

PROJECT NUMBER	BORING NUMBER
148071.FI.LB	SBLCA-SB-11 (MW-75)

SOIL BORING LOG

PROJECT: Dunn Field DNAPL Investigation LOCATION : Memphis, TN ELEVATION: 303.61 feet MSL (TOC); 304.3 feet MSL (ground) DRILLING CONTRACTOR: Boart-Longyear DRILLING METHOD AND EQUIPMENT USED:
WATER LEVELS: 79.15 feet BTOC (01/2001) START: Hollow Stem Auger 4.25 inch ID 11/07/2000 END:

DRILLING METHOD AND EQUIPMENT USED: Hollow Stem Auger 4.25 inch ID						
WATER LEVELS: 79.15 feet BTOC			OGGER: Bryan Burkingstock			
DEPTH BELOW SURFACE (FT)	STANDARD	SOIL DESCRIPTION	COMMENTS			
INTERVAL (FT) RECOVERY (IN) #/TYPE	PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. Corrected FID (ppm):			
			(Soil headspace)			
- - - - - 5	Used Continuous CME Sampler	SILT, brown Very dry and tight soil	0 -			
-I 60 -I 10		SILT, brown, moist	- 0.2 - -			
-I I 53 -I I I I I I I I I I I I I I I I I I I		SILT, brown, moist	15.7 – - –			
-I I 60 -I I 1 20 I I		SILT, brown, moist	0 - -			
-I I 55 -I I I		SILT, brown, moist	0 - -			
- - - - - -		SILT, brown, moist				
30		SILT, brown, moist Transition begins @ 31 feet bgs SANDY SILT, brown transitioning to reddish brown, fine grained	0 -			



PROJECT NUMBER BORING NUMBER **SBLCA-SB-11 (MW-75)** 148071.FI.LB

SOIL BORING LOG

PROJECT: LOCATION : Memphis, TN Dunn Field DNAPL Investigation DRILLING CONTRACTOR : Boart-Longyear ELEVATION: 303.61 feet MSL (TOC); 304.3 feet MSL (ground)

