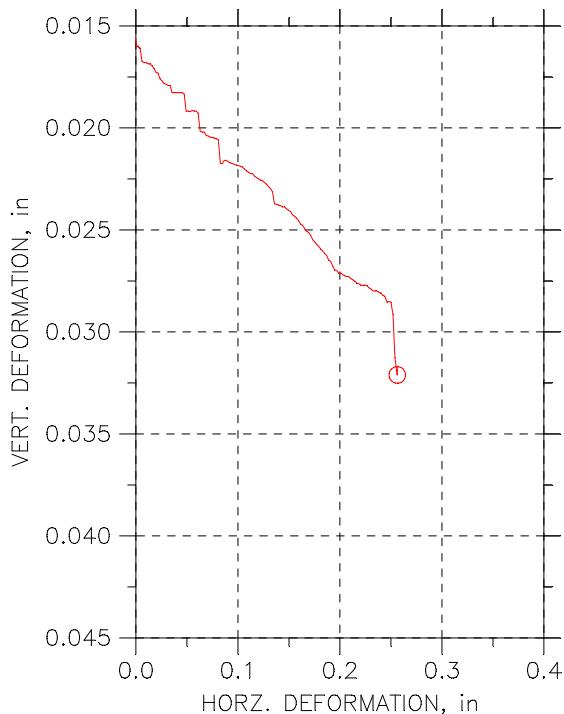
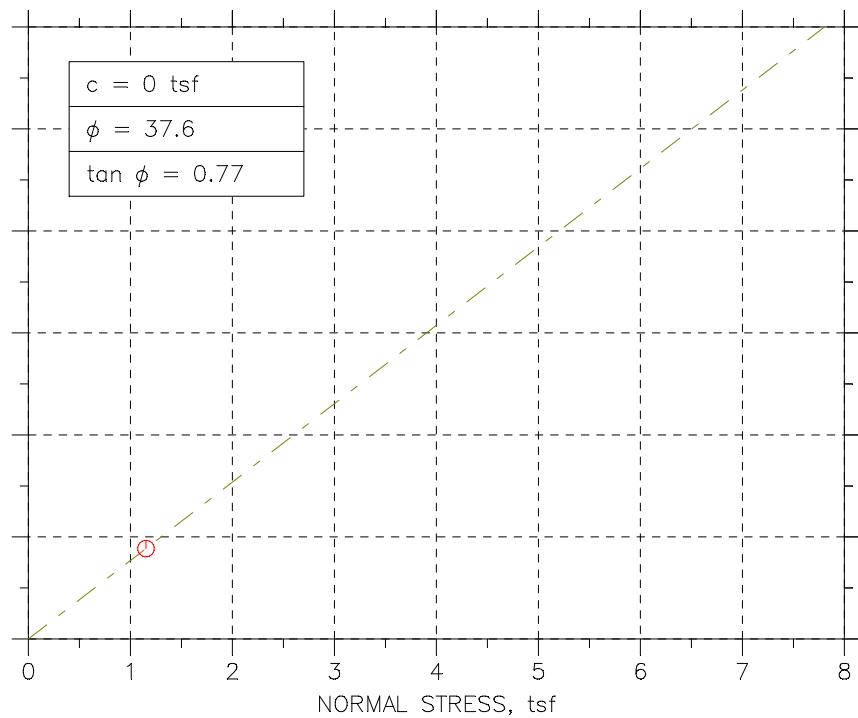
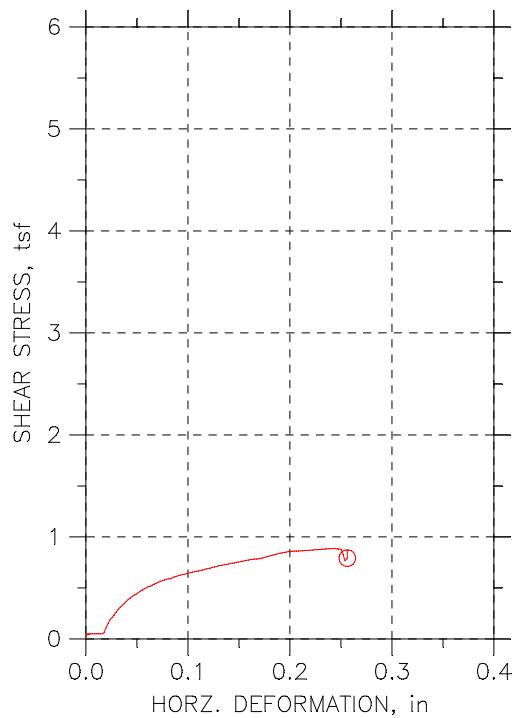


