

Far East District



16

DATE S DRILLIN DRILLIN OVERB COORD GROUN	NG ME NG AC URDE DINAT	ETHOD SENCY EN THI ES: N:	/EQUIF : CKNES 3,983,5	PMENT: BI SS:	BEC EC	50PM-2 HOLE DIAMETER: 5.5 cm TO DEPTH DRILLED: 8.9 m WA	TAL DEPTH: TER DEPTH: TUM:	8,9 m No Water; AD MSL
TYPE C	F HO	<u> </u>		neter	☐ Mon	toring Well	other <u>Direct push</u>	sampling hole
ELEVATION / DEPTH (meters)	SAMPLE TY NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS	FIELD DATA	LAB DATA
51	\$1 \$2				FILL	Poorly-graded GRAVEL with Silt and Sand: light gray; dry to moist; about 75% angular fine to coarse gravel (max.3cm); about 15% fine to coarse Sand; about 10% [Fines; no plasticity; fill material (GP-GM). SILTY SAND: brown; moist; about 5% fine gravel; about 70% subangular fine to coarse Sand; about 25% Fines; fill material (SM). SILTY SAND with Gravel: light brown; moist; about 35% fine to coarse gravel; about 50% fine to coarse Sand; about 15% Fines; no plasticity. Brown; about 15% fine to coarse gravel; about 70% fine to coarse Sand; about 15% Fines. About 2% fine gravel; about 68% fine to coarse Sand; about 30% Fines. Clayey sand layer encountered at 2.6-2.8m Light brown; about 70% fine to medium Sand; about 30% Fines. CLAYEY SAND: light brown; moist; about 60% fine to medium Sand; about 40% Fines; low plasticity; fill material (SC).	%Recovery = 90 PID = 0.2ppm %Recovery = 90 PID = 0.5 - 46.0ppm %Recovery = 97 PID = 0 - 12.0ppm	
6-6-6			Array and the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the stat	***************************************	SM	<u>EILTY EAND</u> : light brown; moist; about 70% fine to coarse Sand; about 30% Fines; residual soil; granite texture. Brown to dark brown.	%Recovery = 100 PID = 0.5 - 2.0ppm	
57	54			Activities supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplies the supplie		Grayish brown grades to light brown.		
3-			İ			Hard pushing of sampler at 8.5-8.9 m; HDP (Hydraulic Down Pressure)= 1400 psi.		

ENVIRO-EXFLORATION . OG 11-032E.GPJ USACE SKOREA.GDT 7722/11

	US Army Corps Of Engineers
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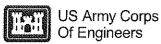
EXPLORATION LOG HOLE NO. E11-119

Far East District



6

				I Site So								
	LOCAT	ION:	Camp	Carrol	<u> </u>		G&EE	NO.:	11-032E		PECTOR:	
				D/EQUIF			FINISH	1ED:1	3 Jul 11	_ DRI	LLER:	bo
							HOLE	DIAMETER:	5.5 cm	TO	ΓAL DEPTH:	
							DEPTI					No Water; AD
	COOR	DINAT	ES: N	3,983,5	538.7 E	: <u>447,6</u>	<u>661.0</u> GROU	ND ELEV.:	52.21 m		ГИМ:	
						nent	CONT				.,	***************************************
	TYPEC)F HO	LE:	☐ Piezon	neter	∐ Moni	toring Well [☐ Test Pit	☐ Auger Hole	iX i c	other <u>Direct push</u>	sampling hole
	ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG	BLOW COUNT	SPT N-VALUE	USCS / STRATA	DE	ESCRIPTION OF M	MATERIALS		FIELD DATA	LAB DATA
	[2] C		××××			AC		nt thickness = 10 c			%Recovery = 94	
	52—	Şi				FILL	\about 75% angul	ar fine to coarse g	nd Sand: gray; dry; ravel (max.3.5cm);	about /	PID = 2.4ppm FC = F1	77
							15% fine to coars	se Sand (max.4.8m erial (GP-GM).	nm); about 10% Fin	es; no∫	\FC = F3 %Recovery = 84	<u></u>
	1						coarse gravel (m.	ax.3cm); about 651	5% subangular fine % subangular tine t	0	PID = 1.3 - 2.0ppm	
	51—	52					coarse Sand (ma fill material (SM).		0% Fines; no plasti	city;		
	_											
	-2		***								%Recovery = 90	
	50										PID = 1.1 - 1.8ppm	
	3					SC		r encountered at 2, reddish brown; moi				
	49							o coarse Sand; abo	out 40% Fines; resid	dual		
		S3					Jon, granto toxta					
	-4					SM	CH TV CAMP, L		00/			
	48	j				SW	coarse Sand (ma:	wn; moisi; about 7 x.4.8mm); about 3	0% subangular fine 0% Fines; no plastic	city;		
	<u> </u>	ŀ					resinnal son					
	_5											
	47		4								%Recovery = 100 PID = 0.7 - 1,8ppm	
,	-	ĺ										
1221		į										
100	46											
ZEA.	-	54										
SKO SKO		ķ										
SACE	457				ļ					-		
2 2	-	<u> </u>							. I have 12.1			
SE.GI							Pressure) = 1400		n; HDP (Hydraulic I	Jown		
ENVIRO-EXPLORATION LOG 11-032E.GPJ USACE SKOREA.GDT 7/22/11	·						Penetration refusa / 5min).	al depth = 7.9m (P	enetration speed =	7cm		
100												
NOT:												
LORA												
EXP.												
NRO NRO												
ယ်L												İ



HOLE NO. **E11-120**





DRILLING METHOD/EQUIPMENT: BEC HOLE DIAMETER: 5.5 cm TOTAL DEPTH: OVFRBURDEN THICKNESS: DEPTH DRILLED: 3.3 m WATER DEPTH: No COORDINATES: N: 3.983,527.6 E: 447,586.6 GROUND ELEV.: 48.89 m DATUM: MI GROUND COVER: Grass CONTAMINATION: TYPE OF HOLE: Piezometer Monitoring Well Test Pit Auger Hole Will other Direct push samp DESCRIPTION OF MATERIALS FIELD DATA ML SILT: yellowish brown; moist; about 10% fine Sand; about 90% Fines; no plasticity, residual soil. SM SILTY SAND: light brown; moist; about 10% fine Sand; about 90% Fines; no plasticity, residual soil. SM SILTY SAND: light brown; moist; about 10% fine Sand; about 90% Fice Fa FC = F3 FIELD DATA WRecovery = 100 PID = 0.3ppm FC - F4 FC = F3 Wiftecovery = 90 PID = 0.1 - 0.7ppm 48-	
DESCRIPTION OF MATERIALS FIELD DATA FIELD DATA FIELD DATA FIELD DATA DESCRIPTION OF MATERIALS FIELD DATA FIELD DATA FIELD DATA FIELD DATA ML SILT: yellowish brown; moist; about 10% fine Sand; about 90% Fines; low plasticity; residual soil. SM SILTY SAND: light brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil. WRecovery = 100 PID = 0.3ppm FC - F4 FC = F3 WRecovery = 98 PID = 0.1 - 0.7ppm	SL
ML SILT: yellowish brown; moist; about 10% fine Sand; about 90% Fines; low plasticity; residual soil. SM SILTY SAND: light brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil. 48——1 47—— \$2	
SILT: yellowish brown; moist; about 10% fine Sand; about 90% Fines; low plasticity; residual soil. SM SILTY SAND: light brown; moist; about 70% subangular fine to coarse Sand (max. 4.8mm); about 30% Fines; no plasticity; residual soil. WRecovery = 100 PID = 0.3ppm FC = F4 FC = F3 WRecovery = 98 PID = 0.1 - 0.7ppm	LAB DATA
48————————————————————————————————————	
47—— s ₂	
Hard pushing of sampler at 3.0 - 3.3 m; H인P (Hydraulic	
Down Pressure) = 1000 psi. Penetration refusal depth = 3.3m (Penetration speed = 5cm / 5min).	

EXPLORATION LOG

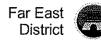
HOLE NO. E11-121



FILL SILTY SAND with Grave]: gray to brown; moist; about 15% subangular fine to coarse gravel (max.3cm); about 60% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; fill material (SM). SM SILTY SAND: light brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil. FC = F3 FC = F3 FC = F3 FC = F3	FILL SILTY SAND with Graval: gray to brown; moist; about 15% subangular fine to coarse gravel (max.3cm); about 60% subangular fine to coarse gravel (max.4.8mm); about 25% Fines; no plasticity, fill material (SM). SILTY SAND: light brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity, residual soil. FC = F3 Hard pushing of sampler at 2.3 - 2.7 m; HDP (Hydraulic Down Proceuro) = 1000 pci. Penetration refusal depth = 2.7 m (Penetration speed = 5cm	DRILLIN OVERB COORE	IG AG URDE INAT ID CC	SENCY EN THI ES: N: OVER:	: CKNES <u>3,983,:</u> <u>Grass</u>	SS: 522.5 E	EC : 447,5	HOLE DIAMETER: 5.5 cm TO DEPTH DRILLED: 2.7 m W 92.9 GROUND ELEV.: 49.04 m DA CONTAMINATION:	OTAL DEPTH: /ATER DEPTH: ATUM: Other Direct push	
FILL Sill TY SAND with Strave): grave (max.3cm); about 60% subangular fine to coarse gravel (max.4.8mm); about 25% Fines; no plasticity, fill material (SM). SM Sill TY SAND: light brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil. FC = F3 FILL SILTY SAND: light brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil. FC = F3 Hard pushing of sampler at 2.3 - 2.7 m; HDP (Hydraulic Down Proceuro) = 1000 pci. Penetration refusal depth = 2.7 m (Penetration speed = 5cm	FILL SILTY SAND: light brown; moist; about 15% subangular fine to coarse gravel (max.4.8mm); shout 25% Fines; no plasticity; fill material (SM). SILTY SAND: light brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); shout 25% PID = 0.4ppm SM SILTY SAND: light brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil. FC = F3 Hard pushing of sampler at 2.3 - 2.7 m; HDP (Hydraulic Down Proceuro) = 1000 pci. Penetration refusal depth = 2.7 m (Penetration speed = 5cm	ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS	FIELD DATA	LAB DATA
SM SiLTY SAND: light brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil. S2 Hard pushing of sampler at 2.3 - 2.7 m; HDP (Hydraulic Down Proceuro) = 1000 pci. Penetration refusal depth = 2.7 m (Penetration speed = 5cm	SM SILTY SAND: light brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil. SILTY SAND: light brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil. Hard pushing of sampler at 2.3 - 2.7 m; HDP (Hydraulic Down Proccuro) = 1000 pci. Penetration refusal depth = 2.7 m (Penetration speed = 5cm	9——0	S1				FILL	subangular fine to coarse gravel (max.3cm); about 60% subangular fine to coarse Sand (max.4.8mm); about 25%	PID = 0.5ppm	
Down Proccuro) = 1000 pci. Penetration refusal depth = 2.7 m (Penetration speed = 5cm	Down Proccure) = 1000 pci. Penetration refusal depth = 2.7 m (Penetration speed = 5cm	81	\$2			TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL	SM	fine to coarse Sand (max.4.8mm); about 30% Fines; no	PID ≈ 0.4ppm	
		-						Down Proceuro) = 1000 poi.	TT-XXX-XXXX	

EXPLORATION LOG

HOLE NO. **E11-122**



66

PROJECT LOCATION DATES DRILLING OVERBUCOORD GROUN	ON: TART IG ME IG AG URDE INAT	Camp ED: THOE ENCY N THI ES: N:	Carrol D/EQUIF CKNES 3,983,5	I	11 <u>BEC:</u> EC			14 TER: _ LED: _ EV.: _	Jul 11	TO" WA	PECTOR: LLER: TAL DEPTH: TER DEPTH: TUM:	9.3 m 6.69 m; AD MSL
TYPE O				neter	☐ Mon	itoring \] Auger Hole	X (other <u>Direct push</u>	sampling hole
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA		DESCRIPTI	ON OF MA	ITERIALS		FIELD DATA	LAB DATA
50—0 49—1 48—2 48—2 47—3 47—4 46—4 45—5	S1 S2 S3				SM SM	to cor coars mater SILT subar Fines	YEY SAND: brown; marse gravel (max.3cm se Sand; about 30% Friaf (SC). Y SAND: reddish browngular fine to coarse s; residual soil.	n); about 67 Fines; medi vn; moist; a	7% subangular fine ium plasticity; fill about 75%	to	%Recovery = 100 PID = 0ppm FC = F3 %Recovery = 97 PID = 0 - 0.1ppm FC = F3 %Recovery = 94 PID = 0.4 - 0.9ppm	
43	₩			TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL TOTAL		With g	granite rock fragment:	š.		TTPVI	РЮ ≈ 0.3 - 3.5ppm	
41——9						_ Pressu	oushing of sampler at ure) = 1000 psi. ration refusal depth =).					

ENVIRO-EXPLORATION LOG 11-032E.GPJ USACE SKOREA.GDT 7/22/11

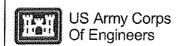
EXPLORATION LOG

HOLE NO. ${f E11 ext{-}123}$

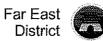


DRILLIN OVERB	NG AG URDE NATI ID CO	ENCY: N THICES: N: VER:	CKNES 3,983,5 Grass	BI 5S: 525.3 E	EC :: _447,6	50PM-1 HOLE DIAMETER: 5.5 cm TOTAL DEPTH: DEPTH DRILLED: 7.7 m WATER DEPTH: 522.3 GROUND ELEV.: 50.38 m DATUM: CONTAMINATION: ditoring Well ☐ Test Pit ☐ Auger Hole ☑ otherDirect push satisfies.	7.7 m 7.32 m; AD MSL
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS / STRATA	DESCRIPTION OF MATERIALS FIELD DATA	LAB DATA
0	\$1 \$2	***			FILL SM	CLAYEY SAND: grayish brown; moist; about 3% subangular fine gravel (max.2cm); about 57% subangular fine to coarse Sand (max.4.8mm); about 40% Fines; [medium plasticity, fill material (SC). SILTY SAND: brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil.	
32 33 13	83			THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE P		About 80% subangular fine to coarse Sand (max.4.8mm); %Recovery = 95 PID = 2.1 - 3.8ppm	
- 6	\$4		***************************************	***************************************		%Recovery = 91 PID = 2.4 - 4.5ppm	
	<u>¥</u>					Hard pushing of sampler at 7-7.7 m; HDP (Hydraulic Down Pressure) = 500 psi. Penetration refusal depth = 7.7m (Penetration speed = 5cm / 5min).	

ENVIRO-EXPLORATION LOIS 11-032E.GPJ USACE SKOREA.GDT 7/22/11



HOLE NO. E11-124



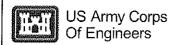
			I Site Se Carrol		oling	G&EE NO.: 11-032	E INS	SPECTOR:	66
DATES	STAR	TED:		13 Ju	11	FINISHED: 13 Jul 1		RILLER:	66
DRILLI	NG M	ETHO	D/EQUI				'		
DRILLI				Bl	EC		***************************************	TAL DEPTH: _	
			ICKNES					ATER DEPTH: _	
					: <u>447,6</u>		<u>'0 m</u> DA	TUM:	MSL
TYPE C			Grass		□ Mani	CONTAMINATION: toring Well	الآلاة ململا	othor Divisional -	
TIPEC	JF NO	LE.	□ Plezor	neter	□ IVIONI	toring Well	LUOIG IV	other <u>Direct push s</u>	ampling noie
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG	BLOW COUNT	SPT N-VALUE	USCS / STRATA	DESCRIPTION OF MATERIAL	.s	FIELD DATA	LAB DATA
	Si				FILL	SILTY SAND with Gravel: brown; moist; abo subangular to angular fine to coarse gravel (r	ut 15%	%Recovery = 100 PID = 1,2ppm	
L	"					about 65% subangular fine to coarse Sand (r about 20% Fines; no plasticity; fill material (S	max.4.8mm);	FC = F3	
51—						About 5% fine to coarse gravel (max.3cm); all subangular fine to medium Sand; about 15%	bout 80%	%Recovery = 100 PID = 0.2 - 39.3ppm	
-1						Light brown to brown.	rines.		
7	52								
50-									
<u> </u>					SM	SILTY SAND: brown; moist; about 70% subar	ngular fina ta	%Recovery = 100	
					O.W	coarse Sand (max.4.8mm); about 30% Fines residual soil.	; no plasticity;	PID = 0.3 - 1.8ppm FC = F3	
49						residuai soit.		FC-#3	
3									
_ 3									
-	S3								
48—									
_4	-								
47									
5								%Recovery = 100	
-								PID = 0 - 0.9ppm	
46-									
-6									
	54					Dense; Hard pushing of sampter at 6.5 m (Pe speed = 5cm / 5min).	enetration		
						·			
45—									
 -7						Hard pushing of sampler at 7.0 -7.35 m; HDF	(Hydraulic		
[i		Down Pressure) = 1400 psi. Penetration refusal depth = 7.35m (Penetration)	on speed =		
						5cm / 10min).	•		

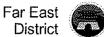
ENVIRO-EXPLORATION LOG 11-032E,GPJ USACE SKOREA,GDT 7'22/11

EXPLORATION LOG HOLE NO. E11-125

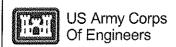


GROUN	ION: START NG ME NG AG URDE SINAT ID CC	Camp FED: _ ETHOD ENCY: EN THICES: N: OVER:	Carrol /EQUIF : : : : : : : : : : : : : : : : : : :	14 Ju 14 Ju PMENT B) SS: 510.3 E	l 11 : <u>BEC</u> : EC	FINISHED: 14 Jul 11 DF 50PM-2 HOLE DIAMETER: 5.5 cm TC DEPTH DRILLED: 2.53 m WA 21.7 GROUND ELEV.: 50.33 m DA CONTAMINATION:	SPECTOR:	MSL
ELEVATION / ADDITION /	SAMPLE TYPE / T	GRAPHIC TI	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	toring Well	other <u>Direct push</u> FIELD DATA	sampling hole LAB DATA
50-	Si				FILL	SILTY SAND: brown; moist; subangular fine gravel; about 65% fine to medium Sand; about 35% Fines; fill material (SM).	%Recovery = 100 PID = 0ppm	
	S2				ROCK	SILTY SAND: brown; moist; about 70% subangular fine to medium Sand; about 30% Fines; no plasticity; residual soil; granite texture. Hard pushing of sampler at 1.3 - 1.5 m; HDP (Hydraulic Down Pressure) = 1400 psi. Penetration refusal depth = 1.56m (Penetration speed = 4cm / 5min). GRANITE: light brown mottled with brown; highly weathered to moderately weathered; Fragmented rock chips	%Recovery = 100 PiD = 0 - 0.5ppm	
48-						at the sampler shoe Percussion drilling at 1.5 - 2.5m. Penetration speed = 3cm / 5min at 2.5m.		
						Toronalion speed – Sull / Sullin at 2.5m.		





Of Er	ngineers	•		HOLE NO. $E11-126$	D	istrict
OVERBURDEN COORDINATES GROUND COVE	mp Carroll D: HOD/EQUIF NCY: THICKNES IN: 3,983,5 ER: Grass	14 Jul PMENT: BE S: 12.9 E:	11 BEC5 CC 447,6	G&EE NO.: 11-032E IN FINISHED: 14 Jul 11 D 50PM-2 HOLE DIAMETER: 5.5 cm TO DEPTH DRILLED: 1.83 m W 31.5 GROUND ELEV.: 50.88 m D. CONTAMINATION:	ISPECTOR: RILLER: OTAL DEPTH: VATER DEPTH: ATUM: Other Direct push s	No Water; AD MSL
ELEVATION / DEPTH (meters) SAMPLE TYPE / NUMBER	CONTAMINATED BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS	FIELD DATA	LAB DATA
50— —1 sz			SM SM	SILTY SAND: brown; moist; about 2% subangular fine gravel; about 73% fine to coarse Sand; about 25% Fines; fill material (SM); grass roots at 0 - 0.15m. SILTY SAND: brown; moist; about 75% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; residual soil; granite texture. Hard pushing of sampler at 1.5 - 1.8 m; HDP (Hydraulic Down Pressure) = 1400 psi. Penetration refusal depth = 1.83m (Penetration speed = 5cm / 5min).	%Recovery = 100 PID = 0ppm %Recovery = 100 PID = 0 - 0.5ppm	



EXPLORATION LOG HOLE NO. E11-127

	PROJE	_					G&EE NO.:	11 627E	INIC	PECTOR:	- 1, 19 (19 1) 1 (19 1) 1 (19 1) 1 (19 1) 1 (19 1) 1 (19 1) 1 (19 1) 1 (19 1) 1 (19 1) 1 (19 1) 1 (19 1) 1 (19
	LOCAT DATE S	ION: START	Camp (ED:	Carroi	14 Ju	l 11	G&EE NO FINISHED:			ILLER:	160
	DRILLI	IG ME	THOE	/EQUIF	PMENT	BEC	50PM-2				
							HOLE DIAMETI			TAL DEPTH:	
	OVERB						23.4 GROUND ELEV	D: 2.32 m / 50.45 m		TER DEPTH: TUM:	No Water; AD MSL
	GROUN						CONTAMINATI				NISL
	TYPE C	F HO	LE: [] Piezon	neter	☐ Moni	toring Well	☐ Auger Hole	X	other <u>Direct push</u>	sampling hole
	ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS / STRATA	DESCRIPTION	OF MATERIALS		FIELD DATA	LAB DATA
		Sí				FILL	SILTY SAND: grayish brown t subangular fine gravel; about about 38% Fines; fill material	60% fine to coarse Sand; (SM).		%Recovery = 92 PID = 0ppm	
	50—					SM	SILTY SAND: light brown; mo fine to coarse Sand (max.4.8r	nm); about 30% Fines; no			
							plasticity, residual soil; granite	e texture.		%Recovery - 100 PID = 0ppm	
	- 1					***************************************					
							Light yellowish brown; w/rock	fragments; very dense.			
	49-	\$2									
		,									
											-
	2						Hard pushing of sampler at 2.	3 - 2,3m; HDP (Hydraulic			
							Down Pressure) = 1300 psi.	, , ,			
	I						Penetration refusal depth = 2.	32m (Penetration speed =	:		
							9cm / bmin).				
22/11											:
7 _08											
REA.						•					
SKO											
USACI											
GPJ											
-032E											
11											
ENVIRO-EXPLORATION LOG 11-032E.GPJ USACE SKOREA.GDT 7722/11											
ORAT											
EXPL											
SI S											
шL											

EXPLORATION LOG

HOLE NO. **E11-128**





DRILLIN OVERB	NG ME NG AG JURDE DINAT ND CC	ETHOD ENCY: N THIC ES: N: OVER:	EQUIF KNES 3,983,5 Grass	SS: 500.8 E	BEC: EC : 447,5	FINISHED: 16 Jul 11 COPM-1 HOLE DIAMETER: 5.5 cm TOPTH DRILLED: 3.2 m VOPM-5 GROUND ELEV.: 48.06 m CONTAMINATION:	NSPECTOR: DRILLER: TOTAL DEPTH: VATER DEPTH: DATUM: W other Direct push	No Water; AD MSL
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS	FIELD DATA	LAB DATA
48——0 47——1 6——2	\$1 \$2				Fill.	SILTY SAND with Gravel: grayish brown; moist; about 20% subangular fine to coarse gravel (max.3cm); about 50% fine to coarse Sand; about 30% Fines; no plasticity; fill material (SM). SILTY SAND: light brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil.	%Recovery = 100 PID = 0.3ppm FC = F3 FC = F3 %Recovery = 97 PID = 0.6ppm %Recovery = 98 PID = 0ppm	
5——3						Hard pushing of sampler at 2.9 - 3.2m; HDP (Hydraulic Down Pressure) = 1000 psi. Penetration refusel depth = 3.3m (Penetration speed = 5cm / 5min).		

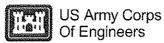


HOLE NO. E11-129



	_							
PROJE						oling		
LOCAT							G&EE NO.: 11-032E INSPECTOR:	Archares .
DATES							FINISHED: <u>15 Jul 11</u> DRILLER:	\mathcal{F}_{i}
DRILLI	IG M	ETHC	D/E	QUIF	MENT:	BEC5	C50PM-2	
DRILLIN	NG AC	SENC	:Y: _		BI	EC	HOLE DIAMETER: <u>5.5 cm</u> TOTAL DEPTH: <u>0.</u>	76 m
OVERB	URD	EN TH	HICK	(NES	:S:		DEPTH DRILLED: <u>0.76 m</u> WATER DEPTH: <u>No W</u>	'ater; AD
COORE	INAT	ES: N	1: <u>3,</u> 9	983,4	<u> 92.2</u> E	447,6	<u>,622.9</u> GROUND ELEV.: <u>50.46 m</u> DATUM: <u>MSL</u>	<i>.</i>
GROUN	ND CC	VER	: <u>G</u>	rass			CONTAMINATION:	
TYPE C							onitoring Well 🔲 Test Pit 🔲 Auger Hole 🔀 other <u>Direct push sampling</u>	g hole
							v v	
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG	CONTAMINATED	SLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS FIELD DATA L	_A8 DATA
ша 5	0.2	0		മാ	<u> </u>	ے م		
						FILL	SILTY SAND: dark brown; moist; fill material (SM); grass roots. %Recovery = 96 PID = 1.2ppm	
50	S 1					SM	SILTY SAND: light brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil; granite texture.	
-							Light yelfowish brown; w/rock fragments; very dense below 0.65m. Hard pushing of sampler at 0.6 - 0.75m; HDP (Hydraulic Down Pressure) = 1300 psi.	
,						ROCK	C GRANITE: grayish brown; highly weathered. Penetration refusal depth = 0.76m (Penetration speed = 1	
							cm / 5min).	

