PROJECT NUMBER 170039 BORING NUMBER MW-122

CH2MHILL

SOIL BORING LOG

PROJECT :	EBT Tre	atability Study	,	LOCATION : Memphis Depot			
ELEVATION :			DRILLING CONTRACTOR : Boart Longyear				
	DRILLING METHOD AND EQUIPMENT WATER LEVELS :			START: 05/04/2002 END: 05/04/2002 LOGGER: Bryan Burkingstock			
DEPTH BELOV		FT)	START . STANDARD	SOIL DESCRIPTION	COMMENTS		
	RVAL (FT)	,	PENETRATION				
	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):		
1	ļ			Gravel (parking lot)	(Soil headspace)		
	i			Silt, brown, moist, (loess)	_		
-	100						
	ļ				0.0		
1 1	i						
-i	i						
5							
1	ł						
i	i						
-	ļ						
	i				0.0		
i	i						
-	ļ						
10	100			Silt, brown, moist, (loess)			
i	i						
1 7	ļ						
1 -1							
i i	i				0.0		
1 !	ļ						
	ł						
¹⁵ — — —	-4						
<u> </u>	ļ.						
-i	i						
					0.0		
1	ļ						
	ł						
20	100						
1 !							
-							
-i	i			Silt, brown, moist, (loess) Sandy Clay, reddish brown with red and gray mottles, moist, fine grained, stiff			
	!			oundy only, roudian brown with red and gray motiles, moist, me gramed, still	0.0		
				Color grading from tap to brownish rad to process and			
-i	i			Color grading from tan to brownish red to orange, red Increase fine grained sand with depth			
²⁵	_{						
	i			Clayey Sand, orange to dark red, fine grained, well sorted, moist, firm			
–!	ļ						
	-				0.0		
i	i						
I -!	!						
³⁰	100						
1 i	i			Sand with gravel, orange to dark red, medium grained, well sorted, moist, loose, pebbles (<10%), subangular, <0.25 inches diameter			
1 1	ļ			······			
-					Driller's sample bag: 45.0		
	i				Ziplock: 0.0		
i i	i						
-	ļ						
35	-4						
i -	i						
-!	!						
	l						

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PROJECT :	PROJECT : EBT Treatability Study		y LOCATION : Memphis Depot					
ELEVATION :		DRILLING CONTRACTOR : Boart Longyear						
	DRILLING METHOD AND EQUIPMENT			T USED: Rotasonic rig (4 inch sample casing / 6 inch outer casing)				
WATER LEVE			START : 05/04/2002 END: 05/04/2002 LOGGER		, ,			
DEPTH BELOW		-1)	STANDARD	SOIL DESCRIPTION	COMMENTS	5		
INTER	VAL (FT)	D V (0()	PENETRATION					
	RECOVE	RY (%) #/TYPE	TEST RESULTS	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY,	DEPTH OF CASING, DRI DRILLING FLUID LOSS,	LLING RATE,		
		#/11FC	6"-6"-6"-6"	OR CONSISTENCY, SOIL STRUCTURE,	TESTS, AND INSTRUMEN			
			0-0-0-0 (N)	MINERALOGY.		cted FID (ppm):		
-	ļ			Clay, pink with light gray sandy clay inclusions, dense, massive, moist	Driller's sample bag: Ziplock:	22.0 0.0		
_				olay, print with light gray bandy olay molesions, dense, messive, molet	Zipiook.	0.0		
40	100							
40 —	100							
i	i							
1	ļ			Gravelly Sand, tan, fine grained, well sorted, moist, loose, pebbles (<10%),				
				<0.25 inch diameter, subangular	Driller's sample bag: Ziplock:	217.0 0.0		
	i				Zipiook.			
45	1			Sand, light yellow, well sorted, fine grained, loose	1			
~ -	-1			Gravelly Sand, brownish yellow to light yellow, fine to coarse grained, poorly sorted,	1			
-i	i			loose, moist, pebbles (<20%), <0.5 inches diameter, subangular	1			
	ļ				1			
	ł				Driller's sample bag:	245.0		
-i	i				Ziplock:	0.0		
	ļ							
50	100							
i	I							
-								
_								
i	i			Same as above, Gravelly Sand	Driller's sample bag:	231.0		
	ļ			Same as above, Gravery Sand	Ziplock:	0.0		
-								
55	i							
·	-1							
-	i				1			
i i	i				1			
!	ļ			Same as above, Gravelly Sand	Driller's sample bag:	183.0		
	i				Ziplock:	0.0		
	į				1			
60	100				1			
	i				1			
-	İ.			Sand, brownish yellow, medium grained, well sorted, moist, loose	1			
				· ·	1			
i	i				Driller's sample bag:	169.0		
]]	ļ.				Ziplock:	0.0		
					1			
⁶⁵	_ i				1			
!	ļ				1			
					1			
-	i				1			
1	į				Driller's sample bag:	158.0		
	1				Ziplock:	0.0		
	i			Same as above, Sand	1			
70	100				1			
	ļ				1			
	i				1			
_i	i			Croughly Cond. brownich vallow, find to coords and and and and and a shall (2001)	1			
	ļ			Gravelly Sand, brownish yellow, fine to coarse grained, poorly sorted, pebbles (<20%) <1 inch diameter, subangular, moist, loos€	Driller's sample bag:			
	i				Ziplock:	0.0		
i			I		<u> </u>			

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SOIL BORING LOG

PROJECT : EBT Treatability Study							
ELEVATION : DRILLING METHOD AND FOUIPMENT		DRILLING CONTRACTOR : Boart Longyear					
WATER LEVELS :				Bryan Burkingstock			
ELOW SURFACE (FT)		STANDARD	SOIL DESCRIPTION	COMMENTS			
		PENETRATION					
				DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS,			
	#/11FE			TESTS, AND INSTRUMENTATION.			
		(N)	MINERALOGY.	Corrected FID (ppm):			
100			Same as above, some gravel 2 inches in diameter	Driller's sample bag: 186.0 Ziplock: 0.0			
				Driller's sample bag: 121.0 Ziplock: 0.0			
100			Same as above, Gravelly Sand	Driller's sample bag: 111.0 Ziplock: 0.0 Driller's sample bag: 45.0 Ziplock: 0.0			
				Watertable @ approximately 93 feet bg:			
100							
	THOD AND _S : SURFACE (F) RECOVER	THOD AND EQUIPMENT S: SURFACE (FT) /AL (FT) RECOVERY (%) #/TYPE	THOD AND EQUIPMENT USED : Rotasonia S : START : SURFACE (FT) STANDARD PENETRATION RECOVERY (%) TEST #/TYPE 6"-6"-6" (N) 100 100	DRILLING CONTRACTOR : Boart Longyear IND EQUIPMENT USED : Rotasonic rig (4 inch sample casing) STANDARD STANDARD SOIL 2002 DIADARD SOIL 2002 COURTRACTOR : Boart Longyear INDE COUTENT, Found to outer casing) STANDARD SOIL DESCRIPTION RECOVERY (%) RECOVERY (%) RESULTS BRTYPE RESULTS SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, 00 CONSISTENCY, SOIL STRUCTURE, MINERALOGY. MINERALOGY. MINERALOGY. MINERALOGY. Inches in diameter 100 Same as above, some gravel 2 inches in diameter 100 Same as above, Gravely Sand			