DIRECT SHEAR TEST REPORT



Symbol	\odot			
Test No.	102BOST2A			
Sample No.	OST-2			
Shape	Circular			
Initial	Dimension, in	2.5		
	Area, in ²	4.9087		
	Height, in	1.1264		
	Water Content, %	121.17		
	Dry Density, pcf	72.587		
	Saturation, %	281.22		
	Void Ratio	1.0039		
	Consol. Height, in	1.1154		
	Consol. Void Ratio	0.98438		
Final	Water Content, %	40.64		
	Dry Density, pcf	74.717		
	Saturation, %	100.00		
	Void Ratio	0.94678		
	Normal Stress, tsf	1.1523		
	Max. Shear Stress, tsf	0.88588		
	Ult. Shear Stress, tsf	0.79217		
	Time to Failure, min	1441.8		

Project: KINGSTON COAL	Disp. Rate, in/min	1.77		
Location: TN	Measured Specific Gravity	2.33		
Project No.: 60095742	Liquid Limit	NP		
Boring No.: 200 16 psi	Plastic Limit	NP		
Sample Type: REMOLDED	Plasticity Index	NP		
Description: FLYASH - DK GRAY - RECONSTITUTED FLY ASH FROM 200 SOIL BORINGS				
Remarks: TEST PERFORMED AS PER ASTM D 3080				

DIRECT SHEAR TEST DATA

Project: KINGSTON COAL
 Boring No.: 200 16 psi
 Sample No.: OST-2
 Test No.: 102BOST2A

Location: TN
 Tested By: BCM
 Test Date: 02/09/09
 Sample Type: REMOLDED

Project No.: 60095742
 Checked By: WPQ
 Depth: NA
 Elevation: NA

Soil Description: FLYASH - DK GRAY - RECONSTITUTED FLY ASH FROM 200 SOIL BORINGS
 Remarks: TEST PERFORMED AS PER ASTM D 3080

