PROJECT NUMBER 170039

BORING NUMBER



## SOIL BORING LOG

PROJECT		ability Study						
				DRILLING CONTRACTOR : Boart Longyear c rig (4 inch sample casing / 6 inch outer casing)				
WATER LE			START :	05/05/2002	END: 05/05/2002	LOGGER :	Mike Karafa	
	LOW SURFACE (FT	.)	STANDARD		SOIL DESCRIPTION		COMMENT	S
	TERVAL (FT)	/	PENETRATION					-
	RECOVERY	Y (%) /TYPE	TEST RESULTS		ROUP SYMBOL, COLOR, I, RELATIVE DENSITY,		DEPTH OF CASING, DRI DRILLING FLUID LOSS,	LLING RATE,
			6"-6"-6"-6"	OR CONSISTENCY, S	OIL STRUCTURE,		TESTS, AND INSTRUME	
			(N)	MINERALOGY.				cted FID (ppm):
l l	Į į			Gravel (parking lot)			(501	headspace)
-				Silt, brown, moist, loe	ess, stifl			-
-	400							
	100							0.0
5								
-1								
								0.0
<sup>10</sup> —	100			Same as above				
-								0.0
   -								
<sup>15</sup>				Sandy clay, (some silt), inclusions, stiff, moist	brown grading to tan, dense, red and grey	sandy clay		
								0.0
20	100							
								0.0
<sup></sup>	·			Clayey sand, red, fine gi	rained, firm, moist			
-1 -1 -1								0.0
<sup>30</sup>	100			Sand (slight gravel), der	k red, fine grained, well sorted, moist, firm	to loose		
 1 1 1				oshu (onghi gravor), Udi	,, ine granes, wei sortes, moist, illill		Driller's sample bag: Ziplock:	151.0 0.0
<sup>35</sup> —	·			Clay, pink with light gray	r mottles, stiff, dense			

PROJECT NUMBER 

170039

BORING NUMBER

IW-7

## SOIL BORING LOG

PROJECT :	EBT Trea	atability Study					
ELEVATION :			DRILLING CONTRACTOR : Boart Longyear USED : Rotasonic rig (4 inch sample casing / 6 inch outer casing)				
WATER LEVELS :			START :		Mike Karafa		
DEPTH BELOW	DEPTH BELOW SURFACE (FT)			SOIL DESCRIPTION	COMMENTS		
INTEF	RVAL (FT) RECOVE	RY (%) #/TYPE	PENETRATION TEST RESULTS	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY,	DEPTH OF CASING, DRILLING DRILLING FLUID LOSS,		
			6"-6"-6" (N)	OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	TESTS, AND INSTRUMENTAT Corrected F		
			(N)	WINNERALOGI.			
  40	100			Sand, golden to light yellow, fine grained, well sorted, loose, moist	Driller's sample bag: 83 Ziplock: 0.		
	-4			Gravel Sand, brownish yellow, fine to coarse grained, poorly sorted, loose, gravel (<10%), subangular, <0.25 inches diameter	Driller's sample bag: 172 Ziplock: 0.		
	100				Driller's sample bag: 312 Ziplock: 0.	2.0 0	
				Sand, light yellow, fine grain, well sorted, loose Gravelly Sand, brownish yellow, fine to medium grain, poorly sorted,	Driller's sample bag: 223 Ziplock: 0.		
	100			pebbles (<20%), subangular, <0.25 inches diameter	Driller's sample bag: 188 Ziplock: 0.		
				Sand, brownish yellow, fine grain, well sorted, loose Gravelly Sand, brownish yellow, fine to medium grained, poorly sorted, loose pebbles (10-20%), <0.5 inches diameter Sand, brownish yellow, fine to medium grain, well sorted, loose	Driller's sample bag: 129 Ziplock: 0.		
	-4				Driller's sample bag: <b>184</b> Ziplock: <b>0.</b>		
	100			Gravelly sand, brownish yellow, fine to coarse grained sand, subangular pebbles (<30%), < 1 inch diameter	Driller's sample bag: 198 Ziplock: 0.	5.0 0	