CEPOF-ED-G



EXPLORATION LOG HOLE NO. E11-130



PROJECT LOCATION DATE STATEMENT OF ILLINGULER COORDINGTYPE OF	ON: <u>(</u> TART G ME G AG JRDE INATE D CO	Camp (ED: THOD/ ENCY: N THIC ES: N: 3 VER: (EQUIF KNES 3,983,4	15 Jul PMENT: BF S: 89.1 E	11 BEC5 EC: 447,6	FINISHED: 15 Jul 11 D 0PM-2 HOLE DIAMETER: 5.5 cm TO DEPTH DRILLED: 1.22 m W 33.2 GROUND ELEV.: 50.91 m D. CONTAMINATION:	ISPECTOR:	1.22 m No Water; AD MSL sampling hole
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS	FIELD DATA	LAB DATA
50-	S1				SM	SILTY SAND: brown to dark brown; moist; fill material (SM); grass roots. SILTY SAND: brown; moist; about 70% subangular fine to coarse Sand; about 30% Fines; no plasticity; residual soil; granite texture. Hard pushing of sampler at 1 - 1.2m; HDP (Hydraulic Down Pressure) = 1400 psi. Penetration refusal depth = 1.22m (Penetration speed = 5 cm / 5min).	%Recovery = 100 PID = 0 - 2.2ppm	

EXPLORATION LOG



HOLE NO. INTITUTO	-
PROJECT: Phase I Site Soil Sampling	
LOCATION: Camp Carroll G&EE NO.: 11-032E INSPECTOR: DATE STARTED: 14 Jul 11 FINISHED: 14 Jul 11 DRILLER:	riji se alak Tiji se alak
DATE STARTED: 14 Jul 11 FINISHED: 14 Jul 11 DRILLER: DRILLING METHOD/EQUIPMENT: BEC50PM-2	10.100.0
	.7 m
OVERBURDEN THICKNESS: DEPTH DRILLED: 1.7 m WATER DEPTH: No W	
COORDINATES: N: 3,983,495.6 E: 447,655.1 GROUND ELEV.: 51.64 m DATUM: MSL	
GROUND COVER: Asphalt pavement CONTAMINATION:	
TYPE OF HOLE: Piezometer Monitoring Well Test Pit Auger Hole Monitoring Well Test Pit Auger Hole Monitoring Well Piezometer	g hole
SAMPLE TYPE / SAMPLE TYPE / SAMPLE TYPE / CONTAMINATED CONTAMINATED SPT N-VALUE SPT SPT N-VALUE SPT SPT SPT SPT SPT SPT SPT SPT SPT SPT	
SAMPLE TYPE SAMPLE TYPE CONTAMINATE STRATA SPT N-VALUE STRATA SPT SPT SPT SPT SPT SPT SPT SPT SPT SPT	.AB DATA
PEECVATION OF ELEVATION OF PRINTER SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK SAMPLE TO WORK S	
AC Asphalt pavement thickness ≈ 12 cm.	
FILL Poorly-graded GRAVEL with Silt and Sand: dark greenish gray; moist; about 75% subangular to angular fine to coarse **Recovery = 92 PID = 0.1ppm	
gravel (max.3.5cm); about 15% fine to coarse Sand; about FC = F1	
10% Fines; no plasticity; fill material (GP-GM).	
Fft.t. SILTY SAND: brown; moist; about 10% subangular fine to	
coarse gravel (max,3cm); about 70% fine to coarse Sand; PID = 0 - 0.4ppm	
1 about 20% Pines, Illi material (SM).	
SM SILTY SAND: brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity;	
residual soil; granite texture.	
Hard workload of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of Government of	
Hard pushing of sampler at 1.5 - 1.7 m; HDP (Hydraulic Down Pressure) = 1400 psi.	
Penetration refusal depth = 1.7m (Penetration speed = 5cm / 10min).	
, totali,	

EXPLORATION LOG

HOLE NO. **E11-132**





		Camp	Carrol			G&EE NO.:	11-032E	NS	PECTOR:	
DATE S					•••••	FINISHED:	15 Jul 11	_ DRI	LLER:	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s
DRILLIN DRILLIN				PMENT:	001600001110000000000000000000000000000		. 55 cm	TO	TAL DEPTH:	3.0 m
OVERB					<u> </u>	DEPTH DRILLED:		_		No Water; AD
					: 447,6	39.7 GROUND ELEV.:		_	UM:	
GROUN						CONTAMINATION		-		
TYPE C)F HC	LE: (☐ Piezon	neter	☐ Moni	toring Well Test Pit	☐ Auger Hole	X c	ther <u>Direct push</u>	sampling hole
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS / STRATA	DESCRIPTION OF	MATERIALS		FIELD DATA	LAB DATA
Γ-0		P o d			PCC	Cement concrete pavement thick	ness = 10 cm.			
51—	S1		- Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Cont		FILL	Poorly-graded GRAVEL with Silt about 60% angular to subangular about 30% fine to coarse Sand (n Fines; no plasticity; fill material (C SILTY SAND: grayish brown to broubangular fino to coarce gravel (subangular fine to coarse Sand; a	coarse gravel (max.0 nax.4.8mm); about 10 iP-GM). own; moist; about 109 max.3cm); about 70%	lcm);	%Recovery = 100 PtD = 2.3ppm FC = F1 FC = F3 %Recovery = 99	
-1	-				SM	plasticity; fill material (SM). SILTY SAND: brown to light brow to coarse Sand; about 30% Fines granite texture.	n; moist; about 70% fi		PID = 0.4 - 2.2ppm	
50	S2			7,747,7				777400		
9			***************************************	T POOMAL.	***************************************			***************************************		
						Hard pushing of sampler at 2.7-3. Pressure) = 1400 psi.	0m; HDP (Hydraulic I	Down		
<u> </u>				······································	··········	Penetration refusal depth = 3.0m / 5min).	(Penetration speed =	5cm		



HOLE NO. **E11-133**



Separation and						HULENU.	11-133			The second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of th
						G&EE NO.:	11 022E	INIC	PECTOR:	
LOCAT DATE:	HON: START	<u>Camp</u> fED:	Сагго	15 Ju	111	GAEE NO.:	11-032E 15 Jul 11		LLER:	
						50PM-2	25.041.22	~		
DRILLI						HOLE DIAMETER			TAL DEPTH:	
						DEPTH DRILLED				No Water; AD
GROU						626.8 GROUND ELEV. CONTAMINATIO		_ DAI	'UM:	MSL
TYPE (toring Well	□ Auger Hole	X c	ther <u>Direct push</u>	sampling hole
ž	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	TN.							
ELEVATION / DEPTH (meters)	F. F.	GRAPHIC LOG CONTAMIN	BLOW COUNT	LUE	¥	DESCRIPTION O	F MATERIALS		FIELD DATA	LAB DATA
EEV DEPT mete	AME	SRA SO SNA	Sol	SPT N-VALUE	USCS/ STRATA					
0	0,2	200	ш	0,2	PCC	Cement concrete pavement thic	lnoco = 10 om			
İ					FILL	Poorly-graded GRAVEL with S angular to subangular course gr		30% _	FC = F1	
					FILL	\15% fine to coarse Sand; about	uvel (mux.2.bem); ubi 5% Fines; no plasticit	out ty; fill /	%Recovery = 90 PID = 0.9ppm	
1	S1					material (GP). SILTY SAND: brown; moist; abo	ut 10% subangular fir	ne to	FC = F3	
					SM	coarse gravel; about 60% subar \about 30% Fines; no plasticity; f	ill material (SM).	/1		
						SILTY SAND: brown; moist; abo Sand; about 30% Fines; no plas			%Recovery = 100 PID = 0.1 - 1.7ppm	
50—						texture.	,			
Γ'										
ŀ	S2									
								ĺ		
49—										
-2						Very dense; w/rock fragments.				
						Hard puching of camplor at 2.2	2 45m: HDQ /Hudraut	ia		
		1111				Down Pressure) = 1400 psi.	e.nom, nor (myarau)			
⊣		<u> andalı</u>				Penetration refusal depth = 2,46	m (Penetration speed] =		
						1cm / 5min).				
										,

ENVIRO-EXPLORATION LOG 11-032E.GPJ USACE SKOREA GDT 7/22/11

	US Army Corps Of Engineers
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HOLE NO. E11-134



	ON: TART G ME G AG JRDE INAT D CC	Camp ED: _ ETHOD ENCY EN THICES: N:	Carrol /EQUIF : : : : : : : : : : : : : : : : : : :	16 Ju 16 Ju PMENT: BJ SS:	H11 BEC: EC		16 Jul 11 ER: 5.5 cm D: 3.0 m :: 50.90 m	_ WATER _ DATUN	DEPTH: R DEPTH: _ t:	No Water; AD
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS / STRATA	DESCRIPTION (OF MATERIALS		FIELD DATA	LAB DATA
50—————————————————————————————————————	S1				FILL FILL SM SC	Poorly-graded GRAVEL: gray, coarse gravel (max.3cm); about 40% Fines; fill material (SILTY SAND: brown; moist; ab gravel; about 70% fine to coarse plasticity, fill material (SM). SILTY SAND: brown; moist; ab Sand; about 30% Fines; residu CLAYEY SAND: light brown; m coarse Sand; about 35% Fines granite texture. Hard pushing of sampler at 1.3 Down Pressure) = 1400 psi; Pe 1.51m (Penetration speed = 1c) Hammer bit percussion drilling SILTY SAND: light brown; mois residual soil.	at 59% fine to coarse Sa(GP). yout 5% subangular fine se Sand; about 25% Fin yout 70% fine to medium all soil. oist; about 65% fine to ;; low plasticity; residual senetration refusal depth m / 5min). at 1.5-2.0m.	and; PID FC: les; no %Re PID FC: I soil;	= F3 ecovery = 97 = 1.4 - 3.1ppm	
483						Hard pushing of sampler at 2.5 Down Pressure = 1400 psi. Penetration refusal depth = 3.0 5 min		, 		

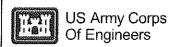
ENVIRO-EXFLORATION LOG 11-032E.GPJ USACE SKOREA.GDT 772211

EXPLORATION LOG

HOLE NO. **E11-135**



PROJE LOCAT	ION:	Camp		1	-		SPECTOR:	
DATES			\/	16 Ju	******		RILLER:	TALA THE STATE OF
DRILLII DRILLII OVERE COORL GROUN	NG AG BURDE DINAT ND CC	SENCY EN THI ES: N: OVER:	(; ICKNES : <u>3,983,</u> 4	B) 6S:	EC :: <u>447,5</u>	HOLE DIAMETER: 5.5 cm TC DEPTH DRILLED: 7.65 m WA 78.2 GROUND ELEV.: 47.26 m DA CONTAMINATION:	OTAL DEPTH: ATER DEPTH: ATUM: Other <u>Direct push</u>	7.65 m No Water; AD MSL sampling hole
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS	FIELD DATA	LAB DATA
47	51				FILL	SILTY SAND with Gravel: brown; moist; about 20% subangular fine to coarse gravel (max.4cm); about 55% subangular fine to coarse Sand (max.4.8mm), about 25% Fines; no plasticity; fill material (SM).	%Recovery = 80 PID = 0.1ppm FC - F3 %Recovery = 84 PID = 0.4ppm	
46	52				FILL	SILTY SAND: brown to grayish brown; moist; about 5% subangular fine to coarse gravel (max.3cm); about 65% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; fill material (SM).	FC = F3	
45	\$3				FILL	CLAYEY SAND: reddish brown; moist; about 5% subangular fine to coarse gravel (max.3cm); about 60% subangular fine to coarse Sand; about 35% Fines; fill material (SC).	%Recovery = 63 PID = 0 - 0.4ppm	
43					SM	SILTY SAND: brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil.	%Recovery = 90	
PPJ USACE SKOREA.GDT 7722/11 0	54			TO COMPANY	***************************************	Many rock fragments at 7.5-7.65m; Hard pushing of sampler	PID = 0 - 0.3ppm	
ENVIRO-EXFLORATION LOG 11-032E.GPJ USACE SKOREA.GDT 7722/11						at 7.4-7.65 m; HDP (Hydraulic Down Pressure) = 1000 psi. Penetration refusal depth = 7.65m (Penetration speed = 3cm / 5min).		



HOLE NO. E11-136



	PROJE					oling		0055110					
	LOCAT DATE S			Carrol	15 Ju	l 11		G&EE NO.: _ FINISHED: _		1-032E 5 Jul 11	_	PECTOR: LLER:	
)/EQUIF		BEC:	50PM		1.	7 Juli 11	_		b6
	DRILLIN					EC						TAL DEPTH:	
	OVERB				***************************************	. 117 4	0 0	DEPTH DRILLI GROUND ELI	-			TER DEPTH: 「UM:	No Water; AD MSL
	GROUN				1/3.U L	<u>44/4</u>	00.0	CONTAMINAT		50.12 m	_ DA	OW	MISL
					neter	☐ Mon	toring V			Auger Hole	(X)	other <u>Direct push</u>	sampling hole
	ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS / STRATA		DESCRIPTIO	DN OF MA	ATERIALS		FIELD DATA	LAB DATA
5	50-0					FILL	grave	Y SAND: brown; moist I (max.1cm); about 59	% fine to	coarse Sand; abo	ut	%Recovery = 100 PID = 0.4ppm	
		\$1				SM	SILTY	Fines; no plasticity; fill <u>/ SAND</u> : light brown; r	noist; abo	out 70% subangula		FC = F3 `` FC = F3	
l		***************************************						coarse Sand; about granite texture.	30% Fine	s; no plasticity; res	siduai	%Recovery = 100	
]											PID = 0.8 - 1.6ppm	
	1												7
4	9	•											
		S2											
	-												
	2												
4												%Recovery = 98 PID = 1.1 - 1.4ppm	
	-		401				Hard o	oushing of sampler at	3 - 3.2m:	HDP (Hydraulic D	nwn		
		53					Pressi	ure) = 1400 psi.	,	(,			
22/11													
LQ 47	—3 7—												
REA G	' [<u></u> }						ation refusal depth =	3.2m (Pe	netration speed =	4cm		
ESKO							/ 5min).					
USACI													
E.GP.													
11-032													
ENVIRO-EXPLORATION LOG 11-032E.GPJ USACE SKOREA GDT 7722/11													
ATION													
RPLOR R													
RO-E													
N. L													



HOLE NO. **E11-137**



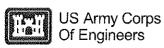
PROJE LOCAT DATE S DRILLIN	ION: START NG ME	Camp ED: THOD	Carrol /EQUIF	l 16 Jul PMENT:	11 BEC	50PM	G&EE NO.: FINISHED: _ -1 HOLE DIAME	16	Jul 11	DRI	PECTOR: LLER:	6.75 m
OVERB	URDE DINAT ND CC	EN THIC ES: N: OVER:	CKNES 3,983,4 Grass	S: 69.1 E	: 447,5	589.2	DEPTH DRIL GROUND EL CONTAMINA	LED: _ EV.: _ TION:		WA DA	TER DEPTH: FUM:	No Water; AD
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS / STRATA		DESCRIPTI	•			FIELD DATA	ŁAB DATA
47—	Si				FILL	grave Sand	Y SAND: brown; mois el (max.2cm); about 7 i (max.4,8mm); about rial (SM).	0% subang	gular fine to coarse		%Recovery = 80 PID = 0.7ppm FC = F3 %Recovery = 97 PiD = 0.2 - 1.0ppm	
46—							Y SAND: light brown; o coarse Sand (max.4 icity; residual soil.	moist; abo 1.8mm); ab	ut 75% subangular out 25% Fines; no		FC = F3	7
45				***************************************							%Recovery = 95 PID = 0ppm	
—3 44—_	S3			***************************************								
43 -				***************************************						***************************************		
42	\$4					Hard Down	pushing of sampler at Pressure) = 1000 ps	t 6.0-6.75 i i.	m; HDP (Hydraulic		%Recovery = 91 PID = 0ppm	
41							ration refusel depth = 5min),	= 6.75m (P	enetration speed =			
												:

ENVIRO-EXPLORATION LOG 11-032E.GPJ USACE SKOREA.GDT 7/22/11

EXPLORATION LOG



U Enginee			HOLE NO.		-130		<u> </u>	istrict		
PROJECT: Phase I Si LOCATION: Camp Ca DATE STARTED: DRILLING METHOD/EDRILLING AGENCY: OVERBURDEN THICK COORDINATES: N: 3.5 GROUND COVER: BI TYPE OF HOLE:	18 Jul 18 Jul QUIPMENT: BE NESS: 083,461,8 E: ick tile	11 BEC50PM- C	FINISHED: -2 HOLE DIAN DEPTH DR GROUND E CONTAMIN	METER: ILLED: ELEV.: IATION:	5.5 cm 2.22 m 49.75 m	11 DRILLER:				
ELEVATION / DEPTH (meters) SAMPLE TYPE / NUMBER GRAPHIC LOG CONTAMINATED	BLOW COUNT SPT N-VALUE	USCS / STRATA	DESCRIP	PTION OF N	IATERIALS		FIELD DATA	LAB DATA		
49— -1 s1 49— -2 s2		FILL Poorl about about solution (SM) SM SiLTY coars. (SM). SILTY to coa granite Hard proposed to the poorl about about about about about the solution of the poorl about about about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poorl about the poo	65% angular to st. 25% fine to coars; no plasticity, fill n (SAND: brown; me a Sand; about 30% (SAND: brown to lists a Sand; about 30 at texture.	with Silt a with Silt a ubangular fire e Sand (ma naterial (GP sist; about 7 fires; no ight brown; 0% Fines; n r at 2.0 - 2.2 psi.	nd Sand: gray; mois ne gravel (max.2cm x.4.8mm): ahout 10	c (Replication)	covery = 100 = 4.6ppm : F3			



HOLE NO. E11-139



PROJE	CT: J	Phase I	Site So	oil Sam	oling					
LOCAT	ION:	Camp	Carrol]		G&EE NO.:			PECTOR: _	
DATES				18 Ju		FINISHED:	18 Jul 11	DRI	LLER:	
DRILLIN DRILLIN OVERB COORE GROUN	NG AG JURDE DINAT	ENCY: EN THIC ES: N:	CKNES 3,983,4	BI SS: I54.7 E	EC	50PM-2 HOLE DIAMETE DEPTH DRILLE G08.4 GROUND ELEV CONTAMINATIO	D: 3.66 m '.: 50.06 m	WA:	TAL DEPTH: _ TER DEPTH: _ TUM:	3.66 m No Water; AD MSL
TYPE C	F HO	LE: [] Piezon	neter	☐ Mon	toring Well	☐ Auger Hole	X c	other <u>Direct push s</u>	ampling hole
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS / STRATA	DESCRIPTION	OF MATERIALS		FIELD DATA	LAB DATA
500	S1				FILL	SILTY SAND with Gravel: gray about 35% subangular fine to a about 50% subangular fine to a Fines; no plasticity; fill materia	coarse gravel (max.3cm) coarse Sand; about 15%		%Recovery = 90 PID = 13.1ppm FC = F3	
		XXX							%Recovery = 100 PID = 4.8 - 18.0ppm	
<u>–1</u>	SM <u>SILTY SAND</u> : brown; moist; about 75% subang coarse Sand (max.4.8mm); about 25% Fines; residual soil; granite texture.								FC = F3	
40	52									
1										
482								Total management of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of t	%Recovery = 100 PID = 4.3 - 4.9ppm	
								1		
4/3	S 3									
7						Hard pushing of sampler at 3.5 Down Pressure) = 1300 psi.	-3.66 m; HDP (Hydraulic	;		
I L	f	<u>: 17.17.1</u>	<u> </u>			Penetration refusal depth = 3.6 1cm / 1min).	6m (Penetration speed =			

ENVIRO-EXPLORATION LOG 11-052E.GPJ USACE SKOREAGET 7/22/11

EXPLORATION LOG

HOLE NO. E11-140



PROJE LOCAT	ION:	Camp	Carrol	I			G&EE NO.:			ECTOR: _	
DATE S DRILLII DRILLII OVERE COORL GROUN TYPE C	NG ME NG AC BURDE DINAT ND CC	ETHOD ENCY EN THI ES: N: OVER:	/EQUIF CKNES 3,983,4 Grass	B) SS: 145.7 E	: <u>BEC:</u> EC : 447,0		HOLE DIAMETE DEPTH DRILLE GROUND ELEV CONTAMINATION	ER: 5.5 cm (D: 3.0 m) (.: 50.41 m)	_ WAT _ DATU	AL DEPTH:	
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS / STRATA		DESCRIPTION	OF MATERIALS		FIELD DATA	LAB DATA
50_	S1				FILL.	angula	SAND: brown; moist; at ar fine to coarse gravel; a about 20% Fines; fill ma	about 77% fine to coarse	e ș	%Recovery = 94 PID = 0ppm	
49—	\$2				SM	coarse granite Light b	SAND: brown; moist; at a Sand; about 30% Fines a texture; whock fragment orown; dense.	s; no plasticity; residual s		6Recovery = 100 PID = 0ppm	
48						Hard pi Pressu	ushing of sampler at 2.5 re) = 1400 psi.	- 3m; HDP (Hydraulic D	Эоwп		
		remin tydfonol gynod gy	energy resourced	n de la companya de la companya de la companya de la companya de la companya de la companya de la companya de		Penetra 5min),	ation refusaf depth = 3m	(Penetration speed = 3	Bem /		

ENVIRO-EXPLORATION LOG 11-032E.GPJ USACE SKOREA.GDT 7/22/11

EXPLORATION LOG

HOLE NO. E11-141



DRILLIN OVERB COORE	NG ME NG AC URDI DINAT ND CC DF HO	ETHOD BENCY: EN THIC ES: N: OVER: LE:	EQUIF KNES 3,983,4 Asphal	PMENT B) S: 48.1 E t pave	: <u>BEC:</u> EC : <u>447,5</u> nent	60PM-1 HOLE DIAMETER: 5.5 cm TO DEPTH DRILLED: 7.2 m W 778.6 GROUND ELEV.: 47.54 m DO CONTAMINATION: DO	RILLER: DTAL DEPTH: ATER DEPTH: ATUM: I otherDirect push s	7.2 m 4.46 m; Al MSL
ELEVATION / DEPTH (meters)	SAMPLE TYPE , NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS	FIELD DATA	LAB DATA
47-1	S1				AC FILL FILL	Asphalt pavement thickness = 5 cm. Poorly-graded GRAVEL with Silt and Sand: grayish brown; moist; about 70% subangular coarse gravel (max.5cm); about 20% subangular fine to coarse Sand (max.4.8mm); about 10% Fines; no plasticity; fill material (GP-GM). SILTY SAND: brown; moist; about 55% subangular fine to coarse gravel (max.3cm); about 30% Fines; no plasticity; fill material (SM). Subangular fine gravel (max.2cm).	FC = F1 %Recovery = 100 PID = 2.2ppm FC = F3 %Recovery = 100 PID = 0.5 - 1.1ppm	
15—- 3 4—- 4 3—-	S3 ▼				FêLL	About 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no gravel below 2.3m. CLAYEY SAND: reddish brown; moist; about 65% subangular fine to coarse Sand (max.4.8mm); about 35% Fines; medium plasticity, fill material (SC). Easy pushing of sampler at 3.3-4.3m; HDP=100 psi. Silty sand layer encountered at 4.0-4.3m; perched water encountered at 4.3m. Brown; wet; about 5% subangular fine to coarse gravel (max.3cm); about 55% subangular fine to coarse Sand; about 30% Fines.	%Recovery = 72 PID = 0.3 - 1.2ppm	
2—	S4			7711464	SM	SILTY SAND: light brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil. Hard pushing of sampler at 7.0-7.2m; HDP (Hydraulic Down Pressure) = 1000 psl.	%Recovery = 71 PID = 0.9 - 2.1ppm	

EXPLORATION LOG

Far East District



					HOLENO. IZII-I-Z		
	CT: <u>Phase</u> ION: Camp			oling	G&EE NO.: 11-032E	NSPECTOR:	
		Carron		11	•	NSPECTOR: _)RILLER:	
	NG METHOL					MILLEN.	
	NG AGENCY			EC.		OTAL DEPTH:	4.73 m
OVERB	URDEN TH	ICKNESS				VATER DEPTH:	1.7 m; AD
			12.5 E	: <u>447,6</u>		ATUM:	MSL
	ID COVER:				CONTAMINATION:		
I YPE O	F HOLE:	⊔ Piezome	eter ———	∐ Monit	toring Well	X other Direct push	sampling hole
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER GRAPHIC LOG	BLOW COUNT					:
Σ Η (ξ)	SAMPLE T NUMBER GRAPHIC LOG	8	SPT N-VALUE	TA	DESCRIPTION OF MATERIALS	FIELD DATA	LAB DATA
EP- mete	SPAM SON	Š į	SPT 4-∨A	USCS / STRATA			
<u> </u>	W2 03 0		07.2.				
19-	sı 💥			FILL	SILTY SAND: brown; moist; about 1% subangular fine gravel; about 69% subangular fine to coarse Sand	%Recovery = 90 PID = 1.2ppm	
}	├ ── ⋙				(max.4.8mm); about 30% Fines; no plasticity; fill material (SM).	FC = F3 %Recovery = 75	
						PID = 1,5 - 1.9ppm	1
8	₅₂						
_	,			SM	SILTY SAND: brown; moist to wet; about 75% subangular	FC = F3	
	*				fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity, residual soil; granite texture.		*****
—2 7—					F	%Recovery = 78	
						PID = 0.5 - 1.7ppm	ı
_3				İ			
16							
-	53						
1							
5-4							
	图图				Hard pushing of sampler at 4.5-4.73 m; HDP (Hydraulic		
					Penetration refusal depth = 4.73m (Penetration speed = 4cm / 5min).	2	
					4cm / Smin).		

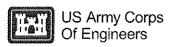
EXPLORATION LOG

HOLE NO. E11-143



PROJECT: Phase I Site Soil Sampling LOCATION: Camp Carroll INSPECTOR: G&EE NO.: _ 11-032E DATE STARTED: 16 Jul 11 DRILLER: FINISHED: 16 Jul 11 DRILLING METHOD/EQUIPMENT: BEC50PM-2 DRILLING AGENCY: BEC HOLE DIAMETER: 5.5 cm TOTAL DEPTH: 3.55 m OVERBURDEN THICKNESS: DEPTH DRILLED: 3.55 m WATER DEPTH: No Water: AD COORDINATES: N: 3,983,444.6 E: 447,613.9 GROUND ELEV.: 49.57 m DATUM: **MSL** GROUND COVER: Grass CONTAMINATION: TYPE OF HOLE: Piezometer ☐ Monitoring Well ☐ Test Pit ☐ Auger Hole X other Direct push sampling hole SAMPLE TYPE NUMBER BLOW COUNT GRAPHIC LOG SPT N-VALUE DESCRIPTION OF MATERIALS USCS/ STRATA FIFLD DATA LAR DATA SILTY SAND: dark brown grades to brown; moist; about 1% subangular fine gravel (max.1cm); about 69% subangular fine to coarse Sand; about 30% Fines; no %Recovery = 90 PID = 2.6ppm FC = F3 plasticity; fill material (SM); grass roots at 0-0.15m. SM SILTY SAND: brown to light brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil; granite texture. %Recovery = 90 49 PiD ≈ 3.5 - 4.8ppm 48--2 %Recovery = 100 PID = 1.7 - 1.9ppm Grayish brown; about 80% subangular fine to coarse Sand; about 20% Fines. 47 Hard pushing of sampler at 3.2-3.55 m; HDP (Hydraulic Down Pressure) = 1300 psi, Penetration refusal depth = 3.55m (Penetration speed = 1cm / 1min).

ENVIRO-EXPLORATION LOG 11-032E.GPJ USACE SKOREA.GDT 1/22/11



HOLE NO. E11-144

Far East District



					Site So	oil Samı	oling	G&EE NO.:	11-032E	INS	PECTOR:	
	DAT	ES	TAR	TED:		18 Ju		FINISHED:			LLER:	
	DRII OVE COO GRO	LIN RBI DRD DUN	IG AC URDI INAT D CC	GENCY EN THI 'ES: N: DVER;	: CKNES	B) SS: 135.9 E	EC :: 447,0	50PM-2 HOLE DIAMET DEPTH DRILLE 532.4 GROUND ELE CONTAMINATI itoring Well ☐ Test Pit	ED: <u>1.52 m</u> V.: <u>50.10 m</u> ION:	_ WA _ DAT	TAL DEPTH: TER DEPTH: TUM:	
				<u> </u>	 		<u> </u>	<u> </u>				
	ELEVATION / DEPTH	(meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION	N OF MATERIALS		FIELD DATA	LAB DATA
	50-	Ŷ	S1			Address	FILL	SILTY SAND with Gravel: gr moist; about 15% subangular 65% subangular finc to coors 20% Fines; fill material (SM);	r fine gravel (max.1.5cm); se Sand (max.4.8mm); ab	about	%Recovery = 96 PiD = 5.8ppm	
		1					SM	SILTY SAND: light brown; modern fine to coarse Sand; about 30 soil; granite texture.	olst; about 70% subangula % Fines; no plasticity, re:	भ sidual	%Recovery = 100 PID = 6.2 - 6.5ppm	
	49—	1	S2					With rock fragments.				
	_							Hard pushing of sampler at 1. Down Pressure) = 1400 psi. Penetration refusal depth = 1	, , ,			
3.GDT 7.22/11								cm / 1min).	,	•		
GPJ USACE SKORE												
ENVIRO-EXPLORATION LOG 11-032E.GPJ USACE SKORES,GDT 7,22/1												
ENVIRO-EXPLOR												

EXPLORATION LOG

HOLE NO. E11-145



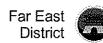
PROJECT: Phase I Site Soil Sampling LOCATION: Camp Carroll INSPECTOR: G&EE NO.: ____ 11-032E DATE STARTED: 17 Jul 11 17 Jul 11 FINISHED: DRILLER: DRILLING METHOD/EQUIPMENT: BEC50PM-1 **DRILLING AGENCY:** HOLE DIAMETER: 5.5 cm TOTAL DEPTH: 5.8 m 5.8 m **OVERBURDEN THICKNESS:** DEPTH DRILLED: WATER DEPTH: No Water; AD COORDINATES: N: 3,983,417.9 E: 447,586.7 GROUND ELEV.: 49.30 m DATUM: MSL GROUND COVER: Grass CONTAMINATION: TYPE OF HOLE:

Piezometer ☐ Monitoring Well Test Pit ☐ Auger Hole X other <u>Direct push sampling hole</u> SAMPLE TYPE / NUMBER BLOW COUNT 80 GRAPHIC LOG SPT N-VALUE ELEVATION DEPTH (meters) DESCRIPTION OF MATERIALS FIELD DATA LAB DATA USCS / STRATA SILTY SAND with Gravel: grayish brown; moist; about %Recovery = 100 25% subangular fine to coarse gravel (max.3cm); about 50% PID = 0.5ppm49 subangular fine to coarse Sand (max.4.8mm), about 25% Fines; no plasticity, fill material (SM); with scraps of asphalt.