Elapsed Time min	Vertical Stress tsf	Vertical Displacement in	Horizontal Stress tsf	Horizontal Displacement in
1	0.00	1.151	0.0156	0
2	61.95	1.152	0.01599	0.02126 0.0004318
3	81.65	1.152	0.01599	0.04331 0.0008156
4	85.99	1.152	0.01599	0.04725 0.001199
5	88.05	1.152	0.01599	0.04803 0.001583
6	90.12	1.152	0.01602	0.04882 0.002015
7	92.73	1.152	0.01602	0.04882 0.002399
8	94.40	1.152	0.01606	0.04882 0.002783
9	96.20	1.152	0.01606	0.04882 0.003166
10	97.99	1.152	0.01609	0.04882 0.00355
11	100.99	1.152	0.01609	0.04961 0.003982
12	117.49	1.152	0.01673	0.04961 0.005949
13	129.50	1.152	0.0168	0.04961 0.007916
14	139.08	1.152	0.0168	0.04961 0.009883
15	157.71	1.151	0.01686	0.04961 0.01185
16	164.57	1.152	0.01686	0.04961 0.01382
17	174.78	1.152	0.01696	0.04961 0.01578
18	186.08	1.152	0.01708	0.063 0.01775
19	197.57	1.152	0.01728	0.1095 0.01972
20	210.83	1.152	0.01731	0.1496 0.02169
21	224.72	1.151	0.0176	0.1914 0.02365
22	231.77	1.151	0.0177	0.2102 0.02562
23	242.19	1.151	0.01782	0.2354 0.02759
24	255.27	1.152	0.01786	0.2638 0.02955
25	267.89	1.152	0.01792	0.289 0.03152
26	278.82	1.152	0.01792	0.3095 0.03349
27	290.85	1.152	0.01828	0.326 0.03545
28	300.84	1.152	0.01828	0.3457 0.03742
29	313.45	1.152	0.01828	0.367 0.03939
30	325.27	1.152	0.01828	0.3859 0.04136
31	335.51	1.152	0.01828	0.4 0.04332
32	347.41	1.152	0.01828	0.4166 0.04529
33	357.32	1.152	0.01834	0.4292 0.04726
34	369.05	1.152	0.01918	0.4394 0.04922
35	378.21	1.152	0.01918	0.4528 0.05119
36	389.97	1.152	0.01921	0.4677 0.05316
37	401.11	1.151	0.01914	0.4803 0.05512
38	410.95	1.152	0.01918	0.4914 0.05709
39	419.53	1.151	0.01918	0.4992 0.05906
40	434.07	1.152	0.01927	0.5126 0.06103
41	444.87	1.152	0.02017	0.5158 0.06299
42	454.67	1.152	0.02021	0.5276 0.06501
43	464.87	1.152	0.02021	0.5378 0.06697
44	475.27	1.152	0.02037	0.5457 0.06894
45	486.79	1.152	0.0204	0.5552 0.07091
46	499.08	1.152	0.02046	0.5638 0.07288
47	508.11	1.152	0.02046	0.5701 0.07484
48	519.32	1.152	0.0205	0.578 0.07681
49	529.00	1.152	0.02053	0.5827 0.07878
50	541.35	1.152	0.02056	0.5898 0.08074
51	549.57	1.152	0.02175	0.589 0.08271
52	561.07	1.152	0.02175	0.5992 0.08468
53	574.57	1.152	0.02159	0.6079 0.08665
54	582.43	1.152	0.02159	0.6126 0.08861
55	594.78	1.152	0.02165	0.6205 0.09058
56	605.84	1.151	0.02172	0.626 0.09255
57	617.63	1.151	0.02175	0.6307 0.09451
58	624.21	1.152	0.02178	0.6339 0.09648
59	639.95	1.152	0.02181	0.6402 0.09845
60	648.11	1.152	0.02185	0.6441 0.1004
61	657.69	1.151	0.02188	0.6496 0.1024
62	670.97	1.152	0.02191	0.6552 0.1043
63	683.56	1.151	0.02201	0.6591 0.1063
64	691.43	1.152	0.0221	0.663 0.1083
65	702.79	1.151	0.02217	0.667 0.1102
66	714.52	1.152	0.02223	0.6717 0.1122
67	724.89	1.151	0.02223	0.6764 0.1142
68	733.06	1.152	0.02236	0.6796 0.1162
69	750.60	1.152	0.02243	0.6867 0.1181
70	757.58	1.152	0.02249	0.6898 0.1201
71	770.00	1.152	0.02255	0.6945 0.1221
72	782.00	1.152	0.02259	0.7008 0.124
73	791.44	1.152	0.02268	0.7048 0.126
74	803.64	1.151	0.02275	0.7103 0.128
75	817.31	1.152	0.02288	0.7166 0.13
76	824.01	1.152	0.02297	0.7189 0.1319
77	834.19	1.152	0.02313	0.7229 0.1339
78	847.34	1.152	0.02371	0.7268 0.1359
79	858.76	1.151	0.02375	0.7308 0.1378
80	865.51	1.152	0.02378	0.7339 0.1398
81	879.81	1.152	0.02381	0.7394 0.1418
82	890.31	1.152	0.02387	0.7426 0.1437
83	898.18	1.152	0.02387	0.7449 0.1457
84	912.77	1.151	0.02397	0.7504 0.1477
85	921.29	1.152	0.02403	0.7536 0.1496
86	931.47	1.151	0.0241	0.7567 0.1516

