

PROJECT NUMBER	BORING NUMBER
170039	MW-123

## **SOIL BORING LOG**

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)

	RLEVELS			START:	c rig (4 inch sample casing / 6 inch outer casing)  04/29/2002 END: 04/29/2002 LOGGER:	Bryan Burkingstock
	BELOW SU		-T)	STANDARD	SOIL DESCRIPTION	COMMENTS
	INTERVA	INTERVAL (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. Gravel (parking lot)	Corrected FID (ppm): (Soil headspace)
	!				Graver (parking lot)	(Soli Headspace)
	i				Silt, brown, moist, (loess)	
-	1 !	100				
-						0.0
	i i					
5_	!+					
_	i i					
-	. !					
_						0.0
	i i	İ				
-	!					
10 _	1 1	100			Silt, brown, moist, (loess)	
	i i					
_	]					
-	<b>:</b>					
_	i i					0.0
	!!!					
-	!!!					
15	ii					
	i i	ĺ				
_	!!!					
-	: :					
	j i					0.0
	!!					
-						
20	j i	100				
	!				Silt, brown, moist, (loess)	
_					Sandy Clay, brownish tan with red and gray mottles, moist, fine grained, stiff	
_	i i					
_	!				Color grading from tan to brownish red to orange, red	0.0
	i i				Increase fine grained sand with depth	
-	i i					
25 _	<b>!</b> ↓					
	i					
	į i	İ			Clayey Sand, dark red, fine grained, well sorted, moist, firm	
-	!!!					
-	i					0.0
	į i				Sand, dark red, fine grained, well sorted, moist, loos∈	
l	1 !	l I				
30 _	i	100				
l _	į i					
I -	!!!					
-	i					Driller's sample bag: 42.0
_	į i				Conductific annual control of the co	Driller's sample bag: 42.0 Ziplock: 0.0
	!!!				Sand with gravel, orange red, fine grained, well sorted, moist, loose, pebbles (<10%) subangular, <0.25 inches diameter	
					• • • • • • • • • • • • • • • • • • • •	
35	1i					
	<u>!</u> !					
I -	i				Clay, pink with light gray sandy clay inclusions, dense, massive, moist	
<u> </u>			I.	<u> </u>		



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PROJECT :	EBT Tre	atability Study	,	LOCATION : Memphis Depot	
ELEVATION:				DRILLING CONTRACTOR: Boart Longyear	
				c rig (4 inch sample casing / 6 inch outer casing)	
WATER LEVE			START:	04/29/2002 END: 04/29/2002 LOGGER:	,
DEPTH BELOW		FT)	STANDARD	SOIL DESCRIPTION	COMMENTS
INTER	VAL (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"-6"	OR CONSISTENCY, SOIL STRUCTURE,	TESTS, AND INSTRUMENTATION.
			(N)	MINERALOGY.	Corrected FID (ppm):
<b>–</b> I				Same as above, Clay	Driller's sample bag: 134.0 Ziplock: 0.0
] [	Į.				Zipiock. <b>0.0</b>
-!	ļ			Gravelly Sand, tan, fine grained, well sorted, moist, loose, pebbles (<10%),	1
40	100			<0.25 inch diameter, subangular	
1 1					
-i	i			Sand, light yellow, well sorted, fine grained, loose	
l i	į			Sand, light yellow, well sorted, fille grained, loose	
1 7					
<u> </u>	Į.				Driller's sample bag: 192.0
!	ļ				Ziplock: 0.0
1 -					
45	_i				
i	- <u>1</u>				
-i	ĺ			Cravelly Cand brownish valley to light valley fine to coorse grained pearly sected	
				Gravelly Sand, brownish yellow to light yellow, fine to coarse grained, poorly sorted, loose, moist, pebbles (<20%), <0.5 inches diameter, subangular	
1 -1	<u> </u>			10000, moiot, possioo ( 20 70), oto moioto diamotor, ousunguiai	
	ļ				Driller's sample bag: 259.0 Ziplock: 0.0
1 !					Ziplock: <b>0.0</b>
1 -	i				
50	100				
1 - i	i				
_i _i	Ĭ				
	Į				
-!	ļ				
1 !	ļ			Same as above, Gravelly Sand	Driller's sample bag: 243.0
1 7					Ziplock: <b>0.0</b>
I -	ŀ				
55	i				
55					
l i	Ī				
] ]					
<u> </u>	Į.				
!	ļ			Same as above, Gravelly Sand	Driller's sample hag: 177.0
-!				dame as above, Graveny damu	Driller's sample bag: 177.0 Ziplock: 0.0
I _i	i				· ·
1 i	i				
60	100				
1					
-	Į				
!	ļ				
1 !				Sand, brownish yellow, medium grained, well sorted, moist, loose	Drillor's sample bag: 119.0
-	i				Driller's sample bag: 119.0 Ziplock: 0.0
1 i	i				2.p.ook. 0.0
1 i	i				
65	_i				
1	Į				
- <u>!</u>	į			Gravelly Sand, brownish yellow, fine to coarse grained, poorly sorted, pebbles (<20%)	
1 !	ļ			<0.5 inches diameter, subangular, mois	
1 7	ŀ				
-	i				Driller's sample bag: 206.0
1 i	i				Ziplock: 0.0
-i	Ī				
70	100				
] -	<u> </u>				
-!	ļ			Same as above, Gravelly Sand	
1 !	ļ				
1 -	ŀ				
1 4	i				Driller's sample bag: 187.0
1 i	i				Ziplock: <b>0.0</b>
i	_ i	1			<u>I</u>



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

### DEPTH BELOW SURFACE (FT)   INTERVAL (FT)	: 04/29/2002 END: 04/29/2002 LOGGEF	R: Bryan Burkingstock
INTERVAL (FT)	SOIL DESCRIPTION	COMMENTS
RECOVERY (%) #/TYPE  TEST RESULTS 6"-6"-6"-6" (N)  75		
#/TYPE RESULTS 6"-6"-6"-6" (N)  75	SOIL NAME, USCS GROUP SYMBOL, COLOR,	DEPTH OF CASING, DRILLING RATE,
75 — — — — — — — — — — — — — — — — — — —	MOISTURE CONTENT, RELATIVE DENSITY,	DRILLING FLUID LOSS,
75	OR CONSISTENCY, SOIL STRUCTURE,	TESTS, AND INSTRUMENTATION.
80   100	MINERALOGY.	Corrected FID (ppm):
85 — — — — 100 — 1	Same as above, Gravelly Sand	Driller's sample bag: 177.0 Ziplock: 0.0
90 100		pos
95		Driller's sample bag: 143.0 Ziplock: 0.0
100 100	Same as above, Gravelly Sand	Driller's sample bag: 106.0 Ziplock: 0.0
100 100 100 1		Driller's sample bag: 73.0 Ziplock: 0.0
		Watertable @ approximately 93 feet bg
105	Same as above, Gravelly Sand	
│ <del>╎</del> ━━┩ │	Boring Terminated @ 106 feet bgs	
- - - 110		