SILTY SAND: brown; moist; about 5% subangular fine to coarse gravel (max.3cm); about 70% subangular fine to FC #F1 \FC = F3 %Recovery = 90 PID = 0.7 - 4.8ppm coarse Sand (max.4.8mm); about 25% Fines; low plasticity; fill material (SM). 48 About 10% subangular fine gravel (max.2cm); about 65% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; encountered clayey sand layer at 1.6m to 1.7m. %Recovery = 89 PID = 0.9 - 4.2ppm 46 SILTY SAND: brown; moist; about 75% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; 45 44 Hard pushing of sampler at 5.4-5.8 m; HDP (Hydraulic Down Pressure) = 1000 psi. Penetration refusal depth = 5.8m (Penetration speed = 5cm

ENVIRO-EXPLORATION LOG 11-032E.GPJ USACE SKOREA.GDT 7/22/11

	US Army Corps Of Engineers
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	PROJE	CT:]	Phase I	Site So	il Samı	oling	•				
	LOCAT	ION:	Camp	Carrol	l		G&EE NO.:	11-032E	INS	PECTOR:	
	DATES							14 Jul 11	DRI	LLER:	STATE OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY
							50PM-1				
							HOLE DIAME				
	OVERB						DEPTH DRIL				No Water; AD
							684.6 GROUND EL		DA	ГИМ:	MSL
	GROUN TYPE C						CONTAMINA itoring Well		NO.	other Direct push	
	TIPEC	r no	' . L		elei	LI MUII	itoring vveir in restr	Pit ☐ Auger Hole	(A)	Julei <u>Direct push</u>	sampling note
	ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS / STRATA	DESCRIPTI	ON OF MATERIALS		FIELD DATA	LAB DATA
	47——0		****			FILL	CLAYEY SAND: brown; m	oist; about 10% subangula	ar fine	%Recovery = 100	
		S1					to coarse gravel (max.3cm coarse Sand (max.4.8mm	i); about 65% subangular); about 25% Fines; medic	fine to um	PID = 1.0ppm FC ≈ F3	
	†					FILL	plasticity; fill material (SC) SILTY SAND: brown; mois			%Recovery = 98 PID = 0.5ppm	
	46 —1						gravel (max.2cm); about 6 Sand (max.4.8mm); about	5% subangular fine to coa	arse	FC = F3	
		S2				SM	material (SM).			ma	
	+					SIVI	SILTY SAND: yellowish bro subangular fine to coarse	Sand (max.4.8mm); about	t 25%	FC = F3	
							Fines; no plasticity; residu	at soil.			
	452						Light brown.			%Recovery = 97	
										PID = 2,6 - 3,1ppm	
	443										
	+	53									
				ļ							
	434										
											5
							Hard pushing of sampler a Down Pressure) = 1000 ps	i.	i		
	•						Penetration refusal depth 3cm / 5min).	= 4.85m (Penetration spec	ed =		
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ENVIRO-EXPLORATION LOG 11-032 E.GPJ USACE SKOREA GDT 7/22/1											
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EXPLORATION LOG HOLE NO. E11-147



PROJECT: Phase I Site Soil Sampling LOCATION: Camp Carroll G&EE NO.: 11-032E INSPECTOR: DATE STARTED: 16 Jul 11 DRILLER: FINISHED: 16 Jul 11 DRILLING METHOD/EQUIPMENT: BEC50PM-2 ____ HOLE DIAMETER: DRILLING AGENCY: TOTAL DEPTH: 5.5 cm 1.97 m **OVERBURDEN THICKNESS:** DEPTH DRILLED: 1.97 m WATER DEPTH: No Water; AD COORDINATES: N: 3,983,432.1 E: 447,610.0 GROUND ELEV.: 49.45 m DATUM: _____ MSL GROUND COVER: Grass CONTAMINATION: TYPE OF HOLE: Piezometer ☐ Monitoring Well ☐ Test Pit ☐ Auger Hole X other <u>Direct push sampling hole</u> SAMPLE TYPE NUMBER BLOW COUNT ELEVATION / DEPTH (meters) GRAPHIC LOG **DESCRIPTION OF MATERIALS** FIELD DATA LAB DATA USCS / STRATA FILL SILTY SAND: brown; moist; about 1% fine gravel; about %Recovery = 100 69% subangular fine to coarse Sand; about 30% Fines; fill material (SM); grass roots at 0-0.1m. 49-SILTY SAND: brown; moist; about 70% subangular fine to coarse Sand; about 30% Fines; no plasticity; residual soil; %Recovery = 100 PID = 3.5 - 4.1ppm granite texture. 48-Hard pushing of sampler at 1.8 - 1.97m; HDP (Hydraulic Down Pressure) = 1300 psi. Penetration refusal depth = 1.97m (Penetration speed = 4

EXPLORATION LOG



				I Site So	oil Sam	oling							
	DATE	HON: stad:	Camp	<u>Carrol</u>	17 Yes	111		G&EE NO.: _ FINISHED: _	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1-032E		PECTOR: _ ILLER:	ACCEPTAGE SERVICE
				D/EQUI					1	/ 341 11	_ DK	LLER. J	
	DRILLI	NG A	GENC'	Y:	В	EC			TER:	5.5 cm	_ TO	TAL DEPTH:	5,8 m
	OVER	3URDI	EN TH	ICKNES	SS:			DEPTH DRILL	.ED:	5.8 m	_ WA		No Water; AD
								GROUND ELE			_ DA	ГUМ:	MSL
				Aspha Piezon		nent □ Mon		CONTAMINAT Vell □ Test Pi		 ☐ Auger Hole	1971	ther Direct much	sampling hole
	111 -	7, 110	, L	1 16201	110101	L WION	itoring v	veli1 169(1)		Auger Floie	<u> </u>	Ariel Direct pusi	i sampling note
	ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG	BLOW COUNT	SPT N-VALUE	USCS / STRATA		DESCRIPTIO	N OF M	ATERIALS		FIELD DATA	LAB DATA
	-0		***			AC		lt pavement thickness				FC = F1	
	47	Si			<u> </u>	FILL	\ moist;	v-graded GRAVEL will about 70% subangula	ar coarse	gravel (max.5cm	ú; L	%Recovery = 100 PID = 0.2ppm	
							labout	20% subangular fine t 10% Fines; no plastic	itv: fill m	aterial (GP-GM)		FC = F3 %Recovery = 85	
	1					FILL	coarse	SAND: brown; moist; e gravel (max.3cm); at e Sand (max.4.8mm);	about 10	J% subangular tin Subangular fine i	e to lu [PiD = 0 - 1.5ppm FC = F3	
	46	\$2				FILL	∐fill ma	e Sano (max.4.8mm); terial (SM), 70% subangular fine t				FC = F3	
	10	01					about	30% Fines.		`	m);		
	2						suban	Y SAND: reddish bro gular fine to coarse Sa	and (max	(.4.8mm); about 3	0%		
	45						SILTY	medium plasticity; fill SAND: brown; moist;	about 59	% subangular fine	to	%Recovery = 66	
	45						coarse	gravel (max.3cm); at Sand (max.4.8mm);	out 65% about 30	subangular tine t % Fines; no plast	io icity;	PID = 0 - 1.4ppm	
	3	ļ						terial (SM). asticity.					
		ĪΔ			:		Brown	; wet; about 5% subar	gular fin	e to coarse grave	1		
	44	83					(max.4 of sam	lom); about 75% suba 8mm); about 20% Fir pler at 3.3-4.3m; HDP ntered at 3.3m.	nes; no p	plasticity: easy pus			
	435	777,000				SM	fine to	SAND: light brown; m coarse Sand (max.4.8 ity; residual soil.	oist; abo imm); ab	ut 75% subangula bout 25% Fines; n	ar O		
2/11	42						Hard p	ock fragments. ushing of sampler at lire) = 1000 psi.	5.5-5.8m	n; HDP (Hydraulic	Down		
7. 7.2							Penetra / 5min)	ation refusal depta 🗕 :	5.8ırı (Pe	enetration speed =	5cm		
ENVIRO-EXPLORATION LOG 11-032E.GPJ USACE SKOREA,GDT 7,22/11													
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	US Army Corps Of Engineers
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EXPLORATION LOG HOLE NO. E11-149



OVERB COORE GROUN	URDI INAT ID CO	ENCY: EN THICES: N: (OVER:	CKNES 3,983,4 Grass	S: 24.7 E	: _447,5	DEPTH DRILLED: 3.6 m 99.3 GROUND ELEV.: 49.81 m	TOTAL DEPTH: 3.6 m WATER DEPTH: No Water; DATUM: MSL Mother Direct push sampling hole
ELEVATION / DEPTH (meters)	SAMPLE TYPE /	GRAPHIC LOG CONTAMINATED	BLOW COUNT 6	SPT 0	USCS/ STRATA	DESCRIPTION OF MATERIALS	FIELD DATA LAB DAT
0	S1				FILL	SILTY SAND with Gravel: brown; moist; about 15% subangular coarse gravel (max.3cm); about 60% subang tine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; fill material (SM).	FC = F3 **
91	S2				FILL	SILTY SAND: brown; moist; about 5% subangular coars gravel (max,3cm); about 65% subangular fine to coarse Sand (max,4,8mm); about 30% Fines; no plasticity, fill material (SM). SILTY SAND: light brown; moist; subangular fine to coar	PID = 1.1 - 2.0ppm FC = F3
32			Agency			Sand (max.4,8mm); no plasticity; residual soil.	%Recovery = 97 PID = 3.1 - 3.6ppm
-3 -3 -	53					Hard pushing of sampler at 3.4-3.6m; HDP (Hydraulic D Pressure) = 1000 psi. Penetration refusal depth = 3.6m (Penetration speed = 1 / 1min).	

EXPLORATION LOG

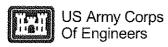
HOLE NO. E11-150





PROJE LOCAT DATE S DRILLII	ION: START	Camp	Carrol	18 Jul	11	G&EE NO.: FINISHED:	11-032E 18 Jul 11	INSPECTOR: DRILLER:	
DRILLII OVERE COORI GROUI	NG AG SURDE DINAT ND CC	SENCY: EN THIC ES: N: OVER:	: CKNES 3,983,4 Grass	BI S: 13.4 E	EC : 447,6	HOLE DIAMETE DEPTH DRILLED 28.5 GROUND ELEV. CONTAMINATIO	D: <u>7.0 m</u> : <u>50.06 m</u> N:	WATER DEPTH: DATUM:	No Water; AD MSL
ELEVATION / LACTOR (Meters)	SAMPLE TYPE /	GRAPHIC II LOG	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	toring Well	☐ Auger Hole	X other <u>Direct push</u>	LAB DATA
50-0	S1 S2		83	ωz	FILL	SILTY SAND: brown; moist; abo gravel (max.1cm); about 70% s Sand (max.4.8mm); about 25% material (SM). About 10% subangular fine to c about 65% subangular fine to co Fines. About 5% subangular fine grave subangular fine to coarse Sand	ubangular fine to coarse Fines; no plasticity; fill oarse gravel (max.3cm); oarse Sand; about 25% el (max.1cm); about 65%	FC = F3 %Recovery = 97 PID = 0.2 - 2.1ppm	
48——2	S3		14. A.A.	7////	FILL	CLAYEY SAND: reddish brown subangular fine to coarse grave subangular fine to coarse Sand Fines; medium plasticity; till ma Gray, wet, about 60% subangula 40% Fines; no gravel below 3.0 Brown; about 65% subangular fi	I (max.3cm); about 60% (max.4.8mm); about 35' terial (SC). ar fine to coarse Sand; a m.	%	
46——4			***************************************		SM	(max.4.8mm); about 35% Fines; SILTY SAND: light brown; moist fine to coarse Sand (max.4.8mm plasticity; residual soil.	; about 75% subangular	%Recovery = 86 PID = 3.9 - 4.3ppm	
44	54 ,					Hard pushing of sampler at 6.7- Pressure) = 1000 psi. Penetration refusal depth - 7.0n / 1min).			

ENVIRO-EXPLORATION LOG 11-022E.GPJ USACE SKOREA.GDT 7/22/11



HOLE NO. E11-151



L DATE STAR	Phase I Site Camp Carr TED:	oll			NSPECTOR:	
DRILLING M DRILLING AG OVERBURD	ETHOD/EQU GENCY: EN THICKNI FES: N: 3,98 3 OVER: Gra s	JIPMENT:	BEC5 EC : 447,5	60PM-1 HOLE DIAMETER: 5.5 cm Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Tolerand Toler	OTAL DEPTH:	No Water; AD MSL
ELEVATION / DEPTH (meters) SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS	FIELD DATA	LAB DATA
471 s ²			FILL FILL	SILTY SAND: brown; moist; about 10% subangular fine to coarse gravel (max.3cm); about 60% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; fill material (SM). About 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no gravel below 0.5m. CLAYEY SAND: reddish brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; medium plasticity; fill material (SC). SILTY SAND: brown; moist; about 3% subangular fine gravel (max.1cm); about 67% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; fill material (SM). About 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no gravel below 2.0m. Low plasticity. SILTY SAND with Gravel: brown; moist; about 15% subangular fine to coarse Sand (max.4.8mm); about 50% subangular fine to coarse Sand (max.4.8mm); about 55% Fines; no plasticity; fill material (SM). About 70% fine to coarse Sand; about 30% Fines; no gravel below 5.5m. SILTY SAND: light brown; moist; about 75% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity, residual soil. Hard pushing of sampler at 7.5-7.85m; HDP (Hydraulic	%Recovery = 100 PID = 0.5ppm FC = Γ3 %Recovery = 93 PID = 0.7 - 1.7ppm FC = F3 FC = F3 %Recovery = 82 PID = 0.7 - 1.4ppm %Recovery = 86 PID = 0 - 1.9ppm	

ENVIRO-EXPLORATION LOG 11-032E.GPJ USACE SKOREA.GDT 7/22/11

EXPLORATION LOG HOLE NO. E11-152

Far East District



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					oil Samp	<u>pling</u>	0 0 mm 1 1 0	44.0055			
				Carrol			G&EE NO.:			SPECTOR: _	
				(FOLUE			FINISHED:	18 Jul 11	_ DR	ILLER:	The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon
1							50PM-1			T 61 PS PS PS TS 11	
E				· ·		EC		ER: <u>5.5 cm</u>		TAL DEPTH:	5.0 m
					SS:		DEPTH DRILLE	***************************************			No Water; AD
							610.1 GROUND ELEV		_ DA	TUM:	MSL
							CONTAMINATI		679	.1	
IY	PE O	F HO)LE: L] Piezon	neter	L. Moni	toring Well	☐ Auger Hole	X	other <u>Direct push</u>	sampling hole
			Т Т.		1		<u> </u>			1	
-		TYPE	GRAPHIC LOG CONTAMINATED	Ę							
101	_	щŒ		BLOW COUNT	<u>w</u>	4	DESCRIPTION	OF MATERIALS		FIELD DATA	LAB DATA
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ELEVATION /	۪ڴڴ ۪	SAMPLE	GRAPHIC LOG CONTAMIN	BFC	SPT N-VALUE	USCS / STRATA					
	0		XXXX			FILL	SILTY SAND: brown; moist; a	hout 59/ pubangular 6%	· to	%Recovery ≈ 100	
-		Si				IFEL	coarse grave! (max.3cm); abo	out 70% subangular fine	to	PID = 1.9ppm	
	-		****				coarse Sand (max.4.8mm); a fill material (SM).	bout 25% Fines; no plas	ticity;	FC = F3 %Recovery = 95	
49							, , , , , , , , , , , , , , , , , , ,			PID = 3.8 - 4.2ppm	
	1				l		No gravel below 1,0m,				
	ļ	52					9				
48	-					SM	SILTY SAND: brown; moist; a coarse Sand (max.4.8mm); a	bout 70% subangular fin	e to	1	
"							coarse Sano (max.4.6mm); a	Dout 30% rines; residua	(SUII.		
	2	• • • • • • • • • • • • • • • • • • • •								%Recovery = 94	
										PID = 2,4 - 4,7ppm	
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	_	S 3								7	
46		-					l				
	-4										
-	1										
	-									ļ	
45							Hard pushing of sampler at 4	.7-5.0m; HDP (Hydraulic	Down		
	_5 L		54901				Pressure) = 1000 psi, Penetration refusal depth = 5	Om (Denetration speed	- 1cm		
							/1min).	nom (i energion speed	- 1011		
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ENVIRO-EXP_ORATION LOG 11-032E.GPJ_USACE SKOREA.GDT 7:22/11											

EXPLORATION LOG

HOLE NO. E11-153



LOCATION: Camp Carroll G&EE NO.: 11-032E INSPECTOR:	
	7 ~
DATE STARTED: <u>18 Jul 11</u> FINISHED; <u>18 Jul 11</u> DRILLER:	
DRILLING AGENCY: BEC HOLE DIAMETER: 5.5 cm TOTAL DEPTH: 10.0 m	
OVERBURDEN THICKNESS: DEPTH DRILLED: 10.0 m WATER DEPTH: No Water;	AD
COORDINATES: N: 3,983,391.3 E: 447,621.3 GROUND ELEV.: 50.17 m DATUM: MSL	
GROUND COVER: Grass CONTAMINATION:	
TYPE OF HOLE: Piezometer Monitoring Well Test Pit Auger Hole X other Direct push sampling hole	
THE CANTION / DEPTH (meters) SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SULVINGER SAMPLE TYPE SPT SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE SAMPLE TYPE	
문 : DESCRIPTION OF MATERIALS FIELD DATA LAB DAT	Α
TABDET AND MATERIALS SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPLE TO SAMPL	
50— AC Aspinal pavement thickness = 7cm.	
III. moist_about 70% subangular fine to coarse grave // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // Newtowny = 100 // New	
\(\(\max.4.8mm\); about 10% Fines; fill material (GP-GM). \(\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\right	
49— Coarse gravel (max.3cm); about 65% subangular fine to PID = 1.0 - 10.3ppm	
coarse Sand (max.4.8mm); about 25% Fines; no plasticity; fill material (SM).	
With scrap of asphalt at 3m. %Recovery = 96	
PID = 2.9 - 4.3ppm	
47— FILL CLAYEY SAND: reddish brown to gray; moist; about 5%	l
subangular fine gravel (max.2cm); about 60% subangular	
medium plasticity, fill material (SC).	ļ
46	
About 3% subangular fine gravel (max.1cm); about 67% subangular fine to coarse Sand; about 30% Fines.	
45—	
SC <u>CLAYEY SAND</u> : reddish brown; moist; about 70%	
Fines; medium plasticity, residual soil.	
-6	
43-7	
SM SILTY SAND: brown; moist; about 70% subangular fine to	
coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil.	
8	
42	- 1
Penetration finish depth = 10.0m (Penetration speed =	
10cm / 20sce).	
IV -	

ENVIRO-EXP_ORATION LOG 11-032E.GPJ USACE SKOREA.GDT 7/22/11



HOLE NO. E11-154





PROJE										·····		
LOCAT				11	4 1	***************************************	G&EE NO.: _				PECTOR:	
DATE S		-			g 11		****		Aug II	DKI	LLER:	te descriptions of the sec
DRILLI					EC_			TER:	5.5 cm	TO	ΓAL DEPTH:	2.3 m
OVERE							DEPTH DRILL					No water; AD
							GROUND ELE	_			ΓUM:	
GROUN	ND CC	OVER:	Grass				CONTAMINAT					
TYPE C)F HO	LE:] Piezon	neter	☐ Moni	itoring V	Well ☐ Test Pi	t [] Auger Hole	X) c	other Direct push	sampling hole
	Γ_	0	<u> </u>	Τ	Т	Τ						
ž	SAMPLE TYPE NUMBER	GRAPHIC LOG CONTAMINATED	l S	'								
E ^{± ©}	E E	HIC AMIN	Ö	5	^¥		DESCRIPTIO	N OF MA	TERIALS		FIELD DATA	LAB DATA
ELEVATION / DEPTH (meters)	AMP	GRAPHIC LOG CONTAMIN	BLOW COUNT	SPT N-VALUE	USCS / STRATA							
	ωz	050	<u>m</u>	ØΖ		<u> </u>						
		XXX		!	FILL	coarse	' <u>SAND</u> : brown; moist; a gravel (max.3cm); abo	out 60% s	subangular fine to		%Recovery = 100 PID = 1.5ppm	
						coarse	e Gand (max.4.6mm); a ial (SM).	bout 30%	Tines; no plasticity	; fill	гс=гз	
52	S1	 	!									
						About 65% st	5% subangular fine to subangular fine to coars	coarse gra	avel (max.3cm); abo	วนt จก%	%Recovery = 100 PID = 0.6 - 2.0ppm	
		 	1			Fines.		O (naki nominyi zac	,,		***************************************
		 										
-												
1		 										
		 										
51		 			SM	SILTY	SAND: light brown; mo	nist: about	f 80% subangular fir	ne l		
	S2					to coar	rse Sand (max.4.8mm)	about 20	1% Fines; residual s	oil;		
						granto	: ICAIGIC.					
			,									
		411										
-2	.			i		Hard pi	ushing of sampler at 2	.1-2,3m; l	HDP (Hydraulic Dov	vn		
		111				Pressu	ıre) = 1000 psi.					
50-		4141				Danetr	ation refusal depth = 2	am (Don	stration around = 1c			
						1min).	аноп гешѕағыеры — г	an (ren	erranon speen – na	m /		
												!
								•				

ENVIRO-EXFLORATION LOG 11-032E-PHASE2-FINAL GPJ USACE SKOREA.GDT 8/22/11

EXPLORATION LOG





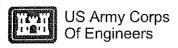
	LOCAT DATE DRILLI DRILLI OVERI COOR	TION: STAR NG M NG A SURD DINA	Camp TED: IETHO GENÇ' EN TH IES: N	D/EQUI Y; IICKNES :3,983,4	11 Au 11 Au PMENT B SS: 188.8 E	EC : <u>447,</u> 6	FINISHED: 11 Aug 11 50PM-1 HOLE DIAMETER: 5.5 cm DEPTH DRILLED: 1.8 m 77.1 GROUND ELEV.: 51.51 n CONTAMINATION:	DR n TO WA	SPECTOR: RILLER: TAL DEPTH: ATER DEPTH: TUM:	No water; AD
	ELEVATION / ALC DEPTH (meters)	SAMPLE TYPE/ H	GRAPHIC LOG CONTAMINATED	1	spt N-VALUE	USCS / STRATA	oring Well	le (X)	other Direct push	sampling hole
	0	S1				FiLL	SILTY SAND: brown; moist; about 10% subangular coarse gravel (max.3cm); about 65% subangular fir coarse Sand (max.4.8mm); about 25% Fines; no plamaterial (SM).	ie to	%Recovery = 100 PID = 2.1ppm FC = F3	
	51— - -—1	52				SM	SILTY SAND: brown; moist; about 80% subangular		%Recovery = 100 PID = 4.2 - 5.2ppm	
SACE SKOREA.GDT 8/22/11	50					A AAAAAA	coarse Sand (max.4.8mm); about 20% Fines; residu granite texture. Hard pushing of sampler at 1.6-1.8m; HDP (Hydrau Pressure) = 1000 psi. Penetration refusal depth = 1.8m (Penetration spee 1min).	tic Down		
ENVIRO-EXPLORATION LOG 11-032E-PHASE2-FINAL GPJ USACE SKOREA GDT 8/22/11										

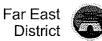
EXPLORATION LOG



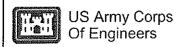


LOCAT	ION:	Camp	o Carro	II	npling	G&EE NO.:	11-032E	_ INS	PECTOR:	
						FINISHED:	05 Aug 11	_ DR	LLER:	
						C50PM-2 HOLE DIAMETER). 55 cm	TO:	TAL DEPTH:	6.45 m
OVERE	BURD	EN TH	ICKNE	SS:	L()	DEPTH DRILLED	6.45 m	- WA	TER DEPTH:	0.73 m: A
COORI	CANIC	ES: N	:3,983,	460.1 E	447,0	679.5 GROUND ELEV.:	51.40 m	_ DA	ГUМ:	
GROU	AD CO	OVER:	Grass	notor	C Mos	CONTAMINATION	V:	rson .	Alban Bi d	
ITEC	<i>T</i> .	 	T	neter	IV/OII	ioning well itest Pit	☐ Auger Hole	IASI (other <u>Direct push s</u>	sampling hole
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	111		DESCRIPTION OF	MATERIALO		Elet b bata	
EVAT PTH iters)	MPLE	GRAPHIC LOG CONTAMIN) WC	SPT N-VALUE	USCS / STRATA	DESCRIPTION OF	MATERIALS		FIELD DATA	LAB DATA
	β⊋	85 8	BLC	ω <u>γ</u>	STS					
					FILL	Poorly-graded GRAVEL with Silt about 60% angular to subangular f	and Sand: brown; n	noist;	%Recovery = 90 PtD = 1.7ppm	
51	S1				-167	(max.2.5cm); about 30% subangulabout 10% Fines; fill material (GP-	ar fine to coarse San	d;	FC = F1 FC = F3	
_						0.15m. SILTY SAND: brown; moist; about	,, ,]	%Recovery = 100	
	Ţ					coarse gravel (max.3.3cm); about i coarse Sand; about 15% Fines; no	70% subangular fine	to	PID = 0.5 - 2.5ppm	
<u> </u> -1			i		FILL	CLAYEY SAND: dark brown; moist	; about 5% subangul	ar	FC = F3	
	S2				CH	fine gravel (max.2cm); about 55% t 40% Fines; medium plasticity; fill m	aterial (SC).	about		
50					OI,	FAT CLAY with Sand: dark brown subangular fine gravel (max.2.5cm)); about 20% subang			
						fine Sand; about 78% Fines; high p	lasticity; alluvial soil.			
2					SC	AL MOTY AND I	. 000/ 5			
					30	CLAYEY SAND: brown; moist; abo Sand; about 40% Fines; medium pl		m	%Recovery = 99 PID = 2.4 - 4.8ppm	
9										
_					SM	SILTY SAND: fight brown; moist; at Sand; about 40% Fines; no plasticit				
-3						texture.				
8										
٠ -										
	Ī									
4	ļ					About 70% fine to coarse Sand; abo	out 30% Fines: w/ rov	.		
	83					fragments at 4.0 - 6.0m.	Jac 50 /6 1 11/03, 49/ 100	^`		
7				ĺ						
						Fine to medium sand size.				
<u> </u>	ľ									
	:									
7-6]					Dense.				
	:					Hard pushing of sampler at 6.1-6.4r	n; HDP (Hydraulic D	own		
5 ⊣ L];				l	Pressure) = 1300 psi. Penetration refusal depth = 6.45m (Penetration speed =	3cm /		<u> </u>



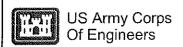


PROJECT:									
LOCATION:			11 4	_ 11	G&EE NO.: _	11-032E	INS	SPECTOR:	
DATE STAF DRILLING N						11 Aug 11	טא	ILLER:	
ORILLING N			В			TER: <u>5.5 cm</u>	TO	TAL DEPTH:	4.5 m
OVERBURE		CKNE	SS:	<u> </u>	DEPTH DRILL	.ED: 4.5 m			No water; AD
					655.6 GROUND ELE		DA ⁻	TUM:	MSL
ROUND C					· · · · · · · · · · · · · · · · · · ·				
YPE OF H	OLE: [] Piezor	neter	☐ Mon	itoring Well Test Pi	t ☐ Auger Hole	X (other <u>Direct push s</u>	ampling hole
ELEVALION / DEPTH (meters) SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTIO	N OF MATERIALS		FIELD DATA	LAB DATA
0 81				FILL	SILTY SAND: brown; moist; (max.1cm); about 60% subar (max.4.8mm); about 35% Fin (SM).	igular fine to coarse Sand		%Recovery = 100 PID = 5.2ppm FC = F3	
			**************************************		About 10% subangular fine to 60% subangular fine to coars Fines.	o coarse gravel (max.3cm e Sand (max.4.8mm); ab	a); about out 30%	%Recovery = 97 PID = 7.8 - 11.2ppm	
-1 S2					About 3% subangular fine gra subangular fine to coarse Sar Fines; encountered clayey sa	nd (max.4.8mm); about 3	5%		
				SM	SILTY SAND: light brown; mo to coarse Sand (max.4.8mm) residual soil.	oist; about 80% subangul ; about 20% Fines; no pla	ar fine asticity;		
								%Recovery = 96 PID = 2.1 - 8.9ppm	
1									
-									
-3									
- S3									
				ļ					
1									
-4					Hard pushing of sampler at 4	.3 4.5m: HDP (Hvdraulic	Down		
					Pressure) = 1000 psi.				
L L	<u>r.45154 </u>	,			Penetration refusal depth = 4 / 1min).	.5m (Penetration speed =	= 1.5cm		
					, 154111).				
								-	





LOCAT DATE S DRILLII DRILLII	NG METHOE NG AGENCY	Carro D/EQUI	II 12 Au PMENT B	g 11 「: BEC	G&EE NO.: <u>11-032E</u> INSPECTOR: FINISHED: <u>12 Aug 11</u> DRILLER:
COORE	DINATES: N:	3,983,4 Grass	<u>435.9</u>	: 447,6	697.4 GROUND ELEV.: 51.31 m DATUM: MSL CONTAMINATION:
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS FIELD DATA LAB DATA
51	S1 S2			FILL	SiLTY SAND: brown; moist; about 5% subangular to angular fine to coarse gravel (max.2.5cm); about 75% subangular fine to coarse Sand; about 20% Fines; no plasticity; filt material (SM); Grass roots at 0-0.05m. Grayish brown. %Recovery = 100 PID = 1.8ppm FC = F3 %Recovery = 98 PID = 2.9 - 3.7ppm
49-				FILL	CLAYEY SAND: brown; moist; about 55% angular to subangular fine gravel (max.1.5cm); about 55% subangular fine to coarse Sand; about 40% Fines; low plasticity; fill material (SC). Reddish brown.
48-1-4-4-4-7-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	S3			SM	Brown. SILTY SAND: yellowish brown; about 65% subangular fine to coarse Sand; about 35% Fines; low plasticity; residual soil
1. USACE SYOREA.GDT 8/22/11					%Recovery = 94 PID = 0.9 - 1.9ppm
7 7 7 8 4 4 4 7 8 8 4 4 4 4 4 4 4 4 4 4	S4				Light brown to brown; about 70% suhangular fine to coarse Sand; about 30% Fines; no plasticity; sampler penetration speed= 7cm/1min at 7.9m.
ENVIRO-EXPLORATION LOG 11-03:E-PHASEZ-FINAL GPJ USACE SAOR	<u>国际销</u>				Hard pushing of sampler at 8,3-8,5m; HDP (Hydraulic Down Pressure) = 1500 psi. Penetration refusal depth = 8,5m (Penetration speed = 5cm / 1min).







