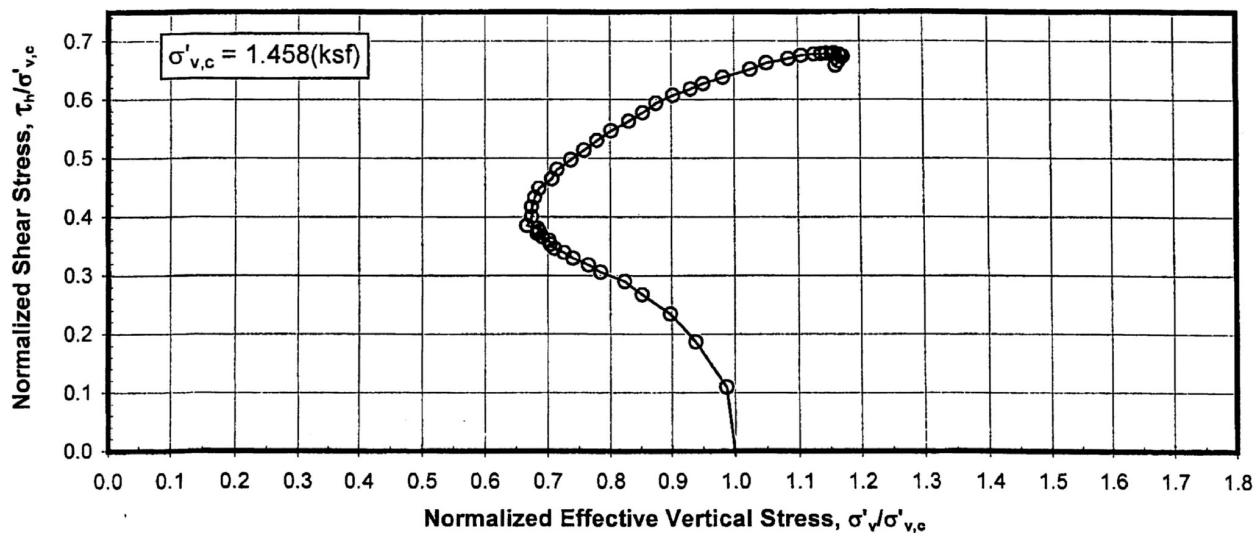
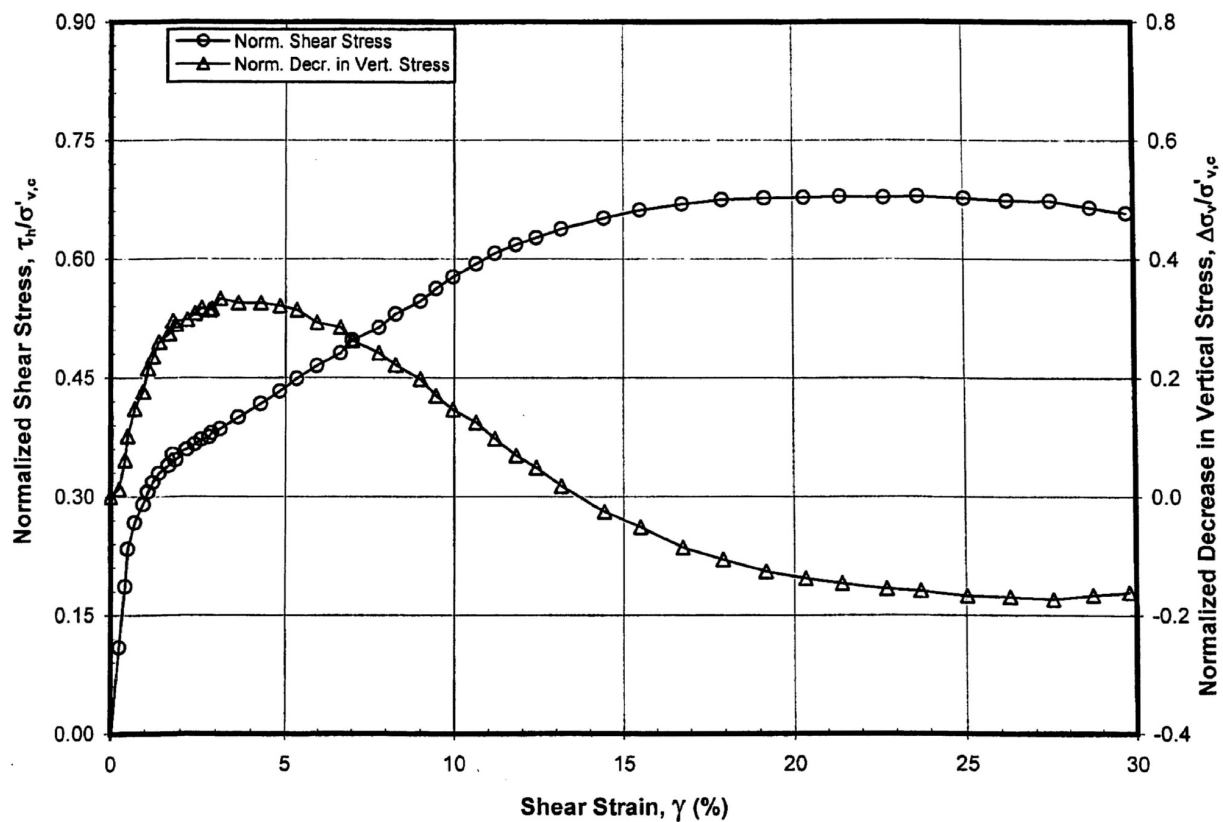
