

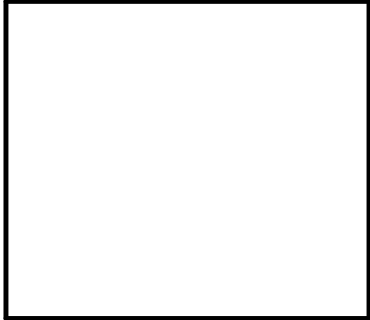


ENGINEER'S LOG

DRILLING START (Date): 8/2/93
 DRILLING COMPLETE (Date/Time): 8/3/93
 GROUTING COMPLETE (Date/Time): 8/5/93
 GROUND ELEVATION (ft): 965.6

COUNTY: Butler
 SR/SEG/OFFSET: (sr/seg/offset)
 STA: 0+76 OFFSET: 12RT
 COORDINATES: 3002012E 142560N

WATER LEVEL DEPTHS:
 Method: (Level method)
 FT: 14 Elapsed time(hr): 0830
 FT: 18 Elapsed time(hr): 1000
 FT: 20 Elapsed time(hr): 1640



MATERIAL DESCRIPTION - Comments - Observations <small>Draw stratification lines to indicate boundaries between different soil and rock types.</small>	GRAPHIC	DEPTH	SPT or RQD			NUNC	N60	REC (%)	Sample ID	HP (tsf)	Gradation (%)					Atterberg			WC (%)	AASHTO	USCS	
											GR	CS	FS	silt	clay	LL	PL	PI				
0.0-9.5': Brown and Gray Sand, Little to Some Rock Fragments, Little Clay, Trace Silt, Loose to Dense, Moist (Alluvial)	[Diagonal Hatching]	0	3	3	4/6"	7	5	30	S-1											a-1-a	sp-sc	
		5	13	21	34	26	90	S-2	2.1	12					52	14	38	23				
		3	35	23	24	47	35	100	S-3													
		6	25	27	17	44	33	100	S-4	.8										a-2-7	sm-sc	
		7	7	8	16	24	18	100	S-5													
		9	9	7	12	19	14	100	S-6													
		9	5	8	7	15	11	100	S-7											a-2-6	sp-sc	
		12	2	4	9	13	10	100	S-8	.94					33	11	22					
		15	9	19	65	84	63	100	S-9													
9.5-13.0': Brown and Gray Clayey Sand, Trace Silt and Rock Fragments, Medium Dense, Moist to Wet (Alluvial)	[Diagonal Hatching]	12	0					56	R-1										a-6	cl		
13.0-14.8': Black Bituminous Coal, Very Broken, Soft (RQD=0%)	[Diagonal Hatching]	15																				
14.0-17.8': Gray to Dark Gray Clayshale, Broken to Blocky, Very Soft .Coal Seam From 16.1-16.2'	[Diagonal Hatching]	15																				

FINAL LOG CHECKED BY:
 Name: _____
 Date: _____

FIELD LOGGED BY:
 Name: ERK
 Cert. number: #1

RIG TYPE: CME-45
 Core Size: 6"

HAMMER TYPE: Safety
 (Automatic, Safety, or Donut)

HAMMER EFFICIENCY RATING (ER):
 Assumed ER: 0.6
 Measured ER: 0.45
 Calibration Date: 10/12/11

CASING TYPE: (case type) _____
 Dia: 4"
 Depth: 13.5'
 Drive Hammer: 140#

ECMS #: 12345

Boring No. B-3

SHEET 1 of 2



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									GR	CS	FS	silt	clay	LL	PL	PI			
(RQD=0%)	[Hatched Box]	18	40			60	R-2												
		21																	
		24																	
		27																	
		30																	
		33																	

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SHEET 2 of 2