PROJE						G&EE NO.: 11-032E	INSPECTOR:
LOCAT				12 Au	σ 11	FINISHED: 12 Aug 11	DRILLER:
						C50PM-2	
DRILLII OVERB COORE GROUN	NG AG SURD SINAT ND CO	GENCY EN TH TES: N: OVER:	/: ICKNE: 3,983,4 Grass	<u>B</u> SS: 424.1 E	EC : 447,0	HOLE DIAMETER: 5.5 cm DEPTH DRILLED: 12.0 m 689.8 GROUND ELEV.: 50.83 m CONTAMINATION:	m WATER DEPTH: No water; /m DATUM: MSL
TYPE C)F HC	DLE: [☐ Piezor	neter	☐ Mon	itoring Well	ole X other Direct push sampling hole
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS / STRATA	DESCRIPTION OF MATERIALS	FIELD DATA LAB DATA
50-	\$1 \$2				FILL	SILTY SAND: brown to grayish brown; moist; abort subangular fine gravel (max.2cm); about 70% subto coarse Sand; about 20% Fines; so plasticity; fill (SM); Grass roots at 0-0.05m. Subangular fine to coarse gravel (max.3cm).	angular fine PID = 10.6ppm
48—				***************************************	FILL	CLAYEY SAND: brown to reddish brown; moist; al fine to medium Sand; about 45% Fines, low plastic (material (SC). SILTY SAND: brown; moist; about 70% subangula coarse Sand; about 30% Fines; no plasticity; fill ma	arfine to
46—	S 3				FILL	CLAYEY SAND: reddish brown; moist; about 55% medium Sand; about 45% Fines; low plasticity; fill r (SC). Medium to high plasticity; at 4.3-5.0m.	fine to material
-6					CH	FAT CLAY with Sand: reddish brown; moist; abou	%Recovery = 91 PID = 1.3 - 3.3ppm
44—	54					Sand; about 85% Fines; high plasticity; residual soi texture.	il; granite
8					ML	SILT with Sand: brown; moist; about 25% fine Sar 75% Fines; low plasticity; residual soil.	nd; about
42					sc	CLAYEY SAND: reddish brown; moist; about 55% about 45% Fines; residual soil. Crayish brown silty sand soil at 8.8-9.0m.	tine Sand;
					ML	SILT with Sand: brown; moist; about 20% fine to r Sand, about 80% Fines; medium plasticity; residua granite texture. Brown silty sand soil at 9.7-10.0m.	
40-					sc	<u>CLAYEY SAND</u> : brown; moist; about 55% subangucoarse Sand; about 45% Fines; medium plasticity; soil; granite texture.	
					SM	SILTY SAND: grayish brown; moist; about 70% sul fine to coarse Sand; about 30% Fines; no plasticity soil; granite texture.	r; residual
						HDP (Hydraulic Down Pressure) = 1500 psi at 11.5 Penetration refusal depth =12.0m (Penetration spe / 1min at 11.9-12.0m).	

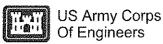
EXPLORATION LOG

HOLE NO. E11-160



PROJECT: Phase II Site Soil Sampling LOCATION: Camp Carroll INSPECTOR: G&EE NO.: 11-032E 12 Aug 11 DATE STARTED: FINISHED: 12 Aug 11 DRILLER: DRILLING METHOD/EQUIPMENT: BEC50PM-1 DRILLING AGENCY: **BEC** HOLE DIAMETER: 5.5 cm **TOTAL DEPTH:** WATER DEPTH: No water; AD **OVERBURDEN THICKNESS:** DEPTH DRILLED: 3.4 m COORDINATES: N:3,983,429.5 E: 447,733.2 GROUND ELEV.: 51.93 m DATUM: _ MSL GROUND COVER: Grass CONTAMINATION: X other <u>Direct push sampling hole</u> TYPE OF HOLE: ☐ Piezometer ☐ Monitoring Well ☐ Test Pit ☐ Auger Hole SAMPLE TYPE / NUMBER CONTAMINATED BLOW COUNT ELEVATION / DEPTH (meters) DESCRIPTION OF MATERIALS FIELD DATA LAB DATA USCS / STRATA %Recovery = 100 PID = 4.6ppm SILTY SAND: brown; moist; about 75% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; residual soil; granite texture. %Recovery = 97 PID = 4.9 - 6.6ppm 51-50 %Recovery = 36 PID = 3.6 - 5.4ppm 49-3 Hard pushing of sampler at 3,2-3,4m; HDP (Hydraulic Down Penetration refusal depth = 3.4m (Penetration speed = 2cm /

ENVIRO-EXPLORATION LOG 11-0525-PHASES-FINAL.GPJ LSACE SKOREA.GDT 8/22/11





HOLE NO. E11-161 PROJECT: Phase II Site Soil Sampling G&EE NO.: _ INSPECTOR: LOCATION: Camp Carroll 11-032E DATE STARTED: 05 Aug 11 FINISHED: 05 Aug 11 DRILLER: DRILLING METHOD/EQUIPMENT: BEC50PM-2 DRILLING AGENCY: BEC HOLE DIAMETER: 5.5 cm TOTAL DEPTH: 7.9 m WATER DEPTH: **OVERBURDEN THICKNESS:** DEPTH DRILLED: 7.9 m 2.0 m: AD 50.51 m COORDINATES: N: 3,983,404.3 E: 447,702.2 GROUND ELEV.: DATUM: MSL GROUND COVER: Grass CONTAMINATION: TYPE OF HOLE: Piezometer ☐ Monitoring Well ☐ Test Pit ☐ Auger Hole X other Direct push sampling hole BLOW COUNT ELEVATION / DEPTH (meters) SAMPLE T NUMBER GRAPHIC LOG SPT N-VALUE DESCRIPTION OF MATERIALS FIELD DATA LAB DATA USCS/ STRATA %Recovery = 96 PID = 1.2ppm SILTY SAND: brown; moist; about 10% subangular fine to coarse gravel (max.3.5cm), about 65% angular to subangular fine to coarse Sand; about 25% Fines; no plasticity; fill material FC = F3 50-%Recovery = 100 PID = 1.2 - 1.6ppm Subangular fine gravel (max.1.5cm). 49 FAT CLAY: reddish brown; moist; about 10% fine Sand; about 90% Fines; medium plasticity; alluvial soil. %Recovery = 100 PID = 2.8 - 3.4ppm 48--3 SANDY FAT CLAY: reddish brown; moist; about 30% fine Sand; about 70% Fines; medium plasticity; alluvial soil. 47 SILT with Sand: yellowish red; moist; about 25% fine Sand; about 75% Fines; no to low plasticity; residual soil; granite ML 46-%Recovery = 100 PID = 1.2 - 5.3ppm SILTY SAND: brown; moist; about 60% fine to medium Sand; about 40% Fines; residual soil; granite texture. 45 £4 Hard pushing of sampler at 7,7-7,9m; HDP (Hydraulic Down Pressure) = 1300 psi. Penetration refusal depth = 7.9m (Penetration speed = 2cm /

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ENVIRO-EXPLORATION LOG 11-032E-PHASE2-FINAL GPJ USACE SKOREA,GDT 8/22/1

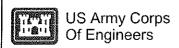
PAGE 1 of 1

EXPLORATION LOG

Far East	
District	į



	PROJE	CT:	Phase 1	II Site S	Soil Sar	npling					
				Carro			G&EE NO.:	11-032E	INS	PECTOR:	
			-			g 11	FINISHED: _	05 Aug 11	_ DRI	ILLER:	A STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STA
							C50PM-2				
	ORILLI	NG A	GENCY	/: 	B	EC	HOLE DIAME	TER: <u>5.5 cm</u>		TAL DEPTH:	1.52 m
		SUKU	EN IHI	2 002	SS:	. 447 5	DEPTH DRILL 742.7 GROUND ELE	****************************		TUM:	No water; AD MSL
					112.4				_ DA	I UIVI	MSL
					neter		itoring Well		X (other Direct push	sampling hole
	ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION	N OF MATERIALS		FIELD DATA	LAB DATA
	2——0	 	XXXX			FILL	SILTY SAND with Gravel: br	own: moist: about 15%		%Recovery = 100	
***************************************		S1					subangular fine to coarse gra subangular to angular fine to no plasticity, fill material (SM)	vel (max.3.3cm); about 659 coarse Sand; about 20% Fi		PID = 1.8ppm FC = F3	
	+									%Recovery = 100 PID = 2.6 - 4.2ppm	
										* 11.7 ··· * * * * * * * * * * * * * * * * *	
			 			SM	CH TV CAMP: fight brown; ma	ict to day about 900/ angu	lar		
						SIVI	SILTY SAND: light brown; mo fine to coarse Sand; about 20	% Fines; residual soil; gran	iite		
_	1	52					texture.				
5	-	U.									
							Hard pushing of sampler at 1.	.2-1.5m: HDP (Hydraulic D	ows		
							Pressure) = 1300 psi.				
22.11							•				
A.GDT 8/22.11	r			·····			Penetration refusal depth = 1, 2,5min),	52m (Penetration speed =	1cm /		
8 8							2.0(1),				
Š											
ACES											
ST											
GP CP											
2-EIN											
HASE											
<u>+</u>											
ENVIRO-EXPLORATION LOG 11-032E-PHASE2-FINAL.GPJ JSACE SKORE											
Afflok											
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HOLE NO. E11-163

Far East District



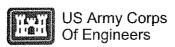
				II Site S		npling			
i i				<u>Carro</u>				SPECTOR:	
4			TED:		10 Au			RILLER:	
			GENC'			EC	C50PM-2 HOLE DIAMETER: 5.5 cm TC	TAL DEPTH: _	10.95 m
				ICKNE		<u> </u>		ATER DEPTH:	
1						: 447,7	······································	TUM:	MSL
				Grass			CONTAMINATION:		
TYI	PE O	FHC	LE: [☐ Piezon	neter	☐ Mon	itoring Well 🗌 Test Pit 🔲 Auger Hole 🔀	other Direct push s	ampling hole
ELEVATION /	neters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED		SPT N-VALUE	USCS / STRATA	DESCRIPTION OF MATERIALS	FIELD DATA	LAB DATA
шс	-0	σz	XXXX	8	ωz	⊃ ທ FILL	SILTY SAND with Gravel: brown; dry to moist; about 30%	%Recovery = 100	
		S1				1 46-6-	subangular fine to coarse gravet (max.3.5cm); about 55% angular to subangular fine to coarse Sand; about 15% Fines;	PID = 8.3ppm FC = F3	
50						FILL	no plasticity; fill material (SM),	%Recovery = 100	1
		\$2					SILTY SAND: light brown; moist; about 80% subangular fine to coarse Sand; about 20% Fines; no plasticity; fill material (SM)	PID = 5.1 - 13.7ppm FC = F3	
	-2						Grayish brown.	%Recovery = 100 PID = 5.7 - 13.8ppm	
								1710 0.7 - 10.0ppitt	
48						FILL	CLAYEY SAND: brown; moist; about 55% subangular fine to medium Sand; about 45% Fines; medium plasticity; fill material.	7	
						SC	\((SC); at 2.7-2.8m. \(\sum_{SILTY SAND: light brown; about 80% fine to coarse Sand;	ſ	
		53					about 20% Fines; fill material (SM); at 2.8-3.1m.		
	-4						CLAYEY SAND: reddish brown; moist; about 65% fine Sand; about 35% Fines; low to medium plasticity; residual soil;		
							granite texture.		
46									
							Brown to grayish brown; subangular fine to medium Sand; low	%Recovery = 94	
							plasticity.	PID = 8.2 - 17.4ppm	
	-6								
						SM	SILTY SAND: brown; moist; about 70% fine to medium	-	
44—							Sand; about 30% Fines; no plasticity; residual soil; w/rock fragments (5mm), granite texture.		
		İ					Light brown,	**************************************	
		S4							
	-8						Granite texture,		
		Ţ					Granic texture.		
42—									
							More silty soil at 9-10m.		
			1111						
	-10 -		///			SC	CLAYEY SAND: brown; wet to moist; about 65% subangular		
							fine to coarse Sand; about 35% Fines; low plasticity; residual soil.		
40-	L					SM	SILTY SAND: light brown; about 55% fine to coarse Sand; "about 45% Fines; residual soil; dense.	1	1
Í	•						End of direct push sampling at 10.95m.	,	
							Hard pushing of sampler at 10,7-10,95m; HDP (Hydraulic Down Pressure) = 1500 ps; Penetration refusal depth = 10,95m (Penetration speed = 5cm / 1min),		
42—							тоголі (пенецавон вреец – роті) іткії),		

EXPLORATION LOG





	ION: STAR	Camp TED:	Carro	ll 11 Au	g 11	G&EE NO.: <u>11-032E</u>	NSPECTOR: DRILLER:
DRILLII OVERE COORI GROUN	NG AG BURDI DINAT ND CO	GENCY EN THI 'ES: N: OVER:	′: CKNE 3,983,; Grass	B: SS: 348.6 E	EC : 447,	HOLE DIAMETER: 5.5 cm T DEPTH DRILLED: 11.0 m V 126.8 GROUND ELEV.: 50.63 m E CONTAMINATION: Yes	OTAL DEPTH: 11.0 m VATER DEPTH: Caved (8.2m); A DATUM: MSL
TYPE	Т	 		neter	∐ Mon	toring Well Test Pit Auger Hole Test Pit	☑ other <u>Direct push sampling hole</u>
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS	FIELD DATA LAB DATA
50	S1			anny spanner.	FILL	SILTY SAND: brown; moist; about 10% subangular fine to coarse gravel (max.3.5cm); about 70% subangular fine to coarse Sand; about 20% Fines; no plasticity; fill material (SM Gruss routs at 0.0.05m. SILTY SAND with Gravel: about 15% subangular fine to coarse gravel (max.2.5cm); about 65% subangular fine to coarse Sand, about 20% Fines.	%Recovery = 100 PID = 2ppm ; FC = F3 %Recovery = 87 PID = 0.6 - 0.9ppm
8	53				FILL	SILTY SAND: about 5% subangular fine to coarse gravel; about 70% subangular fine to coarse Sand; about 25% Fines CLAYEY SAND: reddish brown; moist; about 65% fine to medium Sand; about 35% Fines; low plasticity; fill material (SC). SILTY SAND: grayish brown; moist; about 75% subangular fine to coarse Sand; about 25% Fines; no plasticity; fill materi (SM). CLAYEY SAND: reddish brown; about 65% fine to medium Sand; about 35% Fines. SILTY SAND: grayish brown; about 75% subangular fine to coarse Sand; about 25% Fines.	
6-	✓				SW	Brownish gray. Well-graded SAND: bluish gray; moist to wet; about 95% subangular fine to coarse Sand; about 5% Fines; no plasticity alluvial soil; weak solvent odor. 5.0 to 5.6m; PiD = 50.8 ppm. CLAYEY SANU: brown; molst; about 10% subangular fine to coarse gravel; about 60% subangular to angular fine to coarse gravel; about 60% subangular to angular fine to coarse gravel; about 50% subangular to angular fine to coarse sand; about 30% Fines; low plasticity; alluvial soil.	/
-8	\$4				SM	SILTY SAND: dark brown to brown; moist; about 75% subangular fine to coarse Sand; about 25% Fines; no plasticity, alluvial soil. CLAYEY SAND: brown to reddish brown; moist; about 5% subrounded fine gravel; about 50% fine Sand; about 45% Fines; medium plasticity; alluvial soil.	
2				T THE THE THE THE THE THE THE THE THE TH	ML. SM	SANDY SILT: brown mottled with white; about 40% angular to subangular fine Sand, about 60% Fines; low plasticity, residual soil; granite texture. SILTY SAND: yellowish brown to brown; moist; about 65% angular to subangular fine Sand; about 35% Fines; residual soil; granite texture.	
—10 D—					ML	SANDY SILT: brown mottled with white; about 40%; about 60% Fines; residual soil; End of direct push sampling at 11.0m. Confirmed depths of FILL MATERIAL = 0 -5 m, ALLUVIAL SOILS = 5 - 8.4m, and RESIDUAL SOIL =8.4 - 11.0m.	



HOLE NO. E11-165



PRO	JECT	·]	Phase I	I Site S	Soil San	pling				
LOCA	OITA	N:	Camp	Carro	11		G&EE NO.: 1		SPECTOR: _	A STATE OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PAR
i			TED: _		06 Aug			Aug 11 DI	RILLER:	
						•	50PM-2			
			GENCY			EC	HOLE DIAMETER:		OTAL DEPTH: _	11.0 m
			EN THI				DEPTH DRILLED:		ATER DEPTH: C	
						: <u>447,7</u>	05.6 GROUND ELEV.:	49.64 m D/	ATUM:	MSL
			OVER:			C Mari	CONTAMINATION:	Augustala 19	1 other Diverturely	
IYPE	. OF	ΗŲ	LE: [J Piezon	leter		toring Well	Auger Hole 🛚 🛚	other Direct push sa	impling note
	ì	·	9							
ELEVATION / DEPTH (meters)	2	NUMBER	GRAPHIC LOG CONTAMINATED	SLOW COUNT						
3 X A X	L.	Æ	HI HI	ઠ્ઠ	5	TA A	DESCRIPTION OF MA	TERIALS	FIELD DATA	LAB DATA
LEV.	AMA	Š	GRAPHIC LOG CONTAMIN	Š	SPT N-VALUE	USCS / STRATA				
		Z	0 - 0	<u> </u>	02					
Ľ	- 1	š1				FILL	SILTY SAND with Gravel: brown to light 20% subangular fine to coarse gravel		%Recovery = 100 PID = 4.2ppm	
	ļ		XXX				 subangular fine to coarse Sand (max.4 	k,8mm); about 20%	FC = F3	
			⋙				Fines; no plasticity; fill material (SM). More gravels at 0.5-1m = gravel (35%), sand(45%), fine(20%).	%Recovery = 93 PID = 2.3 - 5.8ppm	
									FC = F3	
İ	`	52	⋙ I							
48										
-2	-		⋙ I				Brown; about 15% fine to coarse grave		%Recovery = 96	-
			⋙ I				60% fine to coarse Sand; about 25% F scrap at 2.3m and 2.7m; PID =17.2 pp		PID = 8.0 - 17.2ppm	
			⋙ I				30 cp at 2.00 and 2.110, 110 - 11.2 pp			
			XXX							
46-	5	3								
1.			XXX	Ì						
4										
			⋙ l							
			₩							
	-						About 20% subangular fine to coarse of		%Recovery = 86	
				i		SC	subangular fine to coarse Sand; about CLAYEY SAND; brown; moist; about 6		PID = 5.6 - 10.6ppm]
44			3			SM	\45% Fines; low plasticity; alluvial soil.		/	
6							SILTY SAND with Gravet: brown; moi subangular to subrounded fine to coars	se gravel (max.3.5cm);		
							about 60% angular fine to coarse Sand plasticity; alluvial soit; PID =10.6 ppm a	l; about 20% Fines; no lt 6-7m.		
					Ī	SC	CLAYEY SAND: brown; moist; about 5		1	
		∇					45% Fines; low plasticity; alluvial soil.			
									-	
42-	s	4								
-8		į			ŀ	СН	FAT CLAY: dark greenish gray grades		1	
"				l			about 5% subangular to subrounded fir about 5% line Sand, about 90% Fines,			
							soil; PID in hole = 3.7m.	•		
					}-	ML	SILT with Sand: brown; moist; about 2		\dashv	
40		}					80% Fines; low plasticity, residual soil;			
10)	-								
		ſ				SM	SILTY SAND: brown; moist; about 70% about 30% Fines; no plasticity; residua			
I	L		- [- '\$- ·				End of direct push sampling at 11.0m a encountered at 9.4-11.0m.	ifter residual soils		

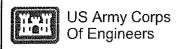
ENVIRO-EXFLORATION LOG 11-032 PHASE 2-FINAL GPJ LSACE SKOREA GDT 8/22/11







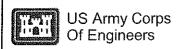
PCC Portland cement concrete pavement thickness = 15cm. FILL Poorty-graded GRAVEL with Sand: fill material (GP); hase course material. SM SILTY SAND: brown; moist, about 75% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; residual soit; grunite texture. SILTY SAND: brown; moist, about 25% Fines; no plasticity; residual soit; grunite texture. \$\frac{\text{SILTY SAND: brown; moist, about 25% Fines; no plasticity; residual soit; grunite texture.}}{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\tex			,422.0 E and cem	: <u>447,</u> 8 ent con	DEPTH DRILLED: 2.7 m 13.7 GROUND ELEV.: 55.49 m 1 crete CONTAMINATION:	TOTAL DEPTH: WATER DEPTH: DATUM: Mathematical distribution of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the depth of the dep	MSL
FILL Poorty-graded GRAVEL with Sand: fill material (GP); base course material. SM SILTY SAND: brown; moist; about 75% subangular fine to coarse Sand (max.4.6mm), about 25% Fines; no plasticity; residual soil; granite texture. SI WRecovery = 100 PID = 8.2ppm FC = F3 WRecovery = 92 PID = 3.2 - 4.2ppm 4	(meters) SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS	FIELD DATA	LAB DATA
FILL Poorty-graded GRAVEL with Sand: fill material (GP); base course material. SM SILTY SAND: brown; moist; about 75% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; residual soil; granite texture. FILL Poorty-graded GRAVEL with Sand: fill material (GP); base course material. SM SILTY SAND: brown; moist; about 75% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; FC = F3 WRecovery = 92 PID = 3.2 - 4.2ppm PID = 3.2 - 4.2ppm	0	r. 9 I		PCC	Portland cement concrete pavement thickness = 15cm.		
coarse Sand (max.4.8mm); about 25% Fines; no plasticity; Fig. = 5.2ppm FC = F3 %Recovery = 92 PID = 3.2 - 4.2ppm 44—- 82]	FILL	Poorly-graded GRAVEL with Sand: fill material (GP); base course material.	· · · · ·	
PID = 3.2 - 4.2ppm	- \$1			SM	coarse Sand (max.4.8mm); about 25% Fines; no plasticity;	PID = 5.2ppm	
	1 s ₂						
	-2		THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE P	Activities and the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second seco			
Hard pushing of sampler at 2.4-2.7m; HDP (Hydraulic Down Pressure) = 1000 psi.	•						
Penetration refusal depth = 2.7m (Penetration speed = 2cm / 1min).	i	8- C-16-1				7	1







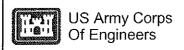
DATE STAI DRILLING I DRILLING I OVERBURI	RTED: METHOE AGENCY DEN THI ATES: N: COVER:	D/EQUII /: CKNES 3,983,4 Dirt	07 Au PMEN1 B) SS:	g 11 F: <u>BEC:</u> EC : <u>447,8</u> 4	OPM-1 HOLE DIAMETER: 5.5 cm DEPTH DRILLED: 5.55 pm 5.9 GROUND ELEV: 55.98 pm CONTAMINATION:	DRILLER:
ELEVATION / DEPTH (meters) SAMPLE TYPE /	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS	FIELD DATA LAB DATA
55—1 sz 54—2 53—3				FILL FILL CH CH	CLAYEY SAND: reddish brown; moist; about 5% s fine gravel (max.2cm); about 65% subangular fine Sand (max.4.8mm); about 30% Fines; medium pla material (SC). SILTY SAND: brown; moist; about 5% subangular (max.2cm); about 65% subangular fine to coarse 5 (max.4.8mm); about 30% Fines; no plasticity; fill m (SM). SANDY FAT CLAY: dark brown; moist; about 40% subangular fine to medium Sand (max.2mm); about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; about 5; a	ine gravel shicity; fill FD = 2.5ppm FC = F3 Maccovery = 100
52——4 51——5	¥			SM	SILTY SAND: brown; moist; about 75% subangula coarse Sand (max.4.8mm); about 25% Fines; no presidual soll; granite texture. Hard pushing of sampler at 5.3-5.55m; HDP (Hydressure) = 1000 psi. Penetration refusal depth = 5.55m (Penetration spimin).	asticity;