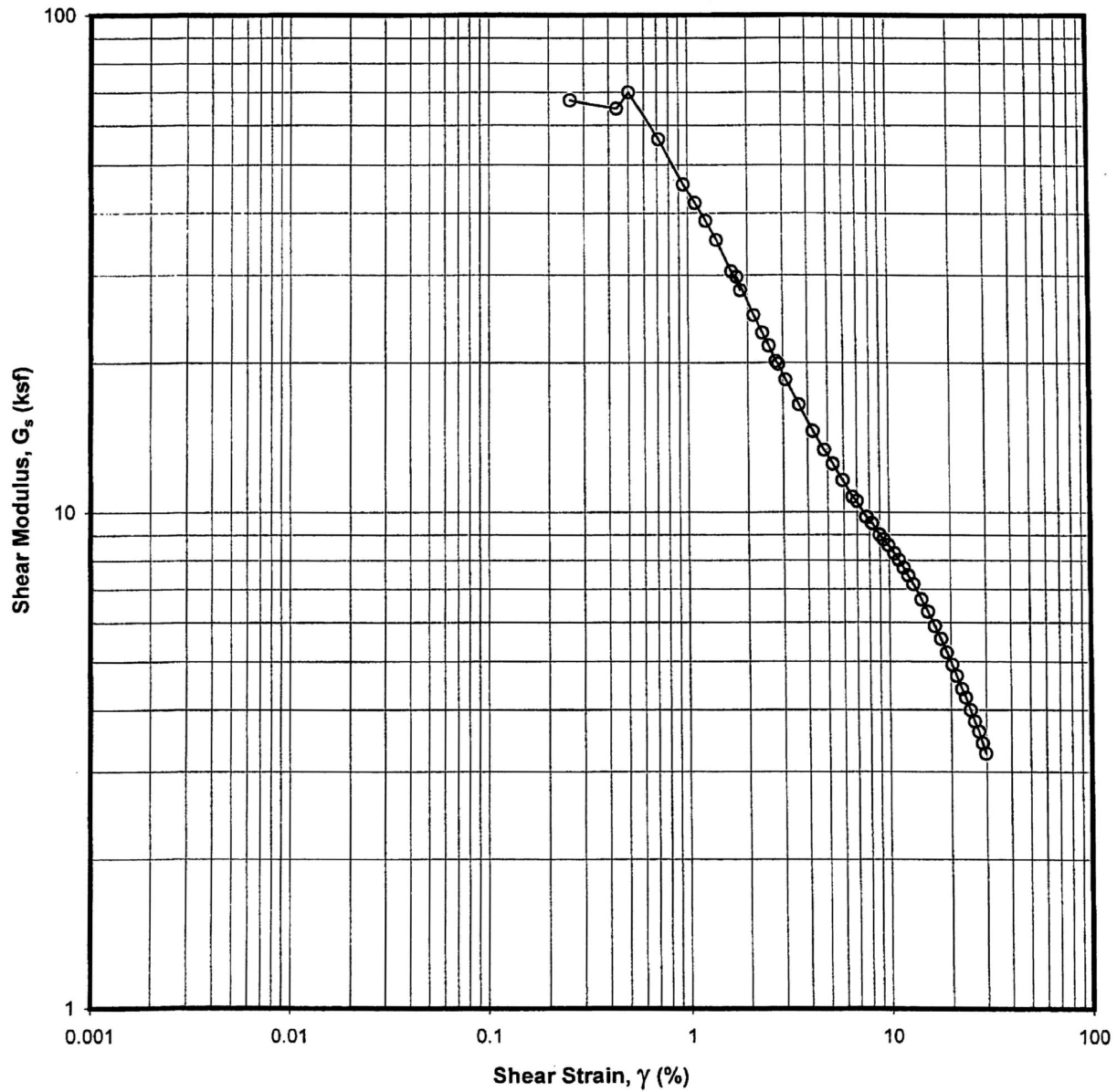