CH2MHILL

PROJECT NUMBER 170039 BORING NUMBER

SOIL BORING LOG

IW-7

PROJEC		EBT Tre	atability Stud	у	LOCATION : Memphis Depot	
	ELEVATION : DRILLING CONTRACTOR : Boart Longyear DRILLING METHOD AND EQUIPMENT USED : Rotasonic rig (4 inch sample casing / 6 inch outer casing)					
WATER			EQUIPMEN	START :	05/05/2002 END: 05/05/2002 LOGGER	: Mike Karafa
		JRFACE (	FT)	STANDARD	SOIL DESCRIPTION	COMMENTS
	INTERVA		,	PENETRATION		COMMENTO
		RECOVE	RY (%)	TEST	SOIL NAME, USCS GROUP SYMBOL, COLOR,	DEPTH OF CASING, DRILLING RATE,
			#/TYPE	RESULTS	MOISTURE CONTENT, RELATIVE DENSITY,	DRILLING FLUID LOSS,
				6"-6"-6"-6"	OR CONSISTENCY, SOIL STRUCTURE,	TESTS, AND INSTRUMENTATION.
				(N)	MINERALOGY.	Corrected FID (ppm):
75	ļ				Gravelly sand, same as above, brownish yellow	
·•						
-	j	I				
_						
						Driller's sample bag: 150.0
-	ĺ					Ziplock: 0.0
-						
80		100				
_						
-				1		1
_	j			1		1
						Driller's sample bag: 143.0
_						Driller's sample bag: 143.0 Ziplock: 0.0
-	j				Gravelly sand, same as above, brownish yellow	
85						
-	j					
_						
						Driller's sample bag: 113.0
_						Driller's sample bag: 113.0 Ziplock: 0.0
-						
90		100				
-						
-						
_						Driller's sample bag: 41.0
						Ziplock: 0.0
-						
95		j				
						Watertable @ approximately 93 feet bg
_						
-	j				Gravelly sand, same as above, brownish yellow	
_						
-	ĺ					
100				1		1
1	į	l				
		l				
-				1		1
_		i				
		l				
-				1		
105		100		1		
	l			1		
				1		1
-		i		1		
_	ļ			1		
				1	Gravelly sand, same as above, brownish yellow	
				1		
110		l		1	Clay, yellowish brown, dense, moist, stiff	

PROJECT NUMBER 170039 BORING NUMBER

IW-7

## SOIL BORING LOG

PROJECT :	EBT Treatabi	lity Study	LOCATION : Memphis Depot				
ELEVATION :			DRILLING CONTRACTOR : Boart Longy	<u>'ear</u>			
WATER LEVE		START :	c rig (4 inch sample casing / 6 inch outer casing) 05/05/2002 END: 05/05/2002	LOGGER : Mike Karafa			
DEPTH BELOW		STANDARD	SOIL DESCRIPTION	COMMENTS			
	VAL (FT)	PENETRATION					
	RECOVERY (%	6) TEST	SOIL NAME, USCS GROUP SYMBOL, COLOR,	DEPTH OF CASING, DRILLING RATE,			
	#/TY	PE RESULTS	MOISTURE CONTENT, RELATIVE DENSITY,	DRILLING FLUID LOSS,			
		6"-6"-6"-6"	OR CONSISTENCY, SOIL STRUCTURE,	TESTS, AND INSTRUMENTATION.			
		(N)	MINERALOGY.	Corrected FID (ppm):			
	!		Same as above, Clay				
i –i	i						
	!						
115	1						
''' <sup>_</sup> i	-i		Boring terminated at 115 ft bgs				
-			5				
-							
120							
-							
-							
_							
_							
<sup>125</sup>							
-							
-							
_							
_							
130							
-							
135							
-							
-							
140							