	PROJE LOCAT DATE	rion:	Camp				G&EE NO.: 11-032E INSPECTOR: FINISHED: 09 Aug 11 DRILLER:
		NG M	ETHO		PMEN		C50PM-1
	OVER	BURDE DINAT	EN THI ES: N:	3,983,4	SS:	: 447,7	DEPTH DRILLED: 3.0 m WATER DEPTH: 0.27 m; AD 771.8 GROUND ELEV.: 52.19 m DATUM: MSL CONTAMINATION:
	TYPE	OF HO	LE: C	Piezon	neter	☐ Moni	nitoring Well
	ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS / STRATA	DESCRIPTION OF MATERIALS FIELD DATA LAB DATA
	52-	s1 <u>▼</u>				FILL	SILTY SAND: grayish brown; moist; about 10% subangular fine gravel (max.2cm); about 65% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; fill material (SM).
	51—					SM	SILTY SAND: brown; moist; about 75% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; residual soil; granite texture. SILTY SAND: brown; moist; about 75% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; FC = F3
	-2	\$2					
ENVIRO-EXPLORATION LOG 11-032E-PHASE2-FINAL.GPJ USACE SKOREA.GDT 8/22/*1	-						Hard pushing of sampler at 2.8-3.0m; HDP (Hydraulic Down Pressure) = 1000 psi.
USACE 3	<u></u> 3	1,,,,			·······		Penetration refusal depth = 3.0m (Penetration speed = 1cm / 1min).
E2-FINAL.GPJ							
11-032E-PHASI							
DRATION LOG							
ENVIRO-EXPLC							





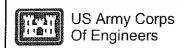
PROJE	CT: I	hase I	I Site S	Soil San	npling							
LOCAT	ION:	Camp	Carro				G&EE NO.:			•	PECTOR:	
DATES							FINISHED: _	09	Aug 11	DRI	LLER:	HINTER B
DRILLI						250PN						
DRILLI			':	B	EC		HOLE DIAME	TER:	<u>5.5 cm</u>		AL DEPTH:	
OVERE							DEPTH DRIL				TER DEPTH:	
				<u>405.3</u> E	: <u>447,7</u>	<u> 189.7</u>	GROUND EL			DAT	TUM:	MSL
GROU							CONTAMINA					
TYPE	OF HO	LE: [] Piezor	neter	☐ Moni	itoring \	Well ☐ Test F	Pit [) Auger Hole	X) c	ther Direct push	sampling hole
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA		DESCRIPTION	ON OF MA	TERIALS		FIELD DATA	LAB DATA
-0		XXX			FILL	SILT	Y SAND: brown; moist	about 10%	% subangular fine t	0	%Recovery = 100	
The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	S1					coars	e gravel (max.5cm); al se Sand (max.4.8mm); rial (3M).	out 65% s	subangular fine to		PID = 2.3ppm FC = F3	
52-						subar Fines		and (max.4	l.8mm); about 25%)	%Recovery = 100 PID = 2.4 - 3.0ppm	
7.	\$2				SM	coars	<u>Y SAND</u> : brown; moist; ie Sand (max.4.8mm); ual soil; granite texture	about 25%	% subangular fine t Fines; no plasticit	о у;	FC = F3	
51							pushing of sampler at ure) = 1000 psi.	1.7-1.8m;	HDP (Hydraulic Do)Wn		
'	e	······································				Penet 1min)	ration refusal depth =	1.8m (Pen	etration speed = 1	cm /		
						·						

EXPLORATION LOG





DRILLING A OVERBURE COORDINA GROUND C	TED: METHOD/EQU GENCY: DEN THICKNE TES: N: 3,983,	07 Aug 11 IPMENT: BEC BEC SS: 393.3 E: 447, Inside land fal	C50PM-1 HOLE DIAMETER: 5.5 cm	DRILLER: TOTAL DEPTH: WATER DEPTH:	1.8 m; AD ISL
ELEVATION / DEPTH (meters) SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	SPT N-VALUE USCS / STRATA	DESCRIPTION OF MATERIALS	FIELD DATA	LAB DATA
53		FILL FILL FILL SC CL SM	SILTY SAND: brown; moist; about 70% subangular fine coarse Sand (max.4.8mm); about 30% Fines; no plastici material (SM). Poorly-graded SAND: yellowish brown; moist; about 5% subangular fine to medium Sand (max.2mm); about 5% no plasticity; fill material (SP). Poorly-graded GRAVEL with Sand: gray; wet; about 70 rounded fine to coarse gravel (max.3cm); about 5% Fines; plasticity; fill material (GP). FAT CLAY: reddish brown; moist; about 10% fine Sand (max.0.43mm); about 90% Fines; high plasticity; fill material (CH). CLAYEY SAND: brown to reddish brown; moist; subang fine gravel (max.1cm); about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; medium plasticity material (SC); PID = 46.7 ppm at 1-1.3m. CLAYEY SAND: gray; moist; about 65% subangular fine coarse Sand (max.4.8mm); about 35% Fines; medium plasticity; alluvial soil; with organics. SANDY LEAN CLAY: dark brown; moist; about 35% subangular fine to medium Sand (max.2mm); about 65% Fines; medium plasticity; alluvial soil. SILTY SAND: brown; moist; about 70% subangular fine coarse Sand (max.4.8mm); about 30% Fines; no plasticit residual soil; granite texture.	### PID = 18.5ppm FC = F3 FC = F3 FC = NFS Fines; ### WRecovery = 77 PID = 24.7 - 46.7ppm FC = NFS FC = F3 ### FC = F3 ### PID = 18.5ppm FC = NFS FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ### FC = F3 ###	







				H Site S		npling		G&EE NO.:	1	1_032E	INIS	PECTOR:	
	•	E STAF				g 11		FINISHED:		Aug 11	-	LLER:	I L
				D/EQUI									
	1	LING A				EC		HOLE DIAME				TAL DEPTH:	
				HICKNE:	************	447.7		DEPTH DRIL GROUND EL				TER DEPTH.	No water; AD MSL
				: Dirt		-· <u> </u>		CONTAMINA					
	TYPE	OF H	OLE:	☐ Piezor	neter	☐ Mon	itoring W	ell 🗆 Test F	Pit 🗆] Auger Hole	X	other <u>Direct push</u> s	sampling hole
	ELEVATION / DEPTH (meters)	SAMPLE TYPE /	GRAPHIC LOG	CONTAMINATED BLOW COUNT	SPT N-VALUE	USCS / STRATA		DESCRIPTI	ON OF MA	TERIALS		FIELD DATA	LAB DATA
	52) S1				FILL	to coars	Y SAND: dark brow se gravel (max.3cm) Sand (max.4,8mm); y; fill material (SC).	about 609	% subangular fine t	fine o	%Recovery = 30 PID = 1.8ppm FC = F3	
								h gray to brown; mo	ist.			%Recovery = 45 PID = 2.5 - 3.9ppm	
	51	S2						about 70% subangu 8mm); about 30% F					
	-												
	50	!				FILL	subangu	SAND with Gravel: star fine gravel (max	.2cm); abo	ut 55% subangula	fine	%Recovery = 52 PID = 1.4 - 6.5ppm	
	-						to coars fill mater porcelair	e Sand (max.4.8mn rial (SM); with waste n).	n); about 28 materials	5% Fines; no plast (pływood, scraps c	city; f		
	49-					FILL	25% sub subangu Fines; m	Y SAND with Grave oangular fine to coar alar fine to coarse Sa nedium plasticity; fill a (ocropa of annd bo	se gravel (and (max.4 material (S	max.5cm); about 5 .8mm); about 25%	0%		
8/22/	484												
E SKOREA.GDT 8/22/*1	-	53				SM	coarse S	AND: brown; moist; Sand (max.4.8mm); soil; disturbed grani	about 30%	Fines; no plasticit			
ENVIRO-EXPLORATION LOG 11-032E-PHASE2-FINAL GPJ LSACE SKOR	475												
132E-PHASE	466							shing of sampler at e) = 1000 psi.	6.3-6.5m; l	HDP (Hydraulic Do	•wn		
717	L	L	<u> 648181</u>					ion refusal depth =	6.5m (Pen	etration speed = 2	cm /		
ğ							1min).						
ATIO M													
Ñ.													
ROE													
쾳													

EXPLORATION LOG

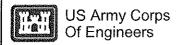
HOLE NO. E11-172





PROJE	CT: I	Phase I	I Site S	Soil San	pling					
LOCAT	ION:	<u>Camp</u>	Carro	<u> </u>		G&EE NO.: FINISHED:	11-032E	_ INS	PECTOR:	
DAILS	SIARI	ED:	VEOLU	UY AU	g]]	FINISHED:	09 Aug 11	_ טאו	LLER:	
						C50PM-1	TT).	TO	ΓAL DEPTH:	8.7 m
OVERE	NO AC		CKNE		EC	HOLE DIAMET	ER. <u>3.3 CM</u>	_ 10 \\\\	TER DEPTH:	
						767.7 GROUND ELE	ED: 8.7 m	_ NV	τυ Μ :	MSL
								_ DM	I O IVI	MIST
TVDE	JE MU	'V⊑\\. I ⊏ ·	T Diazon	notor	[] Mon	CONTAMINAT itoring Well	☐ Auger Hole	(S Z) (other Direct push s	ampling hole
, 111 <u>C</u> C) 11O	l	J 1 102011	icici	LI MON	itoring vvoir	□ //ager riole	W	MICE DIRECT PUBLIC	iamping noic
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION	OF MATERIALS		FIELD DATA	LAB DATA
		×××			FILL	CU TV CAND with County	rich have resist about	200/	%Recovery = 100	
51	S1	XXX			FILL	SILTY SAND with Gravel: gravel: gravel subangular fine to coarse gravel.	rel (max.3cm); about 50%	r	PiD = 2.5ppm	
<u></u>		XXX			FILL	subangular fine to coarse San Fines, no plasticity, fill materia	I (SM).	- //	FC = F3 }FC = NFS	1
		₩				Poorly-graded SAND with Si subangular fine to medium Sa	It: brown; moist; about 90°	%	FC = F3 %Recovery = 92	4
50——1		⋙				Fines; no plasticity; fill materia	I (SP-SM).	·	PID = 1.0 - 2.6ppm	
	S2	XXX				CLAYEY SAND: reddish brow subangular fine to coarse San	d (max.4.8mm); about 30%	6		:
					FILL	Fines; medium plasticity; fill ma Encountered silty sand layer a	aterial (SC).			
		XXX				SILTY SAND: brown; moist; al	bout 70% subangular fine t	to		
49		₩ I				coarse Sand (max.4.8mm); ab material (SM).	out 30% Fines; no plasticit	ty; fill	%Recovery = 86 PID = 5.1 - 8.2ppm	
		XXX				(577)			(16 – 0.1 - 6.2ppiii	
-		XXX								
3	¥	XXX								
48-		XX				About 10% subangular fine to 60% subangular fine to coarse	coarse gravel (max.3cm); · Sand (max.4.8mm); abou	about t 30%		
_	53				FILL	Fines. CLAYEY SAND: brown; moist;	about 50/ outloansular fina			
1 1		₩ l				gravel (max.2cm); about 65%	subangular fine to coarse \$	Sand		
47——4		XX				(max.4.8mm); about 30% Fine (SC).	s; medium plasticity; fill ma	aterial		
47		XX				, ,				
					CH	SANDY FAT CLAY: gray to be	own; moist; about 3%			
						subangular fine gravel (max.1c to coarse Sand (max.4 8mm);	m); about 37% subangular about 60% Fines; biob	r fine		
465	Ţ.			İ	ML	\plasticity; alluvial soil; with orga	nics.	/	%Recovery = 90	
						SANDY SILT: reddish brown; r fine to medium Sand (max,2mi			PID = 0.3 - 5.0ppm	
]					plasticity; residual soil.				
	[:									
45				ĺ	SM	<u>SILTY SAND</u> : brown; moist; ab medium Sand (max.2mm), abo				
						plasticity; residual soil; granite				
	:	### L								
7				-		About 70% subangular fine to o	marca Sand (may 4 Room)	, 1		
44				ŀ		about 30% Fines; no plasticity.	warat danu (max,4.0/////)	'		
<u></u>	S4	1111								
			ļ	-						
43-8		相往上								
						Hard pushing of sampler at 8.5	5-8,7m; HDP (Hvdraulic Do	own I		
]:					Pressure) = 1000 psi.				
_						Penetration refusal depth = 8,7 (min).	7m (Penetration speed = 5	cm /		
						······································				
										•

ENVIRO-EXPLORATION LOG 11-032E-PHASEZ-FINAL GPJ USACE SKOREA.GDT 8/22/11

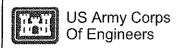


HOLE NO. **E11-173**



PROJECT: Phase II Site Soil Sampling G&EE NO.: ___ INSPECTOR: LOCATION: Camp Carroll 11-032E 10 Aug 11 FINISHED: 10 Aug 11 DRILLER: DATE STARTED: DRILLING METHOD/EQUIPMENT: BEC50PM-1 DRILLING AGENCY: BEC HOLE DIAMETER: 5.5 cm TOTAL DEPTH: 10.0 m DEPTH DRILLED: __ 10.0 m WATER DEPTH: **OVERBURDEN THICKNESS:** MSL COORDINATES: N: 3,983,363.9 E: 447,811.9 GROUND ELEV.: 53.53 m DATUM: _ GROUND COVER: <u>Dirt (Inside land farm)</u> CONTAMINATION: ☐ Monitoring Well X other Direct push sampling hole TYPE OF HOLE: Piezometer ☐ Test Pit Auger Hole CONTAMINATED BLOW COUNT ELEVATION / DEPTH (meters) GRAPHIC LOG LAB DATA SPT N-VALUE DESCRIPTION OF MATERIALS FIELD DATA SAMPLE NUMBER USCS / STRATA SANDY LEAN CLAY: gray; wet; about 5% subangular fine gravel (max.2cm); about 30% subangular fine to coarse Sand %Recovery = 100 PID = 7.4ppmFILL (max.4.0mm); about 65% Fines; medium plasticity; fill material FC = F3 FC = NFS FILL Poorly-graded SAND: brown; wet; about 95% subangular FC = NFS fine to coarse Sand (max.4.8mm); about 5% Fines; no plasticity; fill material (SP). 53-%Recovery = 93 TILL PID - 3.2 - 4.2ppm Poorly-graded GRAVEL with Sand: grayish brown; wet; about 70% subangular fine to coarse gravel (max.3cm); about 25% subangular fine to coarse Sand (max.4.8mm); about 5% FC = F3Fines; no plasticity; fill material (GP). FAT CLAY: reddish brown; moist; about 3% subangular fine gravel (max.2cm); about 7% subangular fine to medium Sand (max.2mm); about 90% Fines; high plasticity; fill material (CH). About 10% subangular fine to medium Sand (max.2mm); about 90% Fines; no gravels. 52-FILE SILTY SAND: brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; fill material (SM) CLAYEY SAND: reddish brown; moist; about 65% subangular fine to coarse Sand (max.4.8mm); about 35% %Recovery = 88 Fines; medium plasticity; fill material (SC). 51 FILL SILTY SAND: brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; fill material (SM). About 5% subangular fine to coarse gravel (max.3cm); about 65% subangular fine to coarse Sand (max.4.8mm); about 30% 50 CLAYEY SAND: brown; moist; about 5% subangular fine gravel (max.2cm); about 65% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; medium plasticity, fill material Wet zone (4.3m). 49~ SANDY LEAN CLAY: grayish brown; moist to wet; about 40% subangular fine to medium Gand (max.2mm); about 60% %Recovery = 81 Fines; medium plasticity; alluvial soil. Poorly-graded SAND with Silt: grayish brown; wet; about 90% subangular fine to coarse Sand (max.4.8mm); about 10% SP-SM \Fines; no plasticity; alluvial soil.

ENVIRO-EXPLORATION LOG 11-032E-PHASE2-FINAL GPU LSACE SHOREA GDT 8/22/







	TION: <u>(</u> Starte	Camp	Carro	II	npling	G&EE NO.: 11-032E INSPECTOR: FINISHED: 10 Aug 11 DRILLER:
DRILLI	NG ME	THOE	D/EQUI	PMENT	: BEC	C50PM-1
	NG AGI BURDEN				EC	HOLE DIAMETER: <u>5.5 cm</u> TOTAL DEPTH: <u>10.0 m</u> DEPTH DRILLED: <u>10.0 m</u> WATER DEPTH: <u>NA</u>
COOR	DINATE	S: N:	3,983,3	363.9 E		B11.9 GROUND ELEV.: 53.53 m DATUM: MSL
	ND CO\ OF HOL					m) CONTAMINATION:
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS FIELD DATA LAB DATA
47						CLAYEY SAND: dark brown; wet; about 60% subangular fine to coarse Sand (max.4.8mm); about 40% Fines; medium plasticity; alluvial soil. Brown; about 3% subangular fine gravel (max.1cm); about 67% subangular fine to coarse Sand (max.4.8mm); about 30% Fines.
467	54					Light gray to brown; moist; about 60% subangular fine to medium Sand (max.2mm); about 40% Fines; high plasticity.
_—8					CH SC	FAT CLAY: grayish brown; moist; about 5% fine Sand (max.0.43mm); about 95% Fines; high plasticity; alluvial soil. CLAYEY SAND: brown to grayish brown; moist; about 5% subangular fine gravel (max.2cm); about 60% subangular fine to coarse Sand (max.4.8mm); about 35% Fines; high
45— 9 — 9 444— 444— 444— 444— 444— 444— 44					**************************************	plasticity; alfuvial soil. Light gray to brown; moist; about 2% subangular fine gravel (max.1cm); about 63% subangular fine to coarse Sand (max.4.8mm); about 35% Fines; high plasticity.
EZ-FINAL GPJ USACE					SM	SILTY SAND: brown; moist; about 75% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; residual soil; granite texture. Hard pushing of sampler at 9.9-10.0m; HDP (Hydraulic Down Pressure) = 1000 psi. Penetration refusal depth = 10.0m (Penetration speed =
ENVIRO-EXPLORATION LOG 11-033E-PHASE2-FINAL GPJ USACE SKO						1.5cm / 1min).

EXPLORATION LOG





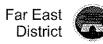
PROJE LOCAT]]		G&EE NO.: _			ECTOR:	
DATE S					g 11		08 Aug 11	DRIL	LER:	
DRILLII OVERB COORE	NG AG SURD DINAT ND CO	GENCY EN THI 'ES: N: DVER:	': CKNES 3,983, 3 <u>Portla</u>	B 38: 366.3 E and cem	EC : <u>447,8</u> ient coi	C50PM-1 HOLE DIAMET DEPTH DRILL B39.1 GROUND ELE CONTEAMUAT itoring Well	ED: <u>8.9 m</u> EV.: <u>54.98 m</u> Hain:	WAT DATI	AL DEPTH: ER DEPTH: JM:	MSL
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS / STRATA	DESCRIPTIO	N OF MATERIALS		FIELD DATA	LAB DATA
	S1				PCC FILL FILL	Portland cement concrete par Poorly-graded GRAVEL with Costrise material. CLAYEY SAND: grayish brow	h Sand: fill material (GP); wn to reddish brown; moist	base	%Recovery = 80 PID = 11.6ppm FC = F3	
541	S2 ■			FILL \[\begin{align*} 60\% subangular fine to coarse Sand (max.4.8mm); at Fines; medium plasticity; fill material (SC). \(\) \(\text{SILTY SAND}; \) brown; moist; about 10\% subangular fine coarse gravet (max.3cm); about 60\% subangular fine coarse Sand (max.4.8mm); about 30\% Fines; no plas material (SM). \[About 5\% subangular fine gravet (max.2cm); about 6\subangular fine to coarse Sand (max.4.8mm); about 6\subangular fine to coarse Sand (max.4.8mm); about 6\subangular fine to coarse Sand (max.4.8mm); about 6\subangular fine to coarse Sand (max.4.8mm); about 6\subangular fine to coarse Sand (max.4.8mm); about 6\subangular fine to coarse Sand (max.4.8mm); about 6\subangular fine to coarse Sand (max.4.8mm); about 6\subangular fine fine fine fine fine fine fine fine	naterial (SC). shout 10% subangular fine ut 60% subangular fine to bout 30% Fines; no plastir vel (max.2cm); about 65% ut (max.4.8mm); about 30 ut layer at 1.7m to 1.8m.	e to coicity; fill	%Recovery = 90 PID = 3.6 - 11.7ppm FC = F3			
23	\$3				FILL	CLAYEY SAND: brown; mois fine to coarse Sand (max.4.8r plasticity; fill material (SC); we SILTY SAND: brown; moist; a (max.2cm); about 70% suban (max.4.8mm); about 25% Fine (SM). About 5% subangular fine gra subangular fine to coarse San Fines; encountered clayey sar	nm); about 30% Fines; m et zone = 2.8m. bout 5% subangular fine gular fine to coarse Sand as; no plasticity; fill materi vel (max.1cm); about 70% d (max.4.8mm); about 25 d layer at 3.9m to 4.0m.	gravel ial %	%Recovery = 85 PID = 2.4 - 3.5ppm	
05					SC CH	CLAYEY SAND: greenish gra subongular fine gravel (mox.1 to coarse Sand (max.4.8mm); plasticity: fill material (SC). CLAYEY SAND: greenish gra subangular fine to coarse San Fines; medium plasticity; alluv	om); about 62% subangul about 35% Fines; mediur y; moist; about 70% d (max.4.8mm); about 30	lar fine	/Pocoveni ≈ 42	
9 -8	Total Particular Control				SC	SANDY FAY CLAY: dark brov subangular fine to medium Sa Fines; high plasticity; alluvial s CLAYEY SAND: dark brown; fine to coarse Sand (max.4.8n plasticity; alluvial soil.	w; moist; about 30% nd (max.2mm); about 70° oil. moist; about 65% subang	% ∫ F	%Recovery = 42 PID = 3.7 - 6.2ppm	
37	S4				CL	SANDY LEAN CLAY: brown; fine to medium Sand (max.2m plasticity; alluvial soil.				
78					SM	SILTY SAND: brown; moist; a coarse Sand (max.4.8mm); ab residual soil; granite texture. Hard pushing of sampler at 8, Pressure) = 1000 psi.	out 30% Fines; no plastic 7-8,9m; HDP (Hydraulic D	city; Down		
		<u> </u>			<u> </u>	Penetration refusal depth = 8. 1min).	9m (Penetration speed ≃	2cm /		

EXPLORATION LOG

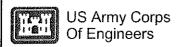


DRILLII OVERE COORI GROUN	NG METHOD NG AGENCY JURDEN THI DINATES: N: ND COVER: DF HOLE: [/: CKNES 3,983,3 Grass	B SS: 346.8 E	EC : <u>447,</u> 7	HOLE DIAMETER: 5.5 cm TO DEPTH DRILLED: 7.25 m W. 784.2 GROUND ELEV.: 51.07 m DA CONTAMINATION:	DTAL DEPTH: ATER DEPTH: ATUM: Other _Direct push sa	MSL
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS	FIELD DATA	LAB DATA
510	51			FILL	SILTY SAND: brown grades to brownish gray; moist; about 5% subangular to subrounded fine gravel (max.2cm); about 75% subangular fine to coarse Sand; about 20% Fines; no plasticity; fill material (SM).	%Recovery = 100 PID = 6.0ppm FC = F3 %Recovery = 85 PID = 8.4 - 10.0ppm	
492	53			FILL FILL	More gravels at 2.0-2.4m. CLAYEY SAND: brown to reddish brown; moist; about 60% subangular fine to coarse Sand; about 40% Fines; medium plasticity; fill material (SC). SILTY SAND: brownish gray; moist to wet; about 80% subangular to angular fine to coarse Sand; about 20% Fines; no plasticity; fill material (SM). CLAYEY SAND: brown; moist; about 65% angular to subangular fine to coarse Sand; about 35% Fines; low to medium plasticity; fill material (SC).	%Recovery ≈ 89 PID = 6.3 - 12.6ppm	
46				СH	SANDY FAT CLAY: dark greenish gray; moist; about 30% fine to medium Sand; about 70% Fines; medium to high plasticity; alluvial soil. Brownish gray grades to light gray; moist; angular to subangular fine to coarse Sand.	%Recovery = 76 PID = 6.6 - 9.4ppm	
457	54			SC SM	CLAYEY SAND: yelfowish brown; moist; about 60% subangular fine to coarse Sand; about 40% Fines; low plasticity; alluvial soil. SILTY SAND: light brown to brown; moist; about 70% angular fine to coarse Sand; about 30% Fines; no plasticity; residual soil; granite texture. Hard pushing of sampler at 7.1-7.25m; HDP (Hydraulic Down Pressure) = 1500 psi. Penetration refusal depth = 7.25m (Penetration speed =		

EXPLORATION LOG



ĺ	PF	ROJE	CT:	Phase	II Site	Soil Sai	mpling						
					<u>p Carro</u>			G&EE NO.: _			PECTOR:	algebra algebra algebra	
				TED:				FINISHED:	10 Aug 11	DR	ILLER:		
Ì								C50PM-1				40.0	
					Y:				TER: <u>5.5 cm</u>		TAL DEPTH:		
- 1					HCKNE			BOI.8 GROUND ELE	ED: <u>10.0 m</u>	- N/V	TER DEPTH: _ TUM:	NA MSL	
								m) CONTAMINAT		_ DA	I OIVI.	WISL	
					☐ Piezor			itoring Well		IXI (other Direct push sampling hole		
Ĺ										uner <u>Direct push samping note</u>			
	ELEVATION /	(meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION	N OF MATERIALS		FIELD DATA	LAB DATA	
		Γ					FILL	CLAYEY SAND: gray; wet; at	oout 10% subangular fine g	ravel	%Recovery = 90		
			S1				FILL \	(max.2cm); about 55% suban \(max.4.8mm); about 35% Fin	guar fine to coarse Sand es; medium plasticity; fill m	PID = 4ppm FC = F3			
	53-							\(SC). Poorly-graded SAND: brown	; wet; about 95% subangul	 ar	FC = NFS		
								fine to coarse Sand (max.4.8r plasticity; fill material (SP).			%Recovery = 80 PtD = 2.9 - 3.2ppm		
							FILL	Poorly-graded GRAVEL with about 70% subangular fine to	Sand: grayish brown; wel	i; about /	FC = NFS FC = F3		
	_	_1					1 166	25% subangular fine to coarse Fines; no plasticity; fill materia	70-13				
								FAT CLAY: reddish brown; m	oist; about 10% subangula				
	52		S 2					to medium Sand (max.2mm); fill material (CH).	about 90% Fines; high pla	sticity;			
	-	-											
							FILL	SILTY SAND: brown; moist; a (max.2cm); about 65% suban	bout 5% subangular fine g gular fine to coarse Sand	ravel			
	~					ļ		(max.4.8mm); about 30% Fine (SM).	es; no plasticity; fill materia				
		<u>—</u> 2						(Girily)			%Recovery = 59		
											PID = 4.6 - 10.1ppm		
1	51												
		-											
11	4						FILL	FAT CLAY with Sand: reddis	h brougt maint about 20%				
EA.GDT 8/22/11		-3					FILL	subangular fine to medium Sa	nd (max.2mm); about 80%				
6								\Fines; high plasticity; fill mater SILTY SAND: brown; moist; a	bout 70% subangular fine (
	50		Ì					coarse Sand (max.4.8mm); ab material (SM); encountered da		y; fill			
8	ļ	-	S3					,	.,,,,,				
Ş.													
2 2	٦												
		-4						About 10% subangular fine to 65% subangular fine to coarse					
Ž	40							Fines.	,				
ASE	40-	_								-			
푒	-		Ě							***************************************			
22	1		ķ										
ار اي	-	-5					FILL	CLAYEY SAND: brown; moist;	ahout 10% subangular tin		%Recovery = 70		
킭								gravel (max.2cm); about 65% (max.4.8mm); about 25% Fine	subangular fine to coarse S	Sand	PID = 3.3 - 6.2ppm		
¥	48-							(SC).	ь, тешин разиску, ві те	IGH			
긼	-	-	ķ										
ğΪ		ſ	Ŕ										
ENVIRO-EXPLORATION LOG 11-032E-PHASE2-FINAL GPJ USACE SYOR	4		Š										