STATIC DSS TEST
K₀ Consolidation - OCR = NA
Sample: UD-4B - Depth: 13.5 - 15.2 ft
Boring B-2321UD

KAW 7/16/08



STATIC DSS TEST
 K_0 Consolidation - OCR = NA
 Sample: UD-4B - Depth: 13.5 - 15.2 ft
 Boring B-2321UD

KAW 7/16/08

DIRECT SIMPLE SHEAR TEST (ASTM D 6528-07): Specimen Setup / Take Down

Project Number: 0411-08-1686 Test Type: SDSS Sta. No.: 12G File Name: B-2321_UD4b
 Task No.: NA Assign, $\sigma'_{v,c}$ = 1.44 ksf $K_{c,DSS} (\tau_{h,c} / \sigma'_{v,c})$ = NA
 Project Name: Exelon (Victoria) Induced OCR = NA $K_{ub,DSS} (\tau_{hu,b} / \sigma'_{v,c})$ = NA
 Test No.: NA Test Series for/on: NA Type Stage: NA = NA NA NA & NA
 Assig. Remarks: Specific Gravity: 2.720 ☒ Meas.; ☐ Assumed

☒ Tube	☐ Field Extruded	☐ Liner	☐ Remolded	☐ Tamping	☐ Constant Effort:	Blows/Tamps per Layer =	
Boring No.: B-2321UD		☐ LPC Core		☐ Impact/Rammer	Rammer Wgt. (lbf) =		No. Layers =
Sample No.: UD-4		Composite No.:		☐ Pluviated:	Tamper Force (lbf) =		Drop (in.) =
Depth (ft): 13.5 - 15.2		Specimen No.: B		☐ Kneading	☐ Undercompaction:	U_{ni} (%) =	Dia. (in.) =
☐ Spec. Selection by X-ray;		☐ Geomarine Sample			Ref. Effort =	% Comp. =	$\pm$ Opt. =

Type	☒ K_o at:	☒ Incremental	;	☐ Anisotropic at:	☐ Inclined Stress Path, $K_{c,DSS}$	☐ Used Automated System
Consolidation:		CRS			90° Stress Path	Remarks:
Loading	☒ Static	☒ Strain	☐ Creep	☒ Const. Vol./Ht	☒ Without - Water	☐ Cyclic (Hz)
Conditions:	Rapid	Stress	Post Cyclic	Drained	With - Bath	Rate: 0.1; 1; Other:

Water Content (WC);	Initial - Trimming Location			Final, W_{at} (see below)	Soil and Ring Masses		Initial	Final
	Top ($W_{0,1}$)	Bottom ($W_{0,2}$)	Sides ($W_{0,3}$)		Mass Moist Soil + Tare (g)	Mass Tare (g)		
Container No.	191	1152	4155	4247	Mass Moist Soil, $M_{t,0}$ $M_{t,at}$ (g)	352.08	176.30	
Mass Moist Soil + Cont. (g)	52.13	152.90	59.67	84.72	Mass Tare (g)	182.70	4.08	
Mass Dry Soil + Container (g)	48.52	131.65	54.07	73.29	Mass Moist Soil, $M_{t,0}$ $M_{t,at}$ (g)	169.38	172.22	
Mass Container (g)	30.75	32.37	29.97	30.14	Excess Dry Soil (soil not included in final mass above)			
WATER CONTENT (%)	20.32	21.40	23.24	26.49	Container No.	5005		
Avg. Initial WC, $W_{0,avg}$ (%)	21.65	Final W_{at} :	☒ Slice ;	Whole Spec.	Mass Dry Soil + Container (g)	32.31		
					Mass Container (g)	31.54		
See attached data sheet(s) for additional water contents					Mass Excess Dry Soil (g)	0.77		

Specimen Trimming:			
☐ Trimming Ring for Fugro Apparatus	NL5	Large-ring ID #	
☒ Trimming Ring for NGI Apparatus		Small-ring ID #	
$H_{s,t}$ (mm):	25.68	$A_{s,t}$ (cm ²):	34.90
$D_{s,t}$ (mm):	66.66	$V_{s,t}$ (cm ³):	89.60
Remarks:			
☐ Free Standing by Wire Saw Lathe or Reconstituted Spec. (mm)			
Height (H_r)	Diameter (D_o)	Remarks: #10 CAP USED	
1 25.740	1-T NA		
2 25.750	2-M NA		
3 25.610	3-B NA		
4 25.710	1'-T NA	For Free Standing	
5 25.600	2'-M NA	or Reconstituted Spec.:	
Avg.	3'-B NA	A_{tr} (cm ²):	NA
= 25.675	Avg NA	V_{tr} (cm ³):	NA

Note: NA indicates not applicable.

F or G in the Sta. No. indicates Fugro or GEOTAC apparatus.

Estimated Initial Unit Weight	
Total, $\gamma_{t,0}$ (lb/ft ³) =	118.01
Dry, $\gamma_{d,0}$ (lb/ft ³) =	97.01

Specimen Lateral Confinement by:				
Wire Reinforced, Model:		Thickness (mm) =		
Stress	Dia. by PiTape (mm)	Area, $A_{c,n}$		
Level	Meas. Corr.	(cm ²)	(in ²)	
0				
$\sigma'_{v,c}$				
$\sigma'_{v,max}$				
☒ Regular Membrane with Ring Set No. 12	ID, Rings (mm)			
Thickness (mm):	Top: 0.57	= 67.24		
☐ Single	Bottom: 0.59	Corr. for mem.		
☒ Double	Membr. Thick. = 0.29	= 66.660		
Area Ring with mem., A_o (cm ²) =		34.90	; (in ²) = 5.409	
Mass Top Cap, etc., M_{tc} =		526.9 g,	1.16	lbf
Data corr. for M_{tc} : ☒ Yes;		☐ No	Plattens with Pins: ☐ Yes; ☒ No	

Final Visual Description: Mottled Brownish Yellow and Light Gray Fat CLAY (CH)

Other Remarks :

Trim./ Recon. By: HC
 Date: 3/26/2008
 Prelim. Calc. By: HC

Setup By: HC
 Date: 3/27/2008
 Final Calc. By: LF

Take Down By: HC
 Date: 3/29/2008
 Reviewed By: HP **HP**

Specimen Take Down: ☒ Spec. removed right after shearing
☐ Spec. unloaded to zero stress with access to water

Remarks:

KAW 7/16/08

DIRECT SIMPLE SHEAR TEST (ASTM D 6528-07): Specimen Calculations & Summary

Project Number: 0411-08-1686 Test Station No.: 12G File Name: B-2321_UD4b
 Task Number: NA Specific Gravity: 2.720 ☒ Measured; ☐ Assumed
 Type Test: SDSS Specimen: ☒ "Undisturbed"; ☐ Reconstituted; ☐ Remolded
 Calculations Corr. for Salt (dissolved solids): ☒ No or, ☐ Yes, with concentration = _____ ppm