87	945.66	1.152	0.02426	0.7623	0.1536
88	954.70	1.151	0.02432	0.7662	0.1555
89	964.95	1.152	0.02442	0.7693	0.1575
90	975.46	1.151	0.02455	0.7741	0.1595
91	989.81	1.152	0.02471	0.778	0.1614
92	996.70	1.152	0.02477	0.7796	0.1634
93	1011.89	1.151	0.02494	0.7835	0.1654
94	1021.11	1.152	0.02506	0.7843	0.1673
95	1030.93	1.152	0.02513	0.7859	0.1693
96	1040.29	1.152	0.02526	0.7898	0.1713
97	1052.59	1.152	0.02548	0.7937	0.1732
98	1064.05	1.152	0.02558	0.7993	0.1752
99	1074.74	1.152	0.02571	0.8048	0.1772
100	1083.86	1.152	0.0258	0.8103	0.1791
101	1094.72	1.152	0.02593	0.815	0.1811
102	1106.69	1.152	0.02603	0.8213	0.1831
103	1113.83	1.152	0.02616	0.8245	0.185
104	1127.29	1.152	0.02625	0.8315	0.187
105	1139.26	1.152	0.02648	0.8378	0.189
106	1149.03	1.152	0.02654	0.841	0.1909
107	1158.97	1.152	0.02677	0.8457	0.193
108	1171.89	1.152	0.02696	0.8489	0.1949
109	1183.06	1.151	0.02699	0.8528	0.1969
110	1195.84	1.152	0.02712	0.856	0.1989
111	1200.20	1.152	0.02712	0.8567	0.2008
112	1214.88	1.152	0.02719	0.8607	0.2028
113	1226.08	1.152	0.02725	0.8615	0.2048
114	1233.55	1.152	0.02728	0.863	0.2067
115	1244.40	1.152	0.02728	0.863	0.2087
116	1257.88	1.152	0.02738	0.8646	0.2107
117	1269.95	1.152	0.02745	0.8646	0.2126
118	1280.28	1.152	0.02751	0.8662	0.2146
119	1292.06	1.152	0.02761	0.8678	0.2166
120	1301.08	1.152	0.02764	0.8693	0.2185
121	1312.25	1.151	0.0277	0.8709	0.2205
122	1320.75	1.151	0.02773	0.8725	0.2225
123	1334.69	1.152	0.0277	0.8741	0.2244
124	1343.25	1.152	0.02773	0.8756	0.2264
125	1355.92	1.152	0.02783	0.8772	0.2284
126	1369.13	1.152	0.0279	0.8788	0.2303
127	1377.93	1.152	0.02799	0.8804	0.2323
128	1389.10	1.152	0.02799	0.8819	0.2343
129	1399.31	1.152	0.02799	0.8827	0.2362
130	1410.44	1.152	0.02806	0.8843	0.2382
131	1418.66	1.152	0.02809	0.8851	0.2402
132	1433.49	1.152	0.02822	0.8859	0.2421
133	1441.81	1.152	0.02825	0.8859	0.2441
134	1452.95	1.151	0.02854	0.8835	0.2461
135	1465.58	1.152	0.02851	0.8812	0.248
136	1473.90	1.152	0.02854	0.8804	0.25
137	1487.33	1.151	0.02915	0.8315	0.252
138	1495.95	1.15	0.03124	0.7662	0.2539
139	1504.74	1.151	0.03208	0.7882	0.256
140	1506.08	1.151	0.03211	0.7922	0.2562