EXPLORATION LOG





				Soil San	apling					
	:NOITA			11		G&EE NO.: _	11-032E	INS	PECTOR: _	
						FINISHED:	10 Aug 11	DRI	LLER:	EKENTEK (
						C50PM-1			FAL DEDTIL	40.0
						HOLE DIAME		10	FAL DEPTH: _	
						DEPTH DRILL		WA	TER DEPTH:	NA
						301.8 GROUND ELE		DA	і ОМ:	MSL
						m) CONTAMINAT		(D)	46-ou Di	tt
ITYPE	OF MU) <u> </u>	∃ Plezor	neter	∐ IVION	itoring Well	t	LAN C	ther Direct push s	ampling note
		۵								
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT							
B + @		GRAPHIC LOG CONTAMIN	8	<u>"</u>	_≰	DESCRIPTIO	N OF MATERIALS		FIELD DATA	LAB DATA
EVA PTF	MB MB	SAP NO NTA	Š.	SPT N-VALUE	USCS/ STRATA					
325	ο̈́z	유건성	ם	ωż	322					
	•									
		XXX								
47—					SC	CLAYEY SAND: gray, moist;				
<u> </u>					CL SC	coarse Sand (max.4.8mm); a \begin{aligned} \prince{\phi} \text{aligned} \prince{\phi} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} \text{aligned} alig		/[
						LEAN CLAY: grayish brown; (max,0.43mm); about 95% Fi	moist; about 5% fine Sa	nd ∫		
_						soil.				
7					CH	CLAYEY SAND: dark brown; subangular fine to medium Sa	moist to wet; about 65% and (max.2mm); about 3	5%		
						Fines; medium plasticity; allur FAT CLAY: dark brown; mois	/ial soil			
46						(max.0,43mm); about 95% Fi	nes; high plasticity; alluv	ial soil.		
l -	\$4					Gray.				
_8						Ab 400/ E C / 0	40\b4-000/ Fi	_		
						About 10% fine Sand (max.0.	43mm); about 90% Fine	s.		
45										
" -										
					SC	CLAYEY SAND: light gray, m	oist; subangular fine to o	coarse		
<u> </u>						gravel (max.3cm); about 60% (max.4.8mm); about 40% Fin	subangular fine to coars es: high plasticity: alluvia	se Sand		
					CH	SANDY FAT CLAY: gray; mo subangular fine to medium Sa	ind (max.2mm); about 7	0%		
						Fines; high plasticity; alluvial s	soil.			
44							7			
			;		SM	SILTY SAND: light gray to bro subangular fine gravel (max.2	um), about 75% subanu	ular fine		
					l	to coarse Sand (max.4.8mm); alluvial soil.	about 20% Fines; no pl	asticity;		
	, L					Hard pushing of sampler at 9	.9-10.0m; HDP (Hydraul	ic Down		<u> </u>
,	,					Pressure) = 1000 psi. Penetration refusal depth = 1	0.0m (Penetration speed	f = 8cm /		
						1min).				
							•		•	

EXPLORATION LOG

HOLE NO. E11-177



PROJECT: Phase II Site Soil Sampling LOCATION: Camp Carroll INSPECTOR: G&EE NO.: 11-032E 08 Aug 11 FINISHED: DATE STARTED: 08 Aug 11 DRILLER: DRILLING METHOD/EQUIPMENT: BEC50PM-1 DRILLING AGENCY: BEC HOLE DIAMETER: 5.5 cm TOTAL DEPTH: 9.0 m 9.0 m WATER DEPTH: 0.2 m; AD **OVERBURDEN THICKNESS:** DEPTH DRILLED: COORDINATES: N: 3,983,340.9 E: 447,834.7 GROUND ELEV.: 54.71 m DATUM: MSL GROUND COVER: Portland cement concrete (DGNEAMINATION: X other Direct push sampling hole TYPE OF HOLE: Piezometer ☐ Monitoring Well ☐ Test Pit ☐ Auger Hole CONTAMINATED BLOW COUNT ELEVATION / DEPTH (meters) GRAPHIC LOG SAMPLE DESCRIPTION OF MATERIALS FIELD DATA LAB DATA USCS / STRATA Portland cement concrete pavement thickness = 20cm. FILE Poorly-graded GRAVEL with Sand: fill material (GP); base course material FILL %Recovery = 70 CLAYEY SAND: greenish gray; moist; about 5% subangular fine to coarse gravel (max.3cm); about 70% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; medium PID = 4.1ppm FC = F3 %Recovery = 98 plasticity, fill material (SC). PID = 5.1 - 7.2ppm SILTY SAND: brown; moist; about 5% subangular fine gravel FC = F3(max.2cm); about 70% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; fill material (SM).
About 5% subangular fine gravel (max.1cm); about 70% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; encountered clayey sand layer at 2.2m to 53 %Recovery = 87 PID = 4.5 - 6.5ppm About 75% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no gravels. 52 CLAYEY SAND: reddish brown to brown; moist; about 10% subangular fine gravel (max.2cm); about 60% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; medium FILL 51 plasticity; fill material (SC); encountered silty sand layer at Brown; moist to wet; about 10% subangular fine to coarse gravel (max.3cm); about 60% subangular fine to coarse Sand (max.4.8mm); about 30% Fines. 50 %Recovery = 74 PID = 2,7 - 5,2ppm 49 CLAYEY SAND: dark brown; moist; about 60% subangular fine to medium Sand (max.2mm); about 40% Fines; medium SC plasticity; alluvial soil. SANDY FAT CLAY: light grayish brown: moist; about 40% subangular fine to medium Sand (max.2mm); about 60% Fines; high plasticity; alluviat soil. CH 48-SM SILTY SAND: brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil; granite texture. -8 Hard pushing of sampler at 8.7-9.0m; HDP (Hydraulic Down Penetration refusal depth = 9.0m (Penetration speed = 2cm /

ENVIRO-EXPLORATION LOG 11-032E-PHASE2-FINAL GPJ USACE SKOREA.GDT 8/22/1

EXPLORATION LOG

HOLE NO. E11-178

Far East District



PROJE					mpling			
LOCAT							SPECTOR:	
DATE S					g 11		ILLER:	
						C50PM-2		
DRILLI					EC		TAL DEPTH: 10.0 m	
OVERE							TER DEPTH: 3.35 m; A	VD_
							TUM: MSL	
GROUN							othor Direct and a start and	
TYPE C	JE HUL	E; L	J Mezon	neter	□ IVION	itoring Well Test Pit Auger Hole Auger Hole	other Direct push sampling hole	
	<u>н</u>	Œ	5					
ELEVATION / DEPTH (meters)	SAMPLE TYPE NUMBER	CONTAMINATIONS	BLOW COUNT	ш		DESCRIPTION OF MATERIALS	FIELD DATA LAB DA'	ТΔ
VAT TH ers)		T AV	٥ ≩	I	S/ ATA	DESCRIPTION OF WATERIALS	THE BATA	17
THE THE	NSAN G	CONTAMIN	E.O.	SPT N-VALUE	USCS / STRATA			
<u></u>	×	XXX			FILL	SILTY SAND: brown grades to light brown; moist; about 10%	%Recovery = 100	
	s1 🐰	XX			FILL	subangular to subrounded fine to coarse gravel (max.3.5cm):	PID = 3.3ppm	
1 +		XX				about 70% subangular fine to coarse Sand; about 20% Fines; no plasticity; fill material (SM).	FC = F3 %Recovery = 100	
	⊗	XX					PID = 2.0 - 6.3ppm	
501		XXI						
	S2 X	₩ I				CLAYEY SAND: brown; moist; about 55% fine Sand; about	FC = F3	
		₩ I				45% Fines; medium plasticity; at 1.3-1.5m. SILTY.SAND: brown; moist; about 5% subangular fine to		
492	<u> </u>	₩ I				coarse gravel (max.3.2cm); about 70% subangular fine to coarse Sand; about 25% Fines; no plasticity; at 1.5-5.0m.	%Recovery = 95	
		₩ I				, , , , , , , , , , , , , , , , , , , ,	PID = 7.2 - 8.0ppm	
+		XX						
	⊗	XX		İ				
483	│	XXI				No gravels below 3.0m.		
	s₃ ¥X	▓╽				Clayey sand layers encountered at 3.3-3.6m and 4.0-5.0m.		
	$ \hspace{.05cm} \hspace{.05cm} $	XX						
474		₩1						
		₩ 1						
+	⊗	₩1						
- 465	l ⊗	XX						
REA GDT 8/22.11	1/2				SC	CLAYEY SAND: grayish brown; moist to wet; about 60% fine to medium Sand; about 40% Fines; medium plasticity; alluvial	%Recovery = 71 PID = 4.4 - 8.5ppm	
- 8K						soil.	l l l l l l l l l l l l l l l l l l l	
456	∇					Dark greenish gray; groundwater encountered at 6.0m while		
ž.						pampling,		
SWC +								
G 447								
						Easy sampler penetration at 7 - 8m; PID in hole = 3.0 ppm.		
	34							
SEZ								
ਬੋ 43—8					SM	SILTY SAND: grayish brown to brown; moist to wet; about		
0328						70% subangular fine to coarse Sand; about 30% Fines; no plasticity; residual soil; greenish-gray mottled with white;		
<u> </u>		441				granite texture.		
9 429								
NO 77 7								
- BA								
ğ								
ENVIRO-EXPLORATION LOG 11-033E-PHASE2-FINAL GPJ JSACE SKO		سليانيان			<u> </u>	End of direct push sampling at 10.0m after residual soils		
<u>a</u>						encountered at 8.0-10.0m.		

EXPLORATION LOG



			II Site				0.0 mm 1.1.0					
			<u>p Carro</u>				G&EE NO.: _ FINISHED:				PECTOR: ,	
			D/EQU						Aug 11	_ DIVI	In-L-1	
DRILLI	NG A	GENC	:Y:	В	EC		HOLE DIAME				TAL DEPTH:	10.0 m
1							DEPTH DRILL					1.96 m; AD
			1: <u>3,983,</u> : <u>Grass</u>				GROUND ELI			_ DAT	ГUM:	MSL
TYPE (OF HO	DVER. DLE:	. Grass ☐ Piezor	neter	☐ Mon				Auger Hole	X c	other Direct push	sampling hole
	Τ	T		1	<u> </u>	1						
ELEVATION / DEPTH (meters)	SAMPLE TYPE, NUMBER	GRAPHIC LOG	BLOW COUNT	SPT N-VALUE	USCS/ STRATA		DESCRIPTIC	ON OF MA	ATERIALS		FIELD DATA	LAB DATA
~ 0					PCC FILL	Portla	nd cement concrete pa	vement t	hickness = 10cm.		FC = F1	
50-					FILL	75% a	<u>v-graded GRAVEL Wi</u> angular to subangular f 15% fine to medium S	ine to coa	rse gravel (max.3c	m); [%Recovery = 97	
	\$1				FILL	ϯ <u>ϯ</u> ∖(GP-G			•	atenal	PID = 22.5ppm FC = F3 ¬FC = F3	
						suban	gular fine to coarse grader gular fine to coarse Sa	svel (max	.4cm): about 65%	, [%Recovery = 68	-/
	\$2					Fines;	no plasticity; fill mater EY SAND: brown to re	ial (SM).		- 11	PID = 3.2ppm	
-2					FILL	fine or	ravel (max.1cm); about about 40% Fines; low	55% sub	angular fine to coa	rse	%Recovery = 60	
						SILTY	'SAND: brown; moist;	about 70	% subangular fine i	to	PID = 3.0 - 5.4ppm	
48						Suban	Sand; about 30% Fin Igular to subrounded o			2.0-		
							EY SAND: brown; moi					
İ	S3					3.75m	about 35% Fines; low	plasticity,	at 2.7-2.65m and	3,0-		
	53						40					
-4						DIOMII	to grayish brown; fine	graver.				
46												
											%Recovery = 60 PID = 1.2 - 14.5ppm	
					CU	EAT C	LAV 44 5 1				.P(D ~ 1,2 • 14,3μμπ	'
					СН	moist;	LAY with Sand: graying fine gravel; about 85%	sn prown ; about 1:	io prownish gray; 5% Fines; high			
6					SC	CLAYE	ity; alluvial soil. E <mark>Y SAND</mark> : brownish gr	ay to brov	n; moist to wet; al	oout		
14—							ubrounded fine to coar n plasticity; alluvial soi		about 30% Fines; I	ow to		
	£4				sc		Y SAND: reddish brow 10% Fines; low plastici					
8					ļ		•		, ,			
						More s	my.					
42												
					ML		rith Sand: reddish bro					
					SM	SILTY	5% Fines; low plastich SAND: brown to light to	prown; mo	pist; about 70% fine	e to		
						coarse	Sand, about 30% Fine	es, residua	al soil, granite texto	я е.		
∟ ₁₀ l		<u> 4014 -</u>					direct push sampling a					
							ned depths of FILL MA = 5.55 - 7.4m, and RE			/IAL		

EXPLORATION LOG

HOLE NO. E11-180



PROJE						
LOCAT DATE:	HON: STAR	<u>Camp</u> TFD:	Carro	09 Au	o 11	G&EE NO.: <u>11-032E</u> INSPECTOR: FINISHED: <u>09 Aug 11</u> DRILLER:
						CC50PM-2
DRILLI	NG A	BENCY	/:	B	EC	HOLE DIAMETER: 5.5 cm TOTAL DEPTH: 10.0 m
OVER						DEPTH DRILLED. <u>10.0 m</u> WATER DEPTH: <u>6.59 m; AD</u>
						7,748.9 GROUND ELEV.: <u>50.14 m</u> DATUM: <u>MSL</u>
TYPE	AD CC	Ϳϒ ϲ ;; ͷϹ·	Grass	notor	□ Mon	CONTAMINATION: <u>Yes</u> pointoring Well ☐ Test Pit ☐ Auger Hole 図 other <u>Direct push sampling hole</u>
	JI 110	LL. L	⊒ FIGZUII	HCIGI	L. INIOH	Shirtornig Well - 1 restrict - Augernole - May office push sampling note
	m	ED	⊢			
NO NO	SAMPLE TYPE NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	111	_	DESCRIPTION OF MATERIALS FIELD DATA LAB DATA
VAT TH ters)	APLE ABER	GRAPHIC LOG CONTAMIN	o wc	SPT N-VALUE	USCS / STRATA	DESCRIPTION OF WATERNALS FIELD DATA DAS DATA
ELEVATION / DEPTH (meters)	SAN D	GR/ CO	BLC	SPT N-V	STR	
500		XXXX			FILL	
	\$1					subangular fine to coarse gravel (max.3.5cm); about 65% Subangular fine to coarse Sand; about 30% Fines; no PID = 2.5ppm FC = F3
						plastrotty; till material (SM); grass roots at U-0.1m.
		‱ l				Brown to light brown; about 15% subangular fine to coarse
	83					gravel (max.3cm); about 60% subangular fine to coarse Sand; about 25% Fines; no plasticity; at 1.0-4.0m.
482						2.0 to 3.0m; PID = 279 ppm.
		\bowtie				PID = 11 - 366ppm
		XX				
						3.0 to 4.0m; PfD = 366 ppm.
	S3					
464						Dark bluish gray to grayish brown; wet to moist; about 10%
		‱ I				subangular fine gravel (max.1cm); about 65% fine to coarse Sand; about 25% Fines; wet sample at 4.3m; more clayey
		XXX				soils.
					FILL	
						80% subangular fine to coarse Sand; about 20% Fines; PID = 7.9 - 314ppm medlum plasticity; fill material (SM).
						5.0 to 6.0m; PID = 314 ppm. CLAYEY SAND: reddish brown; about 60%; about 40%
446						Fines; at 5.65-6.0m.
	_					
				Ī	CL	LEAN CLAY with Sand: brown to grayish brown; moist; about 25% fine Sand; about 75% Fines; medium plasticity; alluvial
					\$C	soil.
	54					CLAYEY SAND: dark greenish gray; moist to wet; about 60% subangular fine to coarse Sand; about 40% Fines; alluvial
					CH	Soil. FAT CLAY with Sand: dark brownish gray; moist; about 20%
428			Ì			tine Sand; about 80% Fines; high plasticity; alluvial soil.
-						
					SC	CLAYEY SAND: brown; moist; about 55% fine Sand; about 45% Fines; medium plasticity; alluvial soil.
						10 (7)
				}	SC	CLAYEY SAND. yellowish brown, moist, about 60%
└ 10	·	e				subangular fine to coarse Sand; about 40% Fines; residual
						End of direct push sampling at 10.0m. Confirmed depths of FILL MATERIAL = 0 - 6.65 m, ALLUVIAL
						SOILS ≈ 6.65 - 9.8m, and RESIDUAL SOIL = 9.8-10.0m,

ENVIRO-EXPLORATION LOG 11-032E-PHASE2-FINAL 3PJ USACE SKOREA GDT 8/22/11

EXPLORATION LOG



LOCAT				Soil Sar II	npling	G&EE NO.: 11-032E INSPECTOR:
DATE S	START	ED:		08 Au	g 11	FINISHED: 08 Aug 11 DRILLER:
DRILLII OVERB	NG AG SURDE SINATE ND CO	ENCY N THI ES: N: VER:	′: CKNES 3,983,3 <u>Grass</u>	B SS: 818.1 E	EC :: <u>447,</u> 7	DEPTH DRILLED: 7.0 m WATER DEPTH: Caved (0.3m); A 762.6 GROUND ELEV.: 49.93 m DATUM: MSL
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS FIELD DATA LAB DATA
491	51				FILL	SILTY SAND: brown to light brown; moist; about 5% subangular to subrounded fine to coarse gravel (max.4.5cm); about 70% subangular fine to coarse Sand; about 25% Fines; no plasticity; fill material (SM). **Recovery = 100 PID = 0.6ppm FC = F3 **Recovery = 93 **PID = 2.8 - 3.8ppm
482					FILL	CLAYEY SAND: reddish brown; about 60% fine Sand; about 40% Fines; medium plasticity; fill material (SC); at 1.4-1.6m. SILTY SAND: brown to light brown; moist; about 5% subangular to subrounded fine to coarse gravel (max.4.5cm); about 70% subangular fine to coarse Sand; about 25% Fines; no plasticity; fill material (SM). FC = F3 **Recovery = 57 PID = 1.6 - 3.5ppm
473	53				FILL	SILTY SAND with Gravel: brown; moist to wet; about 15% subangular fine gravel (max.2cm); about 65% subangular fine to coarse Sand; about 20% Fines; no plasticity; fill material (SM). CLAYEY SAND: reddish brown; wet to moist; about 10% subrounded fine gravel; about 60% fine to medium Sand; about 30% Fines; low plasticity; fill material (SC).
464					FILL	Wet sample at 3.6m. SILTY SAND: brown; moist; about 10% subangular fine gravel; about 60% fine to coarse Sand; about 30% Fines; fill
45			And the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second s			material (SM). Water encountered at 5.5m.
44— _{—6} 					СН	FAT CLAY with Sand: dark greenish gray to brownish gray; moist; about 20% fine Sand; about 80% Fines; high plasticity; alluvial soil.
43—[7	0					End of direct push sampling at 7.0m; Confirmed depths of FILL MATERIAL = 0-5.9m and ALLUVIAL SOILS = 5.9 - 7m.

EXPLORATION LOG

HOLE NO. E11-182



PROJECT: Phase II Site Soil Sampling LOCATION: Camp Carroll G&EE NO.: ___ 11-032E INSPECTOR: DATE STARTED: 07 Aug 11 FINISHED: __ 07 Aug 11 DRILLER: DRILLING METHOD/EQUIPMENT: BEC50PM-2 HOLE DIAMETER: __ 5.5 cm TOTAL DEPTH: 10.0 m DRILLING AGENCY: BEC WATER DEPTH: DEPTH DRILLED: ___10.0 m 2.53 m; AD OVERBURDEN THICKNESS: COORDINATES: N: 3,983,301.8 E: 447,747.3 GROUND ELEV.: 49.73 m DATUM: MSL CONTAMINATION: GROUND COVER: Grass TYPE OF HOLE: Piezometer ☐ Monitoring Well ☐ Test Pit ☐ Auger Hole X other Direct push sampling hole SAMPLE TYPE / NUMBER TNUOD WO. ELEVATION / DEPTH (meters) GRAPHIC LOG FIELD DATA LAB DATA **DESCRIPTION OF MATERIALS** USCS/ STRATA SILTY SAND: brown; moist; about 10% subangular fine to %Recovery = 100 coarse gravel (max.5cm); about 70% subangular fine to PID = 0.8ppm coarse Sand; about 20% Fines; no plasticity; fill material (SM), FC = F3 %Recovery = 92 PID = 1.1 - 2.1ppm Grayish brown, 48--2 %Recovery = 86 PID = 1.7 - 2.9ppm FLL CLAYEY SAND: brown; moist; about 5% subangular fine to coarse gravel (max.4cm); about 55% subangular fine to coarse Sand; about 40% Fines; low plasticity; fill material (SC). TRL SILTY SAND: brown to reddish brown; moist; about 10% subangular fine to coarse gravel (max.3cm); about 60% fine to medium Sand; about 30% Fines; no plasticity; fill material 46 Fine gravel (max.1.5cm). CLAYEY SAND: brown; moist; about 55% subangular fine to coarse Sand; about 45% Fines; low plasticity; fill material (SC). %Recovery = 90 PID = 1.9 - 7.5ppm FILL SILTY SAND: brown; moist; about 5% subangular fine 44 gravel; about 70% fine to coarse Sand; about 25% Fines; no SC plasticity; fill material (SM). CLAYEY SAND with Gravel: brownish gray; moist; about 25% subrounded fine to coarse gravel (max.4cm); about 40% subangular fine to coarse Sand; about 35% Fines; alluvial soil. SANDY FAT CLAY: dark brownish gray; wet; about 30% fine to medium Sand; about 70% Fines; medium to high plasticity; alluvial soil; A coarse gravel (3cm) encountered at 8.7m. 42 CLAYEY SAND with Gravel: grayish brown; moist; about 20% subrounded fine to coarse gravel; about 65% subangular fine to coarse Sand; about 15% Fines; alluvial soil. FAT CLAY with Sand brown; moist; about 15% fine Sand; about 85% Fines; high plasticity; alluvial soil. CLAYEY SAND: reddish brown to black; moist; about 60% subangular fine to coarse Sand; about 40% Fines; medium plasticity; alluvial soil. End of direct push sampling at 10.0m; Confirmed depths of FILL MATERIAL = 0-5.8m and ALLUVIAL SOILS = 5.8-10m.

ENVIRO-EXPLORATION LOG 11-032E-PHASE2-FINAL.GPJ JSACE SKOREA,GDT

EXPLORATION LOG



DRII	LLIN	IG M		/EQUI		T: BEC	C50PM-2		
			GENCY EN THI					OTAL DEPTH: _ /ATER DEPTH:	12.0 m
COC	DRD	INAT	EN 1711 "ES: N:	3.983.2	288.9 E	: 447.		ATUM:	MSL
			OVER:						
TYP	ΕO	F HC	LE: [] Piezon	neter	☐ Mon	toring Well	other Direct push s	sampling hole
ELEVATION / DEPTH	(meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS	FIELD DATA	LAB DATA
	-0	S1				FILL	SILTY SAND with Gravel: brown; moist; about 15% subangular fine to coarse gravel (max.4cm); about 65%	%Recovery = 100 PID = 3.5ppm	
	ŀ						subangular fine to coarse Sand; about 20% Fines; no plasticity; fill material (SM); grass roots at 0-0.05m.	FC = F3 %Recovery = 97	1
		S 2					Light brown; more gravels at 1.2-1.5m.	PID = 4.4 - 5.0ppm	
18-	-2	y						2/6	
	٠ [<u>-1</u>	 				Brown; PID in hole (0-3m open hole) = 1.4 ppm.	%Recovery = 100 PID = 2.1 - 7.3ppm	
			 						
16—		\$3	 			FILL.	CLAYEY SAND: reddish brown; moist; about 5% subangular		
	4		 				fine gravel (max.1cm); about 55% fine to medium Sand; abou 40% Fines; medium plasticity; fill material (SC).		
			 						
						FILL	SILTY SAND: grayish brown; moist; about 5% subangular	%Recovery = 85	
14							fine gravel (max.2cm); about 65% fine to coarse Sand; about 30% Fines; no plasticity; fill material (SM); PID in hole (0-5m open hole) = 0 ppm.	%Recovery = 65 PID = 1.7 - 5.9ppm	
			XXX				орен повеј — о ррш.		
	6		 						
		立				FILL	CLAYEY SAND: brown; moist to wet; about 60% fine to		
2		54					medium Sand; about 40% Fines; low plasticity; fill material (SC); Wet sample at 6.8m.		
	8					FILL	LEAN CLAY with Sond: yellowish brown; moist; about 20%	4	
						FILL	fine Sand; about 80% Fines; low plasticity; fill material (CL). CLAYEY SAND, brows, moist to wet, about 60% fine to medium Sand; about 40% Fines; low plasticity; fill material	<i>-</i>	
						CL	(SC). LEAN CLAY: greenish black to dark reddish brown; moist;	<u>ا</u>	
.0							fine to coarse Sand; about 100% Fines; medium plasticity; alluvial soil; 2.5cm subrounded gravel at 9.7m.		
	10					SC	CLAYEY SAND: dark brown to grayish brown; moist to wet; about 60% fine to coarse Sand; about 40% Fines; low		
	יט						about 60% fine to coarse Sand; about 40% Fines; low plasticity: alluvial soil.		
						CL SC	LEAN CLAY: brown; moist; about 10% fine Sand; about 90% Finea; medium plasticity; alluvial coil; black hard clay (mud	d	
18						55	\(\)\(\)\(\)\(\)\(\)\(\)\(\)\(\)\(\)\(\	<i>J</i>	
	12						End of direct push sampling at 12 0m		

EXPLORATION LOG



PROJE LOCAT	ION:	Camp	Carro	ll		G&EE NO.: 11-032E INSPECTOR:
DATES				<u>06 Au;</u> !PM≓Nii	g 11 r- rec	FINISHED: <u>07 Aug 11</u> DRILLER:C50PM-1
DRILLI OVERE	NG AG BURDI	GENCY EN THI	: CKNE	<u>B</u> SS:	EC	HOLE DIAMETER: 5.5 cm TOTAL DEPTH: 8.75 m DEPTH DRILLED: 8.75 m WATER DEPTH: 1.84 m; AD
					: 447,8	,800.2 GROUND ELEV.: 50.16 m DATUM: MSL
GROUI TYPE (☐ Mon	CONTAMINATION:
		,		· · · · · · · · · · · · · · · · · · ·	,	
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS FIELD DATA LAB DATA
50-0	S1				FILL	SILTY SAND: brown; moist; about 5% subangular fine gravel (max.2cm); about 70% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; fill material FC = F3
						(SM). %Recovery = 100 PID = 2.6 - 2.8ppm
49—	S2					
482	Ā					About 70% subangular fine to coarse Sand (max.4.8mm);
					FILL	SANDY LEAN CLAY: reddish brown; moist; about 35% subangular fine to medium Sand (max.2mm); about 65% Fines; medium plasticity; fill material (Ct.).
473	S 3					SILTY SAND: brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; no plasticity; fill material (SM). Moist to wet; about 3% subrounded fine to coarse gravel (max.3cm); about 72% subangular fine to coarse Sand (max.4.8mm); about 25% Fines.
46-					sc	About 75%; about 25% Fines; no gravels. CLAYEY SAND: reddish brown to grayish brown; moist; about 10% subangular fine gravel (max.2cm); about 60%
						subangular fine to coarse Sand (max.4.8mm); about 30% Fines; medium plasticity; alluvial soil; no gravels at 4.6m to
45					CL	5.0m. / %Recovery = 70 SANDY LEAN CLAY: grayish brown; wet; about 40% subangular fine to medium Sand (max.2mm); about 60% Fines; medium plasticity; alluvial soil.
446					SC	CLAYEY SAND: grayish brown; moist; about 60% subangular fine to coarse Sand (max.4.8mm); about 40% Fines; medium plasticity; alluvial soil.
437	54				SM	SILTY SAND: brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% l'ines; no plasticity; residual soil. Granite texture.
42					A de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la constanta de la consta	Hard pushing of sampler at 8.5-8.75m; HDP (Hydraulic Down Pressure) = 1000 psi.
1 1			l.		1	Penetration refusal depth = 8.75m (Penetration speed = 2cm / 1min).