Consolidation Stress Summary and Loading Summary									
Test Stage:	Max. Stress	Pre-Shear	Post Cyclic	☒	Static Strain Rate = NA (%/hr or				
Nominal Vertical Stress, σ'_v (ksf)	NA	1.44	NA		Cyclic Rate (Hz):	0.1;	1;	Other =	
Axial/Vertical Force, $P_{v,n}$ (lbf)	NA	NA	NA		During/End of Loading		Static	Cyclic	
Horizontal Force, $P_{h,n}$ (lbf)	NA	0	NA		Change in Height, $\Delta H_{L,n}$ (mm)		NA	NA	
Nominal OCR	NA	NA	NA		Change in Vol., $\Delta V_{L,n}$ (cm ³)		NA	NA	
t_c (ON, days, hrs)	NA	0.75 days	NA		Post Cy. Displ. Reset to Null Position:		Yes;	No	

Undrained ambient stress applied: with Delta shear force (lbf) = NA & Duration (min) = NA & Delta disp., $\Delta d_{h,ua}$ (mm) = NA

Trimmed Specimen (TS) - Initial Water Contents over Saturation (%):					
	Top, $W_{o,1}$	Bottom, $W_{o,2}$	Sides, $W_{o,3}$	Avg., $W_{o,avg}$	Selet., $W_{o,s}$
W_o	20.32	21.40	23.24	21.65	21.65
S_o	75.9	78.3	82.1	78.8	78.8
Measured final mass of moist soil, $M_{t,at}$ (g)					172.22
Final mass of moist soil corrected for excess dry soil, $M_{t,at,c}$ (g)					173.19

Calculated Mass of Dry Soil (g)	
Initial Selected Water Content (%)	21.65
Initial, $M_{d,o}$	139.24
Final, $M_{d,at}$	136.92
Selected, M_d	138.08

Initial Back Cal. Specific Gravity (TS):

Selected S_o (%)	
Selected W_o (%)	
Specific Gravity, $G_{s,bc}$	

Height/Volume Change Summary			
Variation in Height & Volume During Consol.	During Initial Consol. to $\sigma'_{v,c}$ or $\sigma'_{v,c,max}$	During Rebound to $\sigma'_{v,c}$	Specimen Unloaded After Test To
Stress Units (ksf)	1.440	NA	NA
Sign Convention: (+) ΔV out & ΔH down; (-) ΔV in & ΔH up			
Delta Def. Read., $\Delta d_{ar,n}$ (mm)	0.120		
Total Equip. Comp., $\Sigma \Delta d_{af,c}$ (mm)	0.000		
Corr. Total Def. $\Delta H_{c,n}$ (mm)	0.120		
ΔV_n using A_o - spec. (cm ³)	0.42		
ΔV_n using $A_{c,n}$ - app. (cm ³)	0.42		
ΔV_n using burette meas. (cm ³)	-3.00		
Selected ΔV_n (cm ³)	0.42	NA	NA = ΔV_{uL}
After Test WC Corr. for ΔV during Shear & Unloading, $W_{at,c}$ (%)			NA

Calculation of ΔV_c by Different Procedures			
By Selected Volumes		By Change in Mass	
ΔV_c (cm ³)	0.42	$\sim M_{t,o} - (M_{t,at,c} + \Delta V_L + \Delta V_{uL})$	
By Cal. Height & App. Area		ΔV_c (cm ³)	-3.81
ΔV_c (cm ³)	0.42	By Saturation = 100% and	
By Cal. Ht. & Init. Spec. Area		Spec. Unloaded to 0 Stress	
ΔV_c (cm ³)	0.42	ΔV_c (cm ³)	NA

Back Cal. Water Content During Consol. - Based on the Consolidation Conclusions Given Below	
Assumed Saturation (%)	100.00
Back Cal. WC before Loading, $W_{c,bc}$ (%)	27.71
Back Cal. WC at Max. Stress, $W_{c,max,bc}$ (%)	NA