DRILLING METHOD AND EQUIPMENT USED : Hollow Stem Auger 4.25 inch ID

WAIRE LEVELS: 78 15 feet BETOC (01/2001) START: 11/07/2000 END: 11/07/2000 LOGGER: Span Burkingstock (11/07/2001) START: 11/07/2000 END: 11/07/2000 COGGER: SOUL DESCRIPTION COMMUNTS (11/07/2001) START: 11/07/2001 START: 11/07/2001 START: START: SOUL MAKE LOGG SRCUP SYMBOL COLOR, 11/07/2001 START: 11/07/2001 START: 11/07/2001 START: START: SOUL MAKE LOGG SRCUP SYMBOL COLOR, 11/07/2001 START: START: SOUL MAKE LOGG SRCUP SYMBOL COLOR, 11/07/2001 START: START: START: SOUL MAKE LOGG SRCUP SYMBOL COLOR, 11/07/2001 START:					01/2001) START:	11/07/2000 END: 11/07/2000 LOGGER:	Bryan Burkingstock
PENETRATION TEST RESULTS NOTIFIED OF STATE RESULTS NOTIFIED OF STATE (9) SOL NAME, USCS GROUP SYMBOL, COLICIA, MOSTURE CONTENT, RELATIVE DENSITY, (9) SOL NAME, USCS GROUP SYMBOL, COLICIA, MOSTURE CONTENT, RELATIVE DENSITY, (9) SILTY SAND, brownish red (see), fine grained SILTY SAND, red with light gray and yellow motities, fine grained SAND, medium to coarse grained, red (with yellowsh tert) With few pebbles, subangular SAND, medium to coarse grained, red (with yellowsh tert) With few pebbles, subangular SAND, medium to coarse grained, fine didth yellow With few pebbles, subangular SAND, medium transitioning to fine grained, ten No pebbles SAND, medium transitioning to fine grained, ten No pebbles SAND, medium transitioning to fine grained, ten No pebbles, subangular SAND, medium to coarse grained, yellowish brown With pebbles (12 to 1 sinch width), subangular SAND, medium to coarse grained, yellowish brown With pebbles (12 to 1 sinch width), subangular SAND, medium to coarse grained, ten With sight pebbles, subangular SAND, medium to coarse grained, brownish yellow, ponty sorted With few pebbles, subangular SAND, medium to coarse grained, brownish yellow, ponty sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, ponty sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, ponty sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, ponty sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, ponty sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, well sorted, no pebbles							
RECOVERY (N) RESULTS RESULTS FOR PET-FOR (RESULTS) FOR PET-FOR (N) MINISTRUC CONTENT, RELATIVE DESIRY, OR CONSISTENCY, SOIL STRUCTURE, MINISTRUCHERY, SOIL STRUCTURE, MINISTRUCTURE, MINIS	_			,		GOIL BLOOM! HOW	COMMENTO
SILTY SAND, incediant to coasse grained, treat with light peoples (1/2 to 1 inch width), subangular SAND, mediant to coasse grained, treat		VI ENVAL	RECOVE		TEST RESULTS	MOISTURE CONTENT, RELATIVE DENSITY,	DRILLING FLUID LOSS,
SILTY SAND, brownish red (tan), fine grained SILTY SAND, rod with light gray and yellow motities, fine grained SILTY SAND, mot with light gray and yellow motities, fine grained SAND, medium to coarse grained, red With peobles, subangular SAND, medium to coarse grained, red SAND, medium to coarse grained, red (with yellowesh tart) SAND, medium to coarse grained, red (with yellowesh tart) With few peobles, subangular SAND, medium to coarse grained, red (with yellowesh tart) SAND, medium to coarse grained, red (with yellowesh tart) SAND, medium to coarse grained, subangular SAND, medium to coarse grained, yellowish brown With peobles (1/2 to 1 inch width), subangular SAND, medium to coarse grained, brown this yellow, poorty sorted With rew peobles (1/2 to 1 inch width), subangular SAND, fine grained, brownish yellow, poorty sorted With few peobles, subangular SAND, fine or coarse grained, brownish yellow, poorty sorted With few peobles, subangular SAND, fine grained, brownish yellow, well sorted, no pebbles SAND, fine grained, brownish yellow, well sorted, no pebbles							
SILTY SAND, net van delbum grained, red SILTY SAND, fine to meditum grained, red With petiotics, subarrigulari SAND, fine to meditum grained, red With petiotics, subarrigulari SAND, modium to coarse grained, red With few petiotics (1/4 to 1/2 inch width), subarrigular SAND, modium to coarse grained, red (with yellowish thrt) With few petiotics (1/4 to 1 inch width), subarrigular SAND, medium to coarse grained, red (with yellowish thrt) With few petiotics, subarrigular SAND, medium to coarse grained, reddish yellow With few petiotics, subarrigular SAND, medium to coarse grained, to fine grained, lan No petiotics SAND, medium to coarse grained, yellowish thrown With salight petiotics, subarrigular SAND, medium to coarse grained, yellowish thrown With petiotics, subarrigular SAND, medium to coarse grained, petiowish thrown With petiotics, subarrigular SAND, fine to coarse grained, trownish yellow, poorly sorted With few petiotics, subarrigular SAND, fine to coarse grained, trownish yellow, poorly sorted With few petiotics, subarrigular SAND, fine to coarse grained, trownish yellow, poorly sorted With few petiotics, subarrigular SAND, fine to coarse grained, trownish yellow, poorly sorted With few petiotics, subarrigular SAND, fine to coarse grained, trownish yellow, poorly sorted With few petiotics, subarrigular SAND, fine grained, brownish yellow, well sorted, no petibles	<u> </u>				(N)	MINERALOGY.	Corrected FID (ppm):
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SAND, medium to coarse grained, red With few pebbles, 14 to 172 inch width), subangular SAND, medium to coarse grained, red with yellow bird with few pebbles (14 to 1 inch width), subangular SAND, medium to coarse grained, reddish yellow With few pebbles, subangular SAND, medium to coarse grained, transitioning to fine grained, tran ho pebbles, subangular SAND, medium transitioning to fine grained, tran ho pebbles, subangular SAND, medium transitioning to fine grained, tran ho pebbles, subangular SAND, medium to coarse grained, tran with sight pebbles, subangular SAND, medium to coarse grained, transitioning to fine grained, transitioni			43				- -
SAND, medium to coarse grained, red With few pebbles (1/4 to 1/2 inch width), subangular SAND, medium to coarse grained, red (with yellowish tind) With few pebbles (1/4 to 1 inch width), subangular SAND, medium to coarse grained, reddish yellow With few pebbles, subangular SAND, medium transitioning to fine grained, tan No pebbles SAND, medium transitioning to fine grained, tan No pebbles, subangular SAND, medium grained, tan With slight pebbles, subangular SAND, medium grained, tan With slight pebbles, subangular SAND, medium transitioning to fine grained, tan SAND, medium grained, tan With slight pebbles, subangular SAND, medium transitioning to fine grained, tellowish brown With pebbles (1/2 to 1 inch width), subangular SAND, fine to coarse grained, yellowish brown With pebbles (1/2 to 1 inch width), subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular sorted sorte	-i	İ					-
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SAND, medium transitioning to fine grained, tan No pebbles SAND, medium grained, tan With slight pebbles, subangular SAND, medium grained, tan With slight pebbles, subangular SAND, medium to coarse grained, yellowish brown With pebbles (1/2 to 1 inch width), subangular SAND, medium to coarse grained, yellowish brown With pebbles (1/2 to 1 inch width), subangular SAND, medium to coarse grained, yellowish brown With pebbles (1/2 to 1 inch width), subangular SAND, medium to coarse grained, yellowish brown With pebbles (1/2 to 1 inch width), subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular	50 [SAND, medium to coarse grained, red (with yellowish tint) With few pebbles (1/4 to 1 inch width), subangular	-
SAND, medium transitioning to fine grained, tan No pebbles SAND, medium grained, tan With slight pebbles, subangular SAND, medium to coarse grained, yellowish brown With pebbles (1/2 to 1 inch width), subangular SAND, medium to coarse grained, yellowish brown With pebbles (1/2 to 1 inch width), subangular SAND, medium to coarse grained, yellowish brown With pebbles (1/2 to 1 inch width), subangular SAND, medium to coarse grained, yellowish brown With pebbles (1/2 to 1 inch width), subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine grained, brownish yellow, well sorted, no pebbles		 	39 			SAND, medium to coarse grained, reddish yellow With few pebbles, subangular	4.1
SAND, medium grained, tan With slight pebbles, subangular SAND, medium to coarse grained, yellowish brown With pebbles (1/2 to 1 inch width), subangular SAND, medium to coarse grained, yellowish brown With pebbles (1/2 to 1 inch width), subangular SAND, medium to coarse grained, yellowish brown With pebbles (1/2 to 1 inch width), subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine grained, brownish yellow, well sorted, no pebbles 6.6	55 						-
SAND, medium to coarse grained, yellowish brown With pebbles (1/2 to 1 inch width), subangular 7.4 SAND, medium to coarse grained, yellowish brown With pebbles (1/2 to 1 inch width), subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular 8 Used Continuous CME Sampler SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine grained, brownish yellow, well sorted, no pebbles 6.6			28 				5.1
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SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular 8 Used Continuous CME Sampler SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine grained, brownish yellow, poorly sorted With few pebbles, subangular 6.6		 	30 			SAND, medium to coarse grained, yellowish brown With pebbles (1/2 to 1 inch width), subangular	7.4
Used Continuous CME Sampler SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular SAND, fine grained, brownish yellow, well sorted, no pebbles 6.6) OS — I — I	 i	 			SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular	-
CME Sampler With few pebbles, subangular CME Sampler With few pebbles, subangular SAND, fine grained, brownish yellow, well sorted, no pebbles 6.6			34				8
6.6	70	 - 			Used Continuous CME Sampler	SAND, fine to coarse grained, brownish yellow, poorly sorted With few pebbles, subangular	
SAND, fine grained, brownish yellow, well sorted, with pebbles			50			SAND, fine grained, brownish yellow, well sorted, no pebbles	6.6
	- - - 75	 				SAND, fine grained, brownish yellow, well sorted, with pebbles	- - -