EXPLORATION LOG



				son Sar	npling					EXCEPTION OF THE
LOCAT				11		G&EE NO.:	11-032E	_ INSI	PECTOR:	
						FINISHED:	96 Aug 11	_ DRI	LLER:	A fire of the fire of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of
						250PM-1 HOLE DIAMETER	: 5.5 cm	TOT	AL DEPTH:	8.8 m
DRILLII OVERB	NG AC	シに エロロ	CKNES	D.	EC				TER DEPTH:	
COOR	UKUI	.E.C. VI.	2 002 2	つる. 20 <i>4 7</i> に	. 447 \$	DEPTH DRILLED: 306.0 GROUND ELEV.:	50 07 m	VV/\ T\Δ\T	UM:	
GROUN								DA!	OIVI	141012
TYPE C	F HC	LE: [Piezon	neter	☐ Mon	toring Well	☐ Auger Hole	X o	ther Direct push s	ampling hole
	Ι_			1	1					1
ELEVATION / DEPTH (meters)	SAMPLE TYPE NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS / STRATA	DESCRIPTION OF	MATERIALS		FIELD DATA	LAB DATA
Γ°	S1				FILL	CLAYEY SAND: brown; moist; abc coarse gravel (max.3cm); about 65			%Recovery = 100 PID = 2.4ppm	
					FILL	coarse Sand (max.4.8mm); about 2	25% Fines; medium	/	FC = F3 %Recovery = 93	
					"	SILTY SAND: brown; moist; about (max.1cm); about 70% subangular	5% subangular fine of	ravel	PID = 2.8 - 2.9ppm FC = F3	
501						(max.4.8mm); about 25% Fines; no (SM).		d		
	S2					About 75% subangular fine to coar about 25% Fines; no gravels; enco	se Sand (max.4.8mm	i);		
						1.8m to 1.9m.	untered clayey sand	ayerat		
49—2	<u>y</u>				FILL	CLAYEY SAND: brown; moist; abo	ut 5% subangular fin	e	%Recovery = 87	
į		XXX				gravel (max.2cm); about 70% suba (max.4.8mm); about 25% Fines; m	ngular fine to coarse	Sand	PID = 2.6 - 3.5 ppm	
_		XXX				(SC).	,, ,			
483		₩ I								
" "						Wet soil at 3.0m to 3.2m.				
+	53	XXX			FILL	SILTY SAND: brown; moist; about	5% subangular fine o	ravel		
474						(max.2cm); about 70% subangular (max.4.8mm); about 25% Fines; no (SM). Wet.	fine to coarse Sand			
+					CL	SANDY LEAN CLAY: grayish brow				
46—5					SC	subangular fine to medium Sand (n Fines; medlum plasticity; aliuvial so CLAYEY SAND: grayish brown; mo	H.	·	%Recovery = 63	
						subangular fine to medium Sand (n Fines; medium plasticity; alluvial so	nax.2mm); about 40%	,	PID = 0.6 - 4.2ppm	
					СН	FAT CLAY with Sand: grayish bro				
45 6						subangular fine Sand (max.0.43mm plasticity; alluvial soil.				
						Grayish brown to gray; about 20% : Sand (max.2mm); about 80% Fines		dium		
	i								•	
147	54					Encountered clayey sand layer (5cr	n).			
						and the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second o	•			
†										
138					sc	CLAYEY SAND: brown; moist; abo coarse Sand (max.4.8mm); about 3 plasticity; residual soil; disturbed gr	0% Fines; medium	ne In		
+					SM	SILTY SAND: brown; moist; about coarse Sand (max.4.8mm); about 3				
, ,		1 11 1				residual soil; granite texture;. Hard pushing of sampler at 8.55-8.	,	1		
						Pressure) = 1000 psi;				
						Penetration refusal depth = 8.8m (1min).	renetration speed =	icm /		

EXPLORATION LOG

HOLE NO. E11-186



DRILLII OVERE COOR! GROUN	NG METH NG AGEN BURDEN T DINATES: ND COVER DF HOLE:	CY: HICKNE N: 3,983, R: <u>Weed</u>	B SS: 296.6 E	EC : 447,8	HOLE DIAMETER: 5.5 cm TO DEPTH DRILLED: 8.0 m WA 322.8 GROUND ELEV.: 52.43 m DA CONTAMINATION:	TAL DEPTH: 8.0 m ATER DEPTH: 3.4 m; AD TUM: MSL other Direct push sampling hole
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER GRAPHIC LOG	CONTAMINATED BLOW COUNT	SPT N-VALUE	USCS / STRATA	DESCRIPTION OF MATERIALS	FIELD DATA LAB DATA
521	S1 S2			F(LL	SILTY SAND: brown; moist; about 10% subangular fine to coarse gravel (max.3cm); about 65% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; fill material (SM); encountered clayey sand layer.	%Recovery = 100 PID = 3.6ppm FC = F3 %Recovery = 88 PID = 1.1 - 1.5ppm
50	▼		***************************************	FILL	CLAYEY SAND: reddish brown; moist to wet; about 5% subangular fine gravel (max.2cm); about 60% subangular fine to coarse Sand (max.4.8mm); about 35% Fines; medium plasticity; fill material (SC). Brown; moist; about 5% subangular fine gravel (max.2cm); about 70% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; encountered sity sand layer at 2.5m to 2.6m. Brown to reddish brown; about 75% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; encountered sity sand layer at 3.3m to 3.5m. Moist to wet.	%Recovery = 90 PID = 2.3 - 4.2ppm
- 5	D4			CH CH	SANDY LEAN CLAY: grayish brown; moist; about 40% subangular fine to coarse Sand (max.4.8mm); about 60% [Fines; medium plasticity; alluvial soil; with organics. CLAYEY SAND: dark brown; moist; about 65% subangular fine to coarse Sand (max.4.8mm); about 35% Fines; high plasticity; alluvial soil. 3ANDY FAT CAY: dark brown; moist; about 30% subangular fine to coarse Sand (max.4.8mm); about 70% Fines; high plasticity; alluvial soil.	%Recovery = 62 PID = 2.6 - 3.5ppm
7 				SC	CLAYEY SAND: brown; moist; about 70% subangular fine to coarse Sand (max.4.8mm); about 30% Fines; medium plasticity; residual soil; disturbed granite texture. Hard pushing of sampler at 7.7-8.0m; HDP (Hydraulic Down Pressure) = 1000 psi. Penetration refusal depth = 8.0m (Penetration speed = 5cm / 1min).	

CEPOF-ED-G

EXPLORATION LOG



PROJE	CT:	Phase I	I Site!	Soil San	nnling		***************************************	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>		
LOCAT	TON:	Camp	Carro	ll		G&EE NO.:		INSP	ECTOR:	
DATE	STAR	TED:		05 Au	g 11	FINISHED:		DRIL	LER:	Marit man
DRILLI	NG M	ETHOD)/EQUI	PMENT	J: BEC	C50PM-1		TOT/	· PEDTII,	40.0
DRILLI									\L DEPTH: ER DEPTH:	10.0 m
COORI	JINAT	.E.C. N∶ πΙΧ ΤΙΤΙ	3 083.1	ან: 273 K F	447.5	DEPTH DRILL 829.9 GROUND ELE	EV.: <u>10.0 m</u> EV.: <u>54.91 m</u>		ER DEPTH: JM:	<u>5.27 m; AD</u>
						CONTAMINAT		DAIG	Jivi.	WISL
						itoring Well		X oth	er Direct push s	ampling hole
,	 	·		-			·	· · · · · · · · · · · · · · · · · · ·		
	PE/	TED	与							
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	m i	4	DESCRIPTIO [®]	N OF MATERIALS		FIELD DATA	LAB DATA
VAT PTH sters)	MBE	GRAPHIC LOG CONTAMIN) W(SPT N-VALUE	USCS / STRATA		VOI TOTAL CO.		(Halate en	
	SAU	8,5,8	B.C	a Z	US					
		XXXX			FILL	SILTY SAND: brown; moist; a		9	%Recovery = 100	
	S1	XX	١	'	!	gravel (max.2cm); about 65% (max.4.8mm); about 25% Fine	subangular fine to coarse S	Sand P	PID = 1.2ppm C = F3	
		 	١	1	1	(SM).	sa, no passion,	\[\gamma_{\psi}	6Recovery = 97 PID = 1.1 - 1.8ppm	1
541			ļ		į '	About EN/ subangular fine ars	-1 (2am)- about 70%		TD = 1.1 - 1.ομρικι	
	52	 	1		1	About 5% subangular fine gra subangular fine to coarse San	nd (max.4.8mm); about 25%			
7		XX	ļ		1	Fines; encountered clayey sar	nd layer.			
53—		XX [į		1					
"		 	ļ		1 '				Recovery = 93 ID = 0.8 - 2.0ppm	
1 +		 	ļ		1				-	
52		 	1		1					
32 -3	1		ļ							
	S3 -	XX	1		<u> </u>	and the same of the broad	* * * 700/			
	1	XXX [ļ		FILL	CLAYEY SAND: reddish brow subangular fine to coarse San	d (max.4.8mm); about 30%	ا		
51——4		 		ı	i	Fines; medium plasticity; fill m	aterial (SC).			
		XX			FILL	SILTY SAND: dark brown; mo to coarse gravel (max.3cm); a				
	1 8	XX	1	.	,	coarse Sand (max.4.8mm); ab motoriol (SM).	pout 25% Fines; no plasticity	y; fill		
50—5		 		į	,	` '	and another fine groups	0/	Recovery = 88	
	_ ▼	XX			.	Brown; moist to wet; about 3% (max.1cm); about 72% subang	gular fine to coarse Sand	Pf	Recovery = 88 ID = 0.3 - 2.3ppm	
7	1	***]	(max.4.8mm); about 25% Fine sand layer at 5.8m to 5.9m.	s; encountered fat day will	1		
496	ı	 	1		,	ı				
	ı Ş	 				Moist to wet; about 3% subang about 72% subangular fine to				
-	. ?	XXX	Ì			about 25% Fines; encountered				
48		XX			,					
407				ļ	SC	CLAYEY SAND: dark brown; r				
1 1	S4 ,					subangular fine to medium Sai Fines; alluvial soil; encountered		.1m.		
47				-	СН	FAT CLAY: dark gray; moist; a				
]						(max.0.43mm); about 90% Fin		oil.		
L					SC	CLAYEY SAND: brown; moist				
469	K					fine to coarse Sand (max.4.8m plasticity; alluvial soil.	im); about 20% Fines, meo-	łum		
						Wet. Easy pushing of sampler at 9.	0-10.0m; HDP (Hydraulic D	lown		
7	ľ					Pressure) = 100 psi.				
4510										
,,						Penetration refusal depth = 10 / 10sec).	J.0m (Penetration speed = 1	10cm		

EXPLORATION LOG



	PRO	DJE	CT:	Phase 1	II Site S	Soil Sar	npling		
	LOC	CAT	ION:	Camp	Carro	II		G&EE NO.: <u>11-032E</u> INSF	PECTOR:
	DAT	ΓE S	TAR	TED:		05 Au	g 11	FINISHED: <u>05 Aug 11</u> DRIL	LER: Mishing Common
								C50PM-1	
				GENC		B	EC		AL DEPTH: 9.58 m
	OVE	ERB	URD	EN TH	ICKNE:	3S:			TER DEPTH: Caved (0.5m); AD
								341.8 GROUND ELEV.: 55.03 m DATE CONTAMINATION:	UM: <u>MSL</u>
						neter			her Direct push sampling hole
ĺ			1 110		1 102011	10.01	L ((10))		
	ELEVATION / DEPTH	(meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS / STRATA	DESCRIPTION OF MATERIALS	FIELD DATA LAB DATA
	55	þ		XXX			FILL		%Recovery = 100
			S1					coarse gravel (max.3cm); about 65% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; fill	PID = 2.5ppm FC = F3
	1		***************************************						%Recovery = 100 PID = 3.8 - 4.2ppm
	54	-1							110 0.0 II.pp/II
ļ	~		S2					About 5% subangular fine gravel (max.2cm); about 70% subangular fine to coarse Sand (max.4.8mm); about 25%	
	+						FILL	CLAYEY SAND: reddish brown; moist; about 5%; about 65%	FC = F3
							FIL	subangular fine to coarse Sand (max.4.8mm); about 30% Fines; medium plasticity; fill material (SC).	
	53-	-2		XXX				SILTY SAND: brown; moist; about 5% subangular fine gravel	%Recovery = 94 PID = 1,4 - 3.9ppm
				XXX				(max.4,8mm); about 25% Fines; no plasticity; fill material	1 10 — 1,4 - 5.5рріп
				XXX				(SM).	
١	52-	-3					TILL	CLAYEY SAND: brown to reddish brown; moist to wet; about	
				 				5% subangular fine gravel (max.2cm); about 70% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; medium	
	+		S3					plasticity; fill material (SC); encountered silty sand layer.	
		_,							
	51—	~4		XXX			FILL	SILTY SAND: brown; moist; about 5% subangular fine gravel (max.2cm); about 70% subangular fine to coarse Sand	
	+							(max.4.8mm); about 25% Fines; no plasticity; fill material (CM).	
7								(Carry)	
8/22/	50-	5					FILL		%Recovery = 76
100				XXX				subangular fine to coarse Sand (max.4.8mm); about 30% Fines; medium plasticity; fill material (SC).	PID = 0.9 - 3.2ppm
REA.	1			<i>>>>></i>			SC	CLAYEY SAND: gray; moist; about 60% subangular fine to	
SKO	49-	-8					CL	coarse Sand (max,4,8mm); about 40% Fines; medium plasticity; alluvial soil; with organics.	
ACE	70							LEAN CLAY with Sand: gray; moist; about 25% subangular fine to medium Sand (max.2mm); about 75% Fines; medium	
3							SM	\placticity; alluvial coil.	
10,1								SILTY SAND: grayish brown; wet; about 80% subangular fine to medium Sand (max.2mm); about 20% Fines; no	
Ž	48	7					SC	plasticity; aliuvial soil. CLAYEY SAND. dark brown; moist; about 70% subangular	***************************************
ASE2			S4					fine to coarse Sand (max.4.8mm); about 30% Fines; medium plasticity; alluvial soil; encountered fat day layer at 7.7m to	i
F.P.L.								7.8m.	
033	47	8							
ģ									
	+			44			SM	SILTY SAND: brown; moist; about 70% subangular fine to	
₹ATIC	46	9	ļ					coarse Sand (max.4.8mm); about 30% Fines; no plasticity; residual soil; granite texture.	Tarana da da da da da da da da da da da da da
P.C.	46—	-		4111				Hard pushing of sampler at 9.3-9.58m; HDP (Hydraulic Down Pressure) = 1000 psi.	
9	+	L						Devotation soft and death at 0.50 - (Devotation areas) of First	
ENVIRO-EXPLORATION LOG 11-032E-PHASE2-FINAL, SPJ USACE SKOREA.GDT 8/22/11								Penetration refusal depth = 9.58m (Penetration speed = 5cm / 2min).	

EXPLORATION LOG

HOLE NO. **E11-189**



PROJECT: Phase II Site Soil Sampling LOCATION: Camp Carroll G&EE NO.: _ 11-032E INSPECTOR: 05 Aug 11 FINISHED: 05 Aug 11 DRILLER: DATE STARTED: DRILLING METHOD/EQUIPMENT: BEC50PM-1 BEC 5.5 cm TOTAL DEPTH: 10.0 m HOLE DIAMETER: __ DRILLING AGENCY: WATER DEPTH: 5.36 m; AD DEPTH DRILLED: 10.0 m **OVERBURDEN THICKNESS:** COORDINATES: N: 3,983,311.0 E: 447,835.5 GROUND ELEV.: 54.81 m DATUM: MSL CONTAMINATION: GROUND COVER: Weed TYPE OF HOLE: Piezometer ☐ Monitoring Well ☐ Test Pit Auger Hole X other Direct push sampling hole CONTAMINATED SAMPLE TYPE NUMBER ELEVATION / DEPTH (meters) BLOW COUNT GRAPHIC LOG SPT N-VALUE DESCRIPTION OF MATERIALS FIELD DATA LAB DATA USCS/ STRATA SILTY SAND: brown; moist; about 3% subangular fine gravel %Recovery = 100 (max.1cm); about 72% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; fill material PID = 1.8ppm FC = F3 %Recovery = 93 PfD = 2.6 - 2.8ppm About 10% subangular fine to coarse gravel (max.3cm); about 65% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; encountered clayey sand layer. 54-S2 No dayey sand layer. -2 %Recovery = 90 PID = 4.8 - 14.0ppm 52-About 5% subangular fine to coarse gravel (max.5cm); about 70% subangular fine to coarse Sand (max.4.8mm); about 25% S3 ...A About 5% subangular fine gravel (max.1cm); about 70% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; encountered dayey sand layer at 4.8m to 5.0m. 50-Moist to wet; about 75%; about 25% Fines; no gravels; encountered clayey sand layer at 5.3m to 5.4m. %Recovery = 90 PID = 2.7 - 12.3ppm -6 Moist to wet; encountered dayey sand layer. 48 SANDY LEAN CLAY: gray to brown; moist; about 30% subangular fine to coarse Sand (max.4.8mm); about 70% Fines; medium plasticity; alluvial soil; with organics. FAT CLAY: dark brown; moist; about 10% subangular tine to medium Gand (max.2mm); about 90% Fines; high plasticity; alluvial soil. --8 FAT CLAY with Sand: brown to light gray; moist; about 5% subangular fine gravel (max.2cm); about 15% subangular fine to coarse Sand (max.4.8mm); about 80% Fines; high 46 CH SM plasticity; alluvial soil. About 25% fine Sand (max.0.43mm); about 75% Fines; no SILTY SAND. light brown, moist, about 75% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; residual soil; granite texture. Hard pushing of sampler at 9.7-10.0m; HDP (Hydraulic Down Pressure) = 800 psi. Penetration refusal depth =10.0m (Penetration speed = 5cm /

ENVIRO-EXPLORATION LOG 11-032E-PHASE2-FINAL GPJ USACE SKOREA,GDT 8/22/1

EXPLORATION LOG

HOLE NO. E11-190





AGENCY: DEN THIC ATES: N: 3. COVER: (EQUIPMEN KNESS: _ .983,371.5 Grass Piezometer	IT: <u>BEC</u> BEC E: <u>447,</u> 6	HOLE DIAMETER: DEPTH DRILLED: G63.9 GROUND ELEV.: CONTAMINATION:	5.5 cm TO 10.0 m WA 49.61 m DA	TAL DEPTH: TAL DEPTH: Ca TUM: other	ved (4.8m); AI MSL
AGENCY: DEN THIC ATES: N: 3. COVER: (KNESS:,983,371.5 Grass Piezometer	BEC E: <u>447,</u> 6	HOLE DIAMETER: DEPTH DRILLED: G63.9 GROUND ELEV.: CONTAMINATION:	10.0 m WA 49.61 m DA	TER DEPTH: Ca	ved (4.8m); Al MSL
GRAPHIC LOG CONTAMINATED	COUNT					iibiitid iiose
	BLOW CO SPT N-VALUE	USCS / STRATA	DESCRIPTION OF MA	STERIALS	FIELD DATA	LAB DATA
		FILL	SILTY SAND with Gravel: brown; mo subangular fine to coarse gravel (max. subangular fine to coarse Sand; about plasticity; fill material (SM).	3cm): about 55%	%Recovery = 100 PID = 0.6ppm FC = F3 %Recovery = 93 PID = 2.8 - 3.8ppm	
		The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	SILTY SAND: moist; about 20% subro gravel (max.3cm); about 60% subangu about 20% Fines; no plasticity.		%Recovery = 57 PID = 1.6 - 3.5ppm	
		FILL	CLAYEY SAND: reddish brown; moist to medium Sand; about 40% Fines; lov (SC). Water encountered at 4.8m.			
		FILL	SILTY SAND: brown; wet; about 70% to coarse Sand; about 30% Fines; fill mat	subangular fine to erial (SM).	%Recovery = 53 PID = 1.9 - 2.7ppm	
		FILL	40% Fines; low to medium plasticity; fill angular gravel (4.5cm) encountered at FAT CLAY with Sand: dark brown to rabout 20% fine Sand; about 80% Fines residual soil.	I material (SC); coarse 7.4m. eddish brown; moist; s; high plasticity;		
			medium Sand; ahout 45% Fines; residi	sal soil; granite texture		
			CH	40% Fines; low to medium plasticity; file angular gravel (4.5cm) encountered at FAT CLAY with Sand: dark brown to real about 20% fine Sand; about 80% Fines residual soil. SC CLAYEY SAND: reddish brown; moist; medium Sand; about 45% Fines; residual soil. End of direct push sampling at 10.0m; FilL, MATERIAL ≈ 0-7.4m, ALLUVIAL:	40% Fines; low to medium plasticity; fill material (SC); coarse angular gravel (4.5cm) encountered at 7.4m. FAT CLAY with Sand: dark brown to reddish brown; moist; about 20% fine Sand; about 80% Fines; high plasticity; residual soil. SC CLAYEY SAND: reddish brown; moist; about 55% fine to medium Sand; about 45% Fines; residual soil; granite texture End of direct push sampling at 10.0m; Confirmed depths of FILL MATERIAL = 0-7.4m, ALLUVIAL SOILS = 7.4-8.4m, and	40% Fines; low to medium plasticity; fill material (SC); coarse angular gravel (4.5cm) encountered at 7.4m. FAT CLAY with Sand; dark brown to reddish brown; moist; about 20% fine Sand; about 80% Fines; high plasticity; residual soil. SC CLAYEY SAND; reddish brown; moist; about 55% fine to medium Sand; about 45% Fines; residual soil; granite texture. End of direct push sampling at 10.0m; Confirmed depths of

CEPOF-ED-G

EXPLORATION LOG





LOCATION: Camp Carroll GREE NO.: 11-032E INSPECTOR: DATE STARTED: 09 Aug 11 FINISHED: 09 Aug 11 DRILLER: DRILLER: DRILLER: DRILLER: DRILLER: DRILLER: S.5.cm TOTAL DEPTH: 7.7 m TOTAL DEPTH: TOTAL DEPTH: TOTAL DEPTH: 4.42 m; AD OVERBURDEN THICKNESS: DEPTH DRILLED: 7.7 m WATER DEPTH: 4.42 m; AD DATUM: MSL GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: GROUND COVER: Grass GROUND COVER: Grass GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COVER: GROUND COV	PROJE	CT: P	hase l	I Site S	Soil Sar	npling								
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BRILLING AGENCY: BBC: HOLE DIAMETER: 5.5 cm TOTAL DEPTH: 7.7 m WATER DEPTH: 4.4 2m; AD DATUM: MSL AGENUND COVER: GROUND COVER: Grass TYPE OF HOLE: Plezometer Monitoring Well Test Pit Auger Hole BECONTAMINATION: TYPE OF HOLE: Plezometer Monitoring Well DESCRIPTION OF MATERIALS FIELD DATA LAB DATA BECONTAMINATION: TYPE OF HOLE: Plezometer Monitoring Well DESCRIPTION OF MATERIALS FIELD DATA LAB DATA BECONTAMINATION: TYPE OF HOLE: BECONTAMINATION: TYPE OF HOLE: BECONTAMINATION: TYPE OF HOLE: BECONTAMINATION: TYPE OF HOLE: BECONTAMINATION: DESCRIPTION OF MATERIALS FIELD DATA LAB DATA BECONTAMINATION: DATE: BECONTAMINATION: TYPE OF HOLE: BECONTAMINATION: TYPE OF HOLE: BECONTAMINATION: DESCRIPTION OF MATERIALS FIELD DATA LAB DATA SET SAME Sign brown: residual 50% since; no classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sign and classing sig								SHED:	09 A	Aug 11	DRI	LLER:		
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TYPE OF HOLE: Plezometer Monitoring Well Test Pit Auger Hole St other Direct push sampling hole Auger Hole										45.61 m	DA	UM:	MSL	
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FILL SILTY SAND: brown: moist; about 10% angular to subangular fine to coarse grave (max.3cm); about 60% subangular fine to coarse Sand; about 30% Fines; no plastately; fill material (2M). FILL SILTY SAND with Graver brown to dark gray; moist; about 60% subangular fine to coarse grave (max.4cm); about 20% Fines; no plastately; fill material (2M). FILT SAND with Graver brown to dark gray; moist; about 60% file to coarse grave (max.4cm); about 25% Fines; about 25% subangular to angular fine to coarse grave (max.4cm); about 25% fines; about 25% subangular to angular fine to coarse grave (max.4cm); file and coarse (max.4cm); about 25% fines; about 25% subangular to angular fine to coarse grave (max.4cm); file angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make angular to make a	ITEC	ır noı	- -	J PIEZUII	ietei	L3 IVIUIII	itomy wen	□ 162(Lif	Ľ	Augei Hole	iza (weer Direct pusi	ı sampımy ı	ioie
Sil Ly SAND proving mass about 10% angular for 10% angular for 10% coarse gravel (max.6m); about 60% (max.6m); about 60% (max.6m); about 60% (max.6m); about 60% (max.6m); about 60% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% subangular for 10% sub	ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	BLOW COUNT	SPT N-VALUE	USCS/ STRATA		DESCRIPTION (of Mati	ERIALS		FIELD DATA	L/	NB DATA
subangular fine to coarse Sand; about 30% Fines; no FC = F3	0	51	$\otimes $			FILL								
SILTY SAND with Gravely brown to dark gray, morist; about 20% subangular or coarse gravel (max-km); about 50% subangular fine to coarse gravel (max-km); about 50% subangular fine to coarse sand; about 25% Fines; no logisticity, iff material (SM). SIMTY SAND: light brown; moist; about 60% fine to medium sand (max-mm); about 40% Fines; residual soil; Granite exture. **Recovery = 100 PID = 2.3 - 4.5ppm Brown; granite texture. **Brown; granite texture. **Brown; granite texture. **Brown; granite texture. **Brown; granite texture. **Brown; granite texture. **Brown; granite texture. **Hard pushing of sampler at 7.6-7,7m; HDP (Hydraulic Down Pressure) = 1500 psi. Penetration refusal depth = 7,7m (Penetration speed = 2cm /	_		XXX				subangular fine	to coarse Sand;	; about 3	0% Fines; no	_	FC = F3		
about 55% subangular fine to coarse Sand, about 25% Fines; no plasticity, fill material (SM). SM SILTY SAND; light brown, moist; about 60% fine to medium Sand (max.3mm); about 40% Fines; residual soit; Granite ### Sand (max.3mm); about 40% Fines; residual soit; Granite ### Sand (max.3mm); about 40% Fines; residual soit; Granite ### Sand (max.3mm); about 40% Fines; residual soit; Granite ### Sand (max.3mm); about 40% Fines; residual soit; Granite ### Sand (max.3mm); about 40% Fines; residual soit; Granite ### Sand (max.3mm); about 40% Fines; residual soit; Granite ### Sand (max.3mm); about 40% Fines; residual soit; Granite ### Sand (max.3mm); about 40% Fines; residual soit; Granite ### Sand (max.3mm); about 40% Fines; residual soit; Granite ### Sand (max.3mm); about 40% Fines; residual soit; Granite #### Sand (max.3mm); about 40% Fines; residual soit; Granite #### Sand (max.3mm); about 40% Fines; residual soit; Granite ##### Sand (max.3mm); about 40% Fines; residual soit; Granite ###### Sand (max.3mm); about 40% Fines; residual soit; Granite ####### Sand (max.3mm); about 40% Fines; residual soit; Granite ###################################	43		₩			I FILL	SILTY SAND V	vith Gravel: brow	wn to dar	k gray, moist; abo	out :	PiD = 1.2 - 3.3ppm	,	
sight brown. Sight brown. Sight brown. Sight brown. Sand (max.3mm); about 40% Fines; residual soil; Granite FC = F3 WRecovery = 100 PPD = 2.3 - 4.5ppm Light brown. Brown; granite texture. water encountered at 6.4m while sampling; wet sample at 6.4-6.5m. Brown; wet; more silty, granite texture. Hard pushing of sampler at 7.6-7.7m; HDP (Hydraulic Down Pressure) = 1500 psi, Penetration released epth = 7.7m (Penetration speed = 2cm /	1		₩ l				about 55% sub	angular fine to co				FC = F3		
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37— -7 S4 ☑ water encountered at 6.4m while sampling; wet sample at 6.4-6.5m. Brown; wet; more silty, granite texture. Hard pushing of sampler at 7.6-7.7m; HDP (Hydraulic Down Pressure) = 1500 psi. Penetration refusal depth = 7.7m (Penetration speed = 2cm /	_6						H							
37— 36— Hard pushing of sampler at 7.6-7.7m; HDP (Hydraulic Down Pressure) = 1500 psi. Penetration refusal depth = 7.7m (Penetration speed = 2cm /	1	C4 57					Brown; granite i	exture,						
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Hard pushing of sampler at 7.6-7.7m; HDP (Hydraulic Down Pressure) = 1500 psi. Penetration refusal depth = 7.7m (Penetration speed = 2cm /							Brown; wet: mo	re silty; granite te	exture.					
Hard pushing of sampler at 7.6-7.7m; HDP (Hydraulic Down Pressure) = 1500 psi. Penetration refusal depth = 7.7m (Penetration speed = 2cm /														
Pressure) = 1500 psi. Penetration refusal depth = 7.7m (Penetration speed = 2cm /	36—											***************************************		
							Pressure) = 150 Penetration refu	0 psi.						