Consolidation	ΔV_c (cm ³) = 0.42	ΔH_c (mm) = 0.120	$\epsilon_{a,c}$ (%) = 0.47	$\Delta V_{c,max}$ (cm ³) = NA
& Preshear	V_c (cm ³) = 89.19	H_c (mm) = 25.555	$\epsilon_{v,c}$ (%) = 0.47	$\epsilon_{ac,max}$ (%) = NA
Conclusions	A_c (cm ²) = 34.90	$\Delta \gamma_c$ (mm) = NA	γ_c (%) = NA	Preshear: γ_{ua} (%) = NA

Summary of Specimen Physical Properties:

Specific Gravity:	Height	Volume	Area	Water Content	Total Unit Weight	Dry Unit Weight	Saturation	Void Ratio,
$G_s = 2.720$ Measured	(mm)	(cm ³)	(cm ²)	(%)	(pcf)	(pcf)	(%)	e
Condition:								
Initial (as trimmed)	25.675	89.60	34.90	22.7	118.0	96.2	80.9	0.765
After to $\sigma'_{v,c}$	25.555	89.19	34.90	27.7	123.4	96.7	100.0	0.757
Consol.: to $\sigma'_{v,c,max}$	NA	NA	NA	NA	NA	NA	NA	NA

LCA-Method: 1- Initial measured value remains constant. 4 - Based on change in height & volume.
 & Note(s) 2 - Initial measured value corrected for applied stress. NA - Not Applicable
 3 - Uses measured value at appropriate stress level (NA for rings).

Calculated By: LF
 Reviewed By: HP

Remarks: t95 for max stress = 1.8 min

Project Number: 0411-08-1686 Test Type: SDSS Test Sta. No.: 12G File Name: B-2321_UD4b
 Project Name: Exelon (Victoria) Task No.: NA Test No.: NA Test Series for: NA

☒ Tube	☐ Field Extruded	☐ Liner	☐ Remolded	☐ Tamping	☐ Constant Effort:	Blows/Tamps per Layer =
Boring No.: <u>B-2321UD</u>	☐ LPC Core	☐	☐	☐ Impact/Rammer	Rammer Wgt. (lb) =	No. Layers =
Sample No.: <u>UD-4</u>	Composite No.: <u></u>	☐	☐	☐ Pluviated:	Tamper Force (lb) =	Drop (in.) =
Depth (ft): <u>13.5 - 15.2</u>	Specimen No.: <u>B</u>	☐	☐	☐ Kneading	☐ Undercompaction:	U _{ni} (%) = Dia. (in.) =
☐ Spec. Selection by X-ray;	☐ Geomarine Sample	☐	☐	☐	Ref. Effort =	% Comp. = ± Opt. =

Type Consolidation:	☒ K ₀ at:	☒ Incremental CRS	☐ Anisotropic at:	☐ Inclined Stress Path, K _{c,DSS}	☐ Used Automated System	Remarks:
Loading Conditions:	☒ Static	☒ Strain Stress	☐ Creep Post Cyclic	☒ Const. Vol./Ht Drained	☒ Without - Water With - Bath	☐ Cyclic (Hz) Rate: <u>0.1</u> ; <u>1</u> ; Other:

Summary of Specimen Physical Properties										
Specific Gravity: G _s = <u>2.720</u> Measured	Height (mm)	Volume (cm ³)	Area (cm ²)	Water Content (%)	Total (pcf)	Dry (pcf)	Saturation (%)	LL PI	-200 %	Void Ratio, e
Condition: Initial	25.68	89.60	34.90	22.67	118.0	96.2	80.9	81	92.2	0.765
After to $\sigma'_{v,c}$	25.56	89.19	34.90	27.71	123.4	96.7	100.0	22	NA	0.757
Consol.: to $\sigma'_{vc,max}$	NA	NA	NA	NA	NA	NA	NA	59	NA	NA

