

PROJECT NUMBER	BORING NUMBER
170039	MW-117

PROJECT: EBT Treatability Study LOCATION: Memphis Depot

ELEVATION: DRILLING CONTRACTOR: Boart Longyear

DRILLING METHOD AND EQUIPMENT USED: Rotasonic rig (4 inch sample casing / 6 inch outer casing)

			EQUIFINEN			asing / 6 inch outer casing)	100055	Dryon Durkin to -1:	
	RLEVELS		-T\	STANDARD:	04/30/2002	END: 05/01/2002	LOGGER :	Bryan Burkingstock	2
DEPIHE	DEPTH BELOW SURFACE (FT) INTERVAL (FT)		1)	STANDARD		SOIL DESCRIPTION		COMMENT	5
		RECOVE	RY (%) #/TYPE	PENETRATION TEST RESULTS	MOISTURE CONTENT	ROUP SYMBOL, COLOR, T, RELATIVE DENSITY,		DEPTH OF CASING, DRII DRILLING FLUID LOSS,	
				6"-6"-6"	OR CONSISTENCY, S	SOIL STRUCTURE,		TESTS, AND INSTRUME	
-	<u> </u>			(N)	MINERALOGY. Gravel (parking lot)				ted FID (ppm): headspace)
	!!				Graver (parking lot)			(3011	neauspace)
_					Silt, brown, moist, (loess	s)			_
- -		100							0.0
5									0.0
10		100			Silt, brown, moist, (loess	s)			0.0
15 20		100							0.0
_					Silt, brown, moist, (loess	s)	-1 -1:tt	4	
- - 25						own with red and gray mottles, moist, fine graine o brownish red to orange, red and with depth	zu, Siiii		0.0
- - -						dark red, fine grained, well sorted, moist, firm o orange, fine grained, slight clay well sort	ted, moist, loos		0.0
30 <u> </u>		100							
- - 35					Sand with gravel, orang subangular, <0.25 inche	e red, fine grained, well sorted, moist, loose, pe es diameter	ebbles (<10%)	Driller's sample bag: Ziplock:	65.0 0.0
I -]				Clay, pink with light gray	y sandy clay inclusions, dense, massive, moist		1	
								<u> </u>	



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		EQUIPMENT		c rig (4 inch sample casing / 6 inch outer casing)	Davis Divisionata di
WATER LEVEL			START:	04/30/2002 END: 05/01/2002 LOGGER:	
DEPTH BELOW		-1)	STANDARD	SOIL DESCRIPTION	COMMENTS
INTER	/AL (FT)		PENETRATION		
	RECOVE		TEST	SOIL NAME, USCS GROUP SYMBOL, COLOR,	DEPTH OF CASING, DRILLING RATE,
		#/TYPE	RESULTS	MOISTURE CONTENT, RELATIVE DENSITY,	DRILLING FLUID LOSS,
			6"-6"-6"	OR CONSISTENCY, SOIL STRUCTURE,	TESTS, AND INSTRUMENTATION.
	_		(N)	MINERALOGY.	Corrected FID (ppm):
-				Same as above, Clay	Driller's sample bag: 155.0 Ziplock: 0.0
40 —	100			Gravelly Sand, tan, fine grained, well sorted, moist, loose, pebbles (<10%), <0.25 inch diameter, subangular	
				Sand, light yellow, well sorted, fine grained, loose	Driller's sample bag: 194.0 Ziplock: 0.0
45	 -4 			Gravelly Sand, brownish yellow to light yellow, fine to coarse grained, poorly sorted, loose, moist, pebbles (<20%), <0.5 inches diameter, subangular	
					Driller's sample bag: 236.0 Ziplock: 0.0
50	100			Same as above, Gravelly Sand	Driller's sample bag: 241.0 Ziplock: 0.0
- - - 60	100			Same as above, Gravelly Sand	Driller's sample bag: 169.0 Ziplock: 0.0
65	 			Sand, brownish yellow, medium grained, well sorted, moist, loose	Driller's sample bag: 124.0 Ziplock: 0.0
-i -i -i -i -i 70 _i	100			Same as above, Sand	Driller's sample bag: 157.0 Ziplock: 0.0
					Driller's sample bag: 174.0 Ziplock: 0.0



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DRILLING METHOD AND EQUIPMENT USED: Rotasonic rig (4 inch sample casing / 6 inch outer casing)

	RLEVELS			START:	04/30/2002 END: 05/01/2002 LOGGER:	Bryan Burkingstock
	BELOW SU		T)	STANDARD	SOIL DESCRIPTION	COMMENTS
		NTERVAL (FT) PENETRATION			COLDEDOM HOM	COALITIO
		RECOVE	DV (0/)	TEST	COIL NAME LISCS ODOLID SYMBOL COLOD	DEPTH OF CASING, DRILLING RATE,
		RECOVE	#/TYPE	RESULTS	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY,	DRILLING FLUID LOSS,
			#/11PE			
				6"-6"-6"	OR CONSISTENCY, SOIL STRUCTURE,	TESTS, AND INSTRUMENTATION.
				(N)	MINERALOGY. Crovelly Sand brownish valley fine to coarse grained, nearly corted, publics (<20%)	Corrected FID (ppm):
75		100			Carvelly Sand, brownish yellow, fine to coarse grained, poorly sorted, pebbles (<20%) <1 inch diameter, subangular, mois Same as above, some gravel 2 inches in diameter	Driller's sample bag: 185.0 Ziplock: 0.0
85		100				Driller's sample bag: 161.0 Ziplock: 0.0
90		100			Same as above, Gravelly Sand	Driller's sample bag: 92.0 Ziplock: 0.0
- - - 95						Driller's sample bag: 63.0 Ziplock: 0.0 Watertable @ approximately 93 feet bg
100		100			Same as above, Gravelly Sand	
- 110					Clay, yellowish gray, stiff, massive, damp	-



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ELEVATION:				DRILLING C	ONTRACTOR:	Boart Longyear		
DRILLING MET	HOD AND EQUIPMENT USED:	Rotasonic rig	(4 inch sample	casing / 6 inch ou	uter casing)			
14/4 TED 1 E1/E1	•	OT 1 DT 0	1 10 0 10 0 0 0	ELID	0 = (0 1 (0 0 0 0	100055)	

	R LEVELS			START:	04/30/2002 END: 05/01/2002 LOGGER:	Bryan Burkingstock
	BELOW SU		=T)	STANDARD	SOIL DESCRIPTION	COMMENTS
	INTERVA		- /	PENETRATION	SSIE DESORIE HOR	SSIEITIO
	INTERVA	L (F1)	DV (0/)		AND MANE HOSE OPENIO OVAROLI COLOR	DEDTIL OF GAOING DRIVENG DATE
		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"	OR CONSISTENCY, SOIL STRUCTURE,	TESTS, AND INSTRUMENTATION.
				(N)	MINERALOGY.	Corrected FID (ppm):
	ļ				Same as above, Clay	
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	I					
	1					
115	<u> </u>	! !			D : T : 1 0 157 11	
					Boring Terminated @ 115 feet bgs	
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