EXPLORATION LOG

HOLE NO. E11-192



PROJECT: Phase II Site Soil Sampling G&EE NO.: ___ 11-032E INSPECTOR: LOCATION: Camp Carroll 12 Aug 11 DRILLER: DATE STARTED: 12 Aug 11 FINISHED: DRILLING METHOD/EQUIPMENT: BEC50PM-2 5.5 cm TOTAL DEPTH: 12.0 m DRILLING AGENCY: BEC HOLE DIAMETER: WATER DEPTH: no water; AD 12.0 m **OVERBURDEN THICKNESS:** DEPTH DRILLED: COORDINATES: N: 3,983,360.1 E: 447,699.4 GROUND ELEV.: 49.96 m DATUM: MSL GROUND COVER: Grass CONTAMINATION: TYPE OF HOLE: Piezometer ☐ Monitoring Well ☐ Test Pit ☐ Auger Hole X other Direct push sampling hole CONTAMINATED SAMPLE TYPE NUMBER ELEVATION / DEPTH (meters) BLOW COUNT GRAPHIC LOG FIELD DATA LAB DATA DESCRIPTION OF MATERIALS USCS/ STRATA FILL SILTY SAND: brown; moist; about 10% angular to %Recovery = 100 **S**1 subangular fine to coarse gravel (max.3cm); about 70% subangular fine to coarse Sand; about 20% Fines; no PID = 0.4ppmFC = F3 plasticity; fill material (SM); grass roots at 0-0.05m. %Recovery = 77 PID = 4.4 - 8.0ppmSILTY SAND with Gravel: grayish brown to brown; moist to wet; about 35% subangular fine to coarse gravel (max.4.5cm); about 50% angular to subangular fine to coarse Sand; about FILL FC = F3 15% Fines; no plasticity; fill material (SM). 48-%Recovery = 51 PID = 2.8 - 3.3ppm Subrounded to subangular fine to coarse gravels (max 3.5cm) at 3-4m 46-Subangular fine gravels (max. 1cm) at 4-5m. %Recovery = 63 PID = 1.5 - 3.8ppmSANDY SILT: reddish brown to brown; moist; about 40% fine to medium Sand; about 60% Fines; no plasticity; residual soil; -6 ML SILT: red grades to reddish brown; moist; about 100% Fines; low plasticity; residual soil. 42--8 SILTY SAND, grayish brown, moist, about 00% angular to subangular fine to coarse Sand; about 40% Fines; no to low ЗМ plasticity; residual soil; granite texture. 40-Brown mottled with white: granite texture. Light brown to brown; moist; about 70% angular to subangular fine to coarse Sand; about 30% Fines; no plasticity; granite HDP (Hydraulie Down Pressure) = 1500 psi at 11.5-12.0m. Penetration refusal depth =12.0m (Penetration speed = 25cm / 1min at 11.75-12.0m).

ENVIRO-EXPLORATION LOG 11-032E-PHASE2-FINAL GPJ USACE SKOREA GDT

EXPLORATION LOG

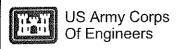
HOLE NO. **E11-193**



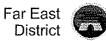
66

PROJECT: Phase II Site Soil Sampling INSPECTOR: LOCATION: Camp Carroll G&EE NO.: 11-032E DATE STARTED: 12 Aug 11 FINISHED: 12 Aug 11 DRILLER: DRILLING METHOD/EQUIPMENT: BEC50PM-1 TOTAL DEPTH: HOLE DIAMETER: 5.5 cm 8.6 m **BEC** DRILLING AGENCY: DEPTH DRILLED: 8.6 m WATER DEPTH: 0.28 m; AD **OVERBURDEN THICKNESS:** 43.32 m MSL COORDINATES: N: 3,983,345.7 E: 447,659.5 GROUND ELEV.: DATUM: GROUND COVER: Grass CONTAMINATION: ☐ Auger Hole X other Direct push sampling hole TYPE OF HOLE: Piezometer ☐ Monitoring Well Test Pit SAMPLE TYPE NUMBER BLOW COUNT ELEVATION / DEPTH (meters) GRAPHIC LOG SPT N-VALUE LAR DATA FIELD DATA DESCRIPTION OF MATERIALS USCS/ STRATA FILL SILTY SAND: brown; moist; about 5% subangular fine to %Recovery = 60 coarse gravel (max.3cm); about 70% subangular fine to coarse Sand (max.4.8mm); about 25% Fines; no plasticity; fill PID = 2.5ppm 43 FC = F3 %Recovery = 100 PID = 3.4 - 3.5ppm material (SM). Wet; about 75% subangular fine to coarse Sand (max.4.8mm); about 25% Fines. FC = F3FILL CLAYEY SAND: reddish brown; moist to wet; about 70% FC - F2 subangular fine to coarse Sand (max.4.8mm); about 30% Fines; medium plasticity; fill material (SC). 42 SILTY SAND: brown; wet; about 85% subangular fine to FILL coarse Sand (max.4.8mm); about 15% Fines; no plasticity; fill material (SM). CLAYEY SAND: reddish brown to brown; moist; about 65% FILL %Recovery = 69 PID = 1.5 - 2.6ppm subangular fine to coarse Sand (max.4.8mm); about 35% Fines; medium plasticity; fill material (SC). SILTY SAND: brown; wet; about 85% subangular fine to SC medium Sand (max,2mm); about 15% Fines; no plasticity; fill material (SM). CLAYEY SAND: reddish brown; moist; about 65% subangular fine to medium Sand (max.2mm); about 35% 40 Fines; medium plasticity; residual soil; granite texture. 53 39 SM SILTY SAND: brown; moist; about 60% subangular fine to %Recovery = 75 PID = 1.5 - 5.5ppmmedium Sand (max.2mm); about 40% Fines; low plasticity; 38 residual soil; granite texture. Reddish brown to yellowish brown; no to low plasticity; with blackish rock tragments. 37 Yellowish brown; low plasticity. 36 About 70% subangular fine to medium Sand (max.2mm); about 30% Fines. 35 Hard pushing of sampler at 8.4-8.6m; HDP (Hydraulic Down Pressure) = 1000 psi. Penetration refusal depth = 8.6m (Penetration speed = 2cm /

ENVIRO-EXPLORATION LOG 11-032E-PHASE2-FINAL.GPJ USACE SKOREA.GDT



EXPLORATION LOG



LOCA	TION:	Cami	II Site S Carro	II		G&EE NO.: 11-032E IN	ISPECTOR:			
DATE STARTED: 13 Aug 11 FINISHED: 13 Aug 11 DRILLER:										
DRILLI OVERI COOR	ING A BURD DINAT	GFNC` EN TH ſES: N	Y: IICKNE: : 3,983, :	B) SS: 353.8 E	EC : <u>447,</u> 6	HOLE DIAMETER: 5.5 cm TO DEPTH DRILLED: 10.0 m W 07.8 GROUND ELEV.: 42.98 m DA	ATER DEPTH:	No water; AD		
TYPE	OF HO	DLE: (☐ Piezon	neter	☐ Mon	CONTAMINATION: toring Well □ Test Pit □ Auger Hole X	other Direct push s	sampling hole		
ELEVATION / DEPTH (meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG	BLOW COUNT	SPT N-VALUE	USCS/ STRATA	DESCRIPTION OF MATERIALS	FIELD DATA	LAB DATA		
0	51				AC FILL FILL	Asphalt concrete pavement thickness = 10cm. Poorly-graded GRAVEL with Silt and Sand: gray to dark gray; dry to moist; about 75% angular to subangular fine to coarse gravel (max.3.5cm); about 15% subangular fine Sand; about 10% Fines; fill material (GP-GM); Base course material.	FC = F1 \FC = F3 \\Recovery = 100 \PID = 0ppm \\Recovery = 100	J		
2	52				SM	SILTY SAND: reddish brown to brown; moist; about 75% angular to subangular fine to coarse Sand; about 25% Flnes; no plasticity; fill material (SM). SILTY SAND: reddish brown to brown; moist; about 65% angular to subangular fine to coarse Sand; about 35% Fines;	%Recovery = 100 PID = 5,4ppm			
-2						no plasticity; residual soil; granite texture.	%Recovery = 66 PID = 4.9 - 8.4ppm			
0-	\$3					Light brown grades to brown; about 70% subangular fine to coarse Sand; about 30% Fines.				
4						Light brown; granite texture.				
6							%Recovery = 69 PID = 0.7 - 9.6ppm			
6						Brown; wet sample at 6.8m.	THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY O			
6	S4				ML	Light hrown to pinkish brown; w/ rock tragments; dense at /-7.4m (sampler penetration speed = 6cm/ 1min). SILT with Sand: gray/sh brown; moist; about 25% finc Sand;				
-8					SM	about 75% Fines; low plasticity; residual soil; granite texture. SILTY SAND: grayish brown; moist; about 70% subangular fine to coarse Sand; about 30% Fines; no plasticity; residual soil; granite texture.				
						Hard pushing of sampler at 9.8-10.0m; HDP (Hydraulic Down Pressure) = 1600 psi. Penetration refusal depth = 10m (Penetration speed = 5cm / 1min).				

EXPLORATION LOG



PRC).IF(CT· 1	Phase II	Site S	Soil San	nnling							
PROJECT: Phase II Site Soil Sampling LOCATION: Camp Carroll G&EE NO.: 11-032E INSPECTOR:													
DAT	FS	TAR	TED:	CHIIO	13 Aug	o 11	FINISHED	13	Ang 11	DR	ILLER:		7
DATE STARTED: 13 Aug 11 FINISHED: 13 Aug 11 DRILLER:													
	DRILLING AGENCY: BEC HOLE DIAMETER: 5.5 cm TOTAL DEPTH: 11.0 m												
OVE	III DDI	HEN	EN THI	· · · · · · · · · · · · · · · · · · ·	SG.	<u> </u>	DEPTH DR	NLIED:	11 0 m	\/\A	TER DEPTH	No water: Al	ก
COC	ישרו. רושר	INIAT		2 002 1	30. 3 <i>477</i> E	· 447.6	630.8 GROUND I	:: EV ·	42 91 m	DΔ	TUM:	MSL.	
COC	אווא טעט	יוואא ו	7.VED:	C. 2020	<u>347.7</u> L	. 44/,0	AINAATIAOO	 .i.v.:	42.71 III	אט	1 O W	3411.71.3	
TVO	אטנ		JVER.	Grass		[] Man	CONTAMIN itoring Well	VATION. ~+ Di+ □	Auger Hole	(V)	other Direct much	sampling hole	
ITP	E O	r HU	PLE:	Plezor	neter	INOU!	noring vveil in rea	Strit 🗀	Augel Hole	NAT (other <u>Direct push</u>	i sampang note	
					<u> </u>					***************************************			
=		SAMPLE TYPE / NUMBER	GRAPHIC LOG CONTAMINATED	Ξ	1								
ELEVATION / DEPTH	_	<u>π</u> α	ე 🧸	BLOW COUNT	Щ	4	DESCRI	PTION OF MAT	TERIALS		FIELD DATA	LAB DATA	
A E	ers)	IPL:	F E	<u> </u>	. P	SS/							
	Ē	SAN SAN	GRAPHIC LOG CONTAMIN	BLC	SPT N-VALUE	USCS/ STRATA							
	-0											-	,
	١		XXX			AC	Asphalt concrete pavem Poorly-graded GRAVE	ent thickness =	: 7cm. I Sand: gray to dan		FC≈F1 NFC≈F3		
		នវ	XXX			FILL	oray; dry to moist; about	: 75% subangul	lar to angular fine t	0	%Recovery = 100	/	
42-							coarse gravel (max,3cm Fines; fill material (GP-G); about 15% fil SM); Base cour	ne Sand; about 10' se material.	%	PID = 3.2ppm %Recovery = 100		
72			XXX				SILTY SAND: brown: m	oist: about 5%	angular fine gravel		PID = 4.5ppm		
		52					(max.1.2cm); about 75% about 20% Fines; no pla	supangular fir sticity; fill mate	ne to coarse Sano; rial (SM).				
	ŀ		⋙ I				No gravels below 1m. Dark gray sands at 1.8-2	2 Om					
ļ	2		₩##			FILL	CLAYEY SAND: reddish	n brown; moist;	about 55% fine Sa	ınd;	%Recovery = 63		
							about 45% Fines; mediu	m plasticity; fill	material (SC).		PID = 1.9 - 5.2ppm		
			₩										
40						SC	CLAYEY SAND: reddish	hroun: maint:	shout 659/: shout				
						30	45% Fines; medium plas	sticity; residual	soil; reddish brown	1			
		S 3					mottled w/black at 3.8-4	n.					
]		
ΙΓ	"					CH	SANDY FAT CLAY: red Sand; about 70% Fines;			•			
							Carlo, about 1070 1 mas,	mgn piadnostj,	100,000 Ook				
38-						ML	SANDY SILT: yellowish	brown: moist: a	ibout 35% angular	to			
36	ŀ					SC	\ subangular fine to coarse	e Sand: about t	65% Fines; low	Ī	%Recovery = 65 PID = 1.3 - 2.7ppm		
							plasticity; residual soil; g CLAYEY SAND: light bro	own to vellowis	h brown; molst; ab-	out	PID = 1.3 - 2.7ppm		
							65% angular to subangu Fines; low plasticity; resi	lar fine to coars	se Sand; about 35%				
l ⊢	6					SM	SILTY SAND: light brown	n; moist; about	55% fine to mediu	ım			
							Sand; about 45% Fines; granite texture.	no to low plasti	icity; residual soil;				
							granite texture.						
36-							Oraviah huayan ahayit 60	0/ angular ta a	shanaular fina ta				
							Grayish brown; about 60 coarse Sand; about 40%	Fines.	apanguai ine to				
	- 1	S4											
11.	.												
	8						About 70% angular to su 30% Fines; at 7-11m; gr		o coarse Sand; abo	out			
	1						bowines, acr cha, gi	unito toxtoro:					
34-													
	10 -						Yellowish brown; granite	texture.					
								-					
32	L						Moderate sampler penet	ration enough	7cm / 1min) of 10	7 _			
							11m: HDP (Hydraulic Do	wn Pressure) =	: 1500 psi.				ſ
							Penetration end depth =	13 m .					

EXPLORATION LOG





	PR	OJE	CT:	Phase	II Site	Soil Sar	npling					
	LO	CAT	ION:	Cam	p Carro	oll			11-032E		PECTOR:	
						13 Au		FINISHED: 250PM-1	13 Aug 11	_ DRI	LLER:	<i>b</i> (
								HOLE DIAMET	FER: 5.5 cm	TO	ΓAL DEPTH:	10.3 m
	٥٧	'ERE	URD	EN TH	HCKNE	SS:		DEPTH DRILL	ED: <u>10.3 m</u>	_ WA	TER DEPTH:	1.77 m; AD
								654.1 GROUND ELE		_ DA ⁻	ГUМ:	MSL
	GH	DE C	AD CO	ソトド・	☐ Piezo	meter meter	□ Moni	CONTAMINAT itoring Well		D X 1 (other Direct push s	ampling hole
	1 1		, , ,	,	1 1020	1000		normy tron 2 real n	. Lu ragor rioto		,	
	ELEVATION /	(meters)	SAMPLE TYPE / NUMBER	GRAPHIC LOG	CONTAMINATED BLOW COUNT	SPT N-VALUE	USCS / STRATA	DESCRIPTIOI	N OF MATERIALS		FIELD DATA	LAB DATA
		- 0		***			AC	Asphalt concrete pavement the				
			61				FILL	Poorly-graded GRAVEL with about 5% Fines; fill material (GP); base course material.	25%; 	%Recovery = 60 PID = 2.9ppm	
	42							CLAYEY SAND: reddish brow subangular fine to coarse Sar	nd (max.4.8mm); about 30%	%	FC = F3 %Recovery = 73	
		2	S2 Y					Fines; medium plasticity; fill n Moist to wet; about 3% suban about 57% subangular fine to about 40% Fines; encountere 1.2m; perched water at 0.8m Moist.	igular fine gravel (max.1cm coarse Sand (max.4.8mm d sandy day layer at 1.1m);	PID = 4.6 - 5.2ppm	
								Brown; no gravels.			%Recovery = 78 PID = 4.2 - 5.8ppm	
	40-						CH /	FAT CLAY: reddish brown; m		, , <i>[</i>		
		— 4	\$3				SM	(max.0.43mm); about 95% Fidisturbed granite texture. SILTY SAND: reddish brown; fine to coarse Sand (max.4.8 plasticity; residual soil; granite	moist; about 70% subangu	ular		
	38							Brown; no to low plasticity.				
22*11		6						No plasticity.			%Recovery = 91 PID = 2.8 - 7.0ppm	
A.GDT 8/22'11								Light brown.				
CE SKOREA.GI	36							-				
ALGPJ US/		-8	04									
PHASE2-FIN	34—											
1-032E-												
8	}	-10						Hard pushing of sampler at 1	0.2-10.3m; HDP (Hydraulic	:		
ENVIRO-EXPLORATION LOG 11-032E-PHASE2-FINAL GPJ USACE SKORE	j	i		<u>. 1 - 1: </u>	1	I	<u></u>	Down Pressure) = 1000 psi. Penetration refusal depth = 8 1min).	.75m (Penetration speed =	5cm /		
Ą												•
ENVIRO												

SOIL DESCRIPTIONS



Asphalt



Fat Clay



Fat Clay with Sand



Sandy Fat Clay



Lean Clay



Lean Clay with Sand



Sandy Lean Clay



Fill material



Silt



Sift with Sand



Sandy Silt



Portland Cement Concrete



Clayey Sand



Clayey Sand with Gravel



Sifty Sand



Silty Sand with gravel

ROCK DESCRIPTIONS

GROUNDWATER

 ∇

Groundwater 1st reading (While drilling or at completion)

¥

Groundwater 2nd reading (After Drilling or over 12 hours later after drilling)

SOIL SAMPLERS



Direct Push Sampling

FIELD / LAB TEST DATA

LL = Liquid Limit
PI = PlastIcity Index
MC = %Moisture Content
Fitnes = %Passing #200 Sieve
Cc = Compression Index
OCR = Overconsolidation Ratio
Tor = Torvane
PP - Pocket Penetrometer
PID = Photoionization detector

Petro FLAG = Petroleum Hydrocarbons detected FC = Frost Classification



US Army Corpe of Engineers Far East Distric



Key to Symbols

Project Name: Phase II Site Soil Sampling

Location: Camp Carroll G&EE Number: 11-032E

7) 11-032E-PHASE2.GPJ USACE SKOREA.GDT 8/15/11

- 1. The dates of drilling/penetration and type of equipment used are shown on the logs. All soils were classified in accordance with ASTM D 2488. Results of tests conducted on recovered samples are shown on the logs.
- 2. Borehole locations and elevations were determined using GPS RTK and/or Traverse methods. Equipments used are Trimble GPS RTK and/or Sokkia Total Stations. Survey Datum is WGS84, UTM Zone 52 and Elevations are Mean Sea Level (MSL).
- 3. The groundwater table is representative of boring location and time of drilling/sampling , and may change according to seasonal precipitation.
- 4. The exploration logs are subject to the limitations, conclusions, and recommendations provided in the report. Some variation in the subsurface conditions and depth to specific soil strata between boring locations can be expected.
- 5. Soil and rock conditions and associated stratigraphic features as depicted in the boring logs are specific for the particular drilling/sampling location, and may vary between boreholes.
- 6. Penetration refusal depth on the logs is based on achieving an penetration speed within dense to very dense residual soil or decomposed bedrock above groundwater table or no water conditions.
- 7. When direct push sampling system used, some gravelly soils may have the potential to provide poor sample recovery or erroneous penetration speed due to the coarse size of the particles, as compared to the size of the sampler (35mm ID).





Note

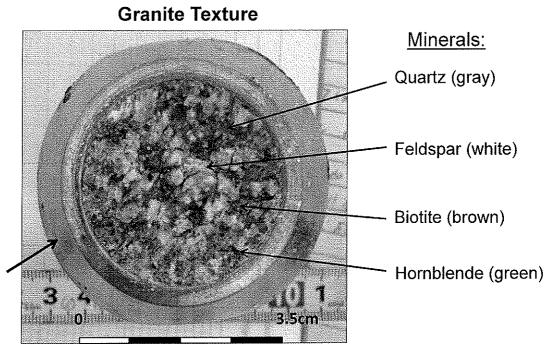
Project Name: Phase II Site Soil Sampling

Location: Camp Carroll G&EE Number: 11-032E APPENDIX V. SOIL DESCRIPTIVE SUMMARY AT THE BOTTOM OF BORHEOLES.

11-032E Camp Carroll Phase I Site Residual Soil

Silty Sand (SM): Light brown to brown; Fine to coarse-grained granite texture;

3.5cm ID sampler shoe of direct push sampling system (Model: BEC50PM-2)



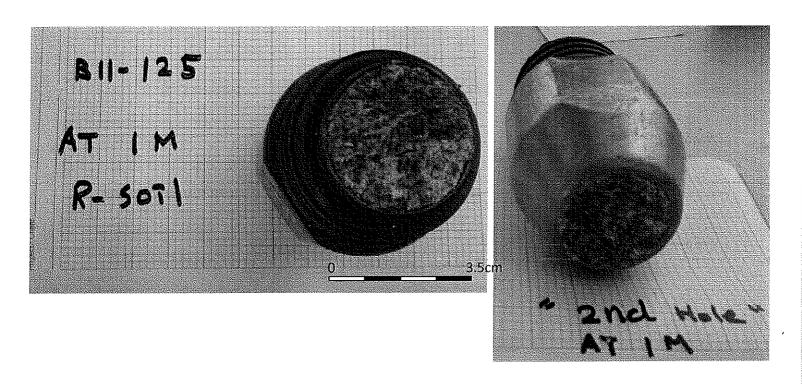
RESIDUAL SOILS

Residual soils are defined as the deposits formed by in-place weathering of rock (Glossary of Geology, 4th Ed. Bates & Jackson, AGI).

At Camp Carroll Phase I investigation project site, *RESIDUAL SOILS* occurred in all 40 boreholes investigated with the depths of 0.1m to 6m below ground surface. Residual soils are originated from underlying GRANITE bedrock by weathering process and show granite rock texture. The collected soil samples consist of typical minerals of granite rock and its residual soils. The constituent minerals are quartz, feldspar, biotite, hornblende and clay minerals as weathering products.

Granite textures are shown in following pictures (Plates 1 to 9) taken at Camp Carroll Phase I site during 12-19 July 2011.

Borehole E11-125 Residual Soil Sample at 1m





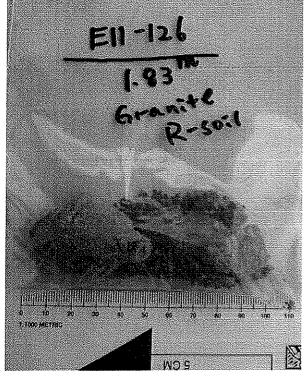
Phase I Site Soil Sampling Camp Carroll (G&EE 11-032E) Jul 2011

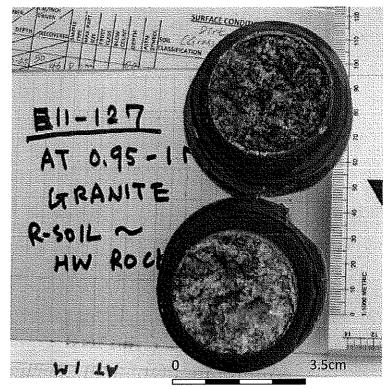
Borehole E11-126

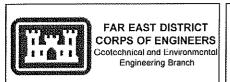
Borehole E11-127

Residual Soil Sample at 1.83m





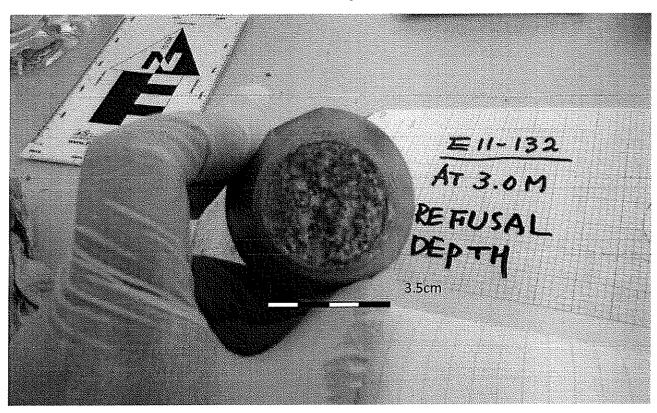


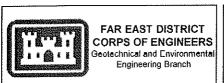


Phase I Site Soil Sampling **Camp Carroll** (G&EE 11-032E) Jul 2011

Borehole E11-132

Residual Soil Sample at 3.0m

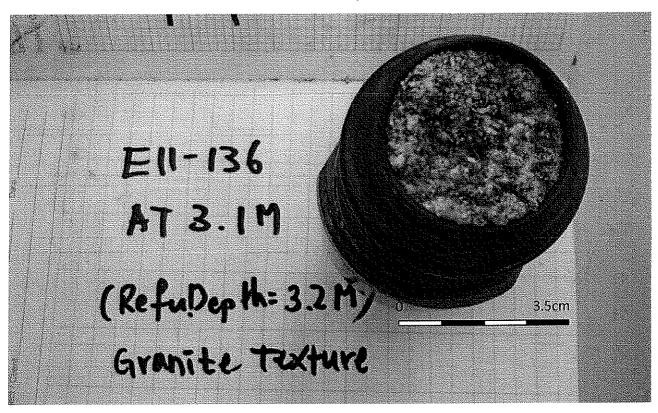




Phase I Site Soil Sampling Camp Carroll (G&EE 11-032E) Jul 2011

Borehole E11-136

Residual Soil Sample at 3.1 m





Phase I Site Soil Sampling Camp Carroll (G&EE 11-032E) Jul 2011