Consolidation Stress Summary and Loading Summary										
Item	Unit	Max. Stress	Pre-Shear	Post Cyclic	X	Static Strain Rate = 6.5 %/hr.				
Vert. Consol. Stress, $\sigma'_{v,c}$:	(ksf)	NA	1.458	NA		Cyclic Rate (Hz):		0.1;		1; Other =
Induced OCR:	-	NA	NA	NA		During/End of Loading			Static	Cyclic
Axial Strain during Consol., $\epsilon_{a,c}$:	%	NA	0.47	NA		Change in Height, $\Delta H_{L,n}$ (mm):			NA	NA
Horiz. Consol. Stress, $\tau_{h,c}$:	(ksf)	NA	NA	NA		Change in Vol., $\Delta V_{L,n}$ (cm ³):			NA	NA
Consol. Stress Ratio, $\tau_{h,c} / \sigma'_{v,c}$:	-	NA	NA	NA		Post Cy.Displ. Reset to Null Pos.:			Yes;	No
Shear Strain during Consol., $\epsilon_{h,c}$:	%	NA	NA	NA		Number of Loading Cycles, N = NA				
Undr. Ambient Shear Stress, $\tau_{h,ub}$:	(ksf)	NA	NA	NA		$\pm \tau_h =$ NA (ksf)		$\pm \gamma =$ NA %		
Undr. Ambient Shear Strain, $\epsilon_{h,ub}$:	%	NA	NA	NA		at end of cyclic loading, $\sigma'_{v,c,r} =$ NA (ksf)				

Weight Top Cap, etc., M _{tc} (lb): <u>1.16</u>	Data Normalization: ☒ Yes ☐ No Value: <u>1.458</u> (ksf)
Data corr. for M _{tc} : ☒ Yes; ☐ No	Plattens with Pins: ☐ Yes; ☒ No
Wire Reinforced Membrane, Model: <u></u>	Data corr. for Membr. strength: ☒ Yes ☐ No
☒ Regular Membrane with Rings	☒ Pre-Shear Conditions ☐ Post-Cyclic Conditions
	Maximum Stress during Consol. ☐

Notes: See Fugro South, Inc. Notation Listing for definition of symbols and acronyms.

F or G in the Test Sta. No. indicates Fugro or GEOTAC apparatus.