LEGEND
FID Flame Ionization Detector
T Time



148071.FI.LB SBLCA-SB-11 (MW-75)	PROJECT NUMBER	BORING NUMBER
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SOIL BORING LOG

PROJECT: LOCATION : Memphis, TN Dunn Field DNAPL Investigation ELEVATION: 303.61 feet MSL (TOC); 304.3 feet MSL (ground)
DRILLING METHOD AND EQUIPMENT USED: Hollow St DRILLING CONTRACTOR : Boart-Longyear Hollow Stem Auger 4.25 inch ID

WATER LEVELS: 79.15 feet BTOC (01/20		01/2001) START:	11/07/2000 END: 11/07/2000 LOGGER:	Bryan Burkingstock		
DEPTH BELOW SURFACE (FT) STANDARD		STANDARD	SOIL DESCRIPTION	COMMENTS		
II.	INTERVAL (FT) PENETRATION		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.
<u> </u>				(N)	MINERALOGY.	Corrected FID (ppm):
!					SAND, medium grained, tan, well sorted, no pebbles	
7					•	
1 -		52				19.1
1 -i		-			SAND, medium grained, tan, well sorted	_
l î						
					SAND, medium grained, tan, well sorted	_
80		ļ				_
!					SAND, medium to coarse grained, tan, well sorted	
-		26			-	32.3
1 -					WATER TABLE @ 81.8 FEET BGS	No FID below water table
1 _7		l		Begin using 4 foot		_
l î				2 inch split spoon	SAND, medium to coarse grained, brownish yellow, wet	
7		48			SAND, medium to coarse grained, brownish yellow, wet	-
85				No blow counts		
!				were measured.	SAND, medium to coarse grained, brownish yellow, wet	
		 			,, g,, ,,	_
-i						-
1 <u>.</u> î		!			SAND, medium to coarse grained, brownish yellow, wet	_
l î	j	48				
-I					@ 89 feet bgs: four inch CLAY layer (light gray)	-
90					SAND, medium to coarse grained, brownish yellow, wet	_
<u> </u>		l			CLAY (@ 90.4 feet bgs)	
-					Light gray with hints of light yellow, stiff, plastic, wet	=
-i		48				-
_i		70				_
					CLAY, light gray with hints of light yellow, stiff, plastic, wet	
-						-
95					BORING TERMINATED @ 93.5 FEET BGS.	_
-						=
-						=
						_
-						_
100						_
-						-
						_