NA - Not Applicable

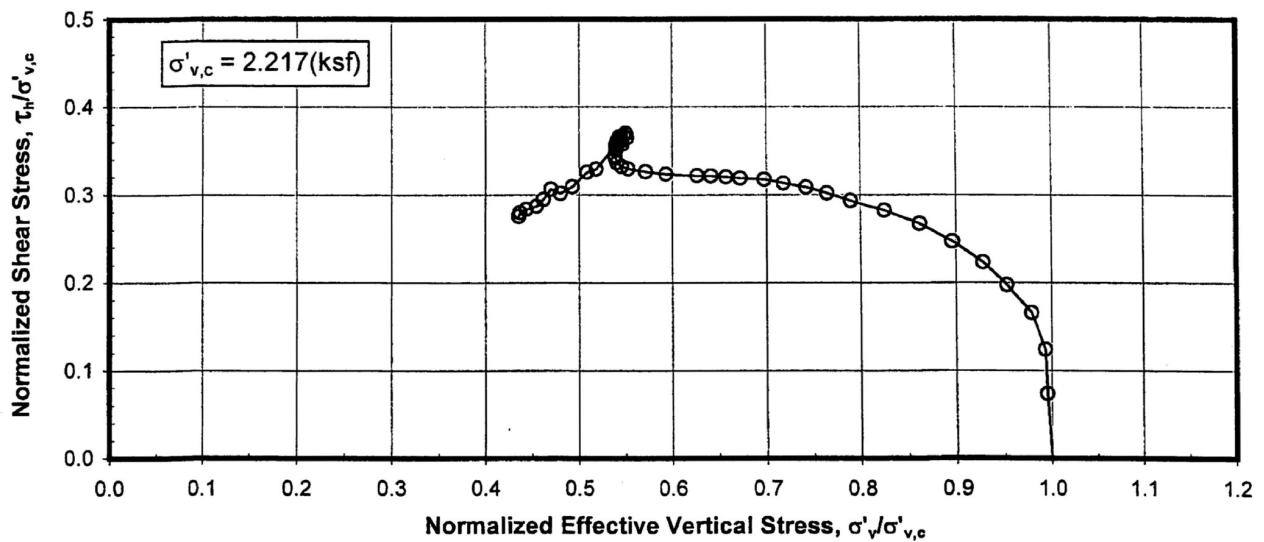
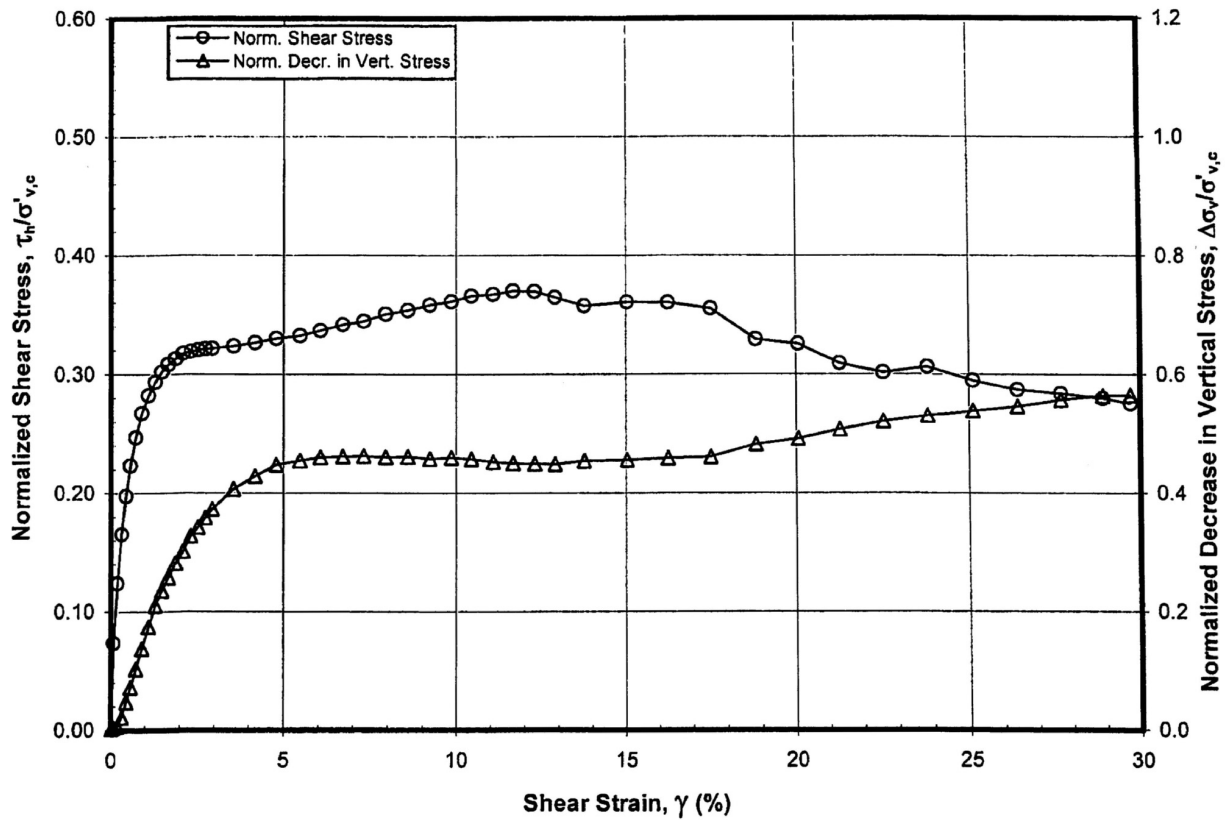
Final Visual Description and Remarks: Mottled Brownish Yellow and Light Gray Fat CLAY (CH)

Loading Summary						
	τ_h (ksf)	γ (%)	σ'_v (ksf)	τ_h / σ'_v	$\Delta \sigma'_v / \sigma'_{v,c}$	$C_u / \sigma'_{v,c}$
at Peak Shear Stress	0.990	23.73	1.691	0.586	-0.159	0.679
at Maximum Strain	0.960	29.80	1.694	0.566	-0.162	-

Boring No.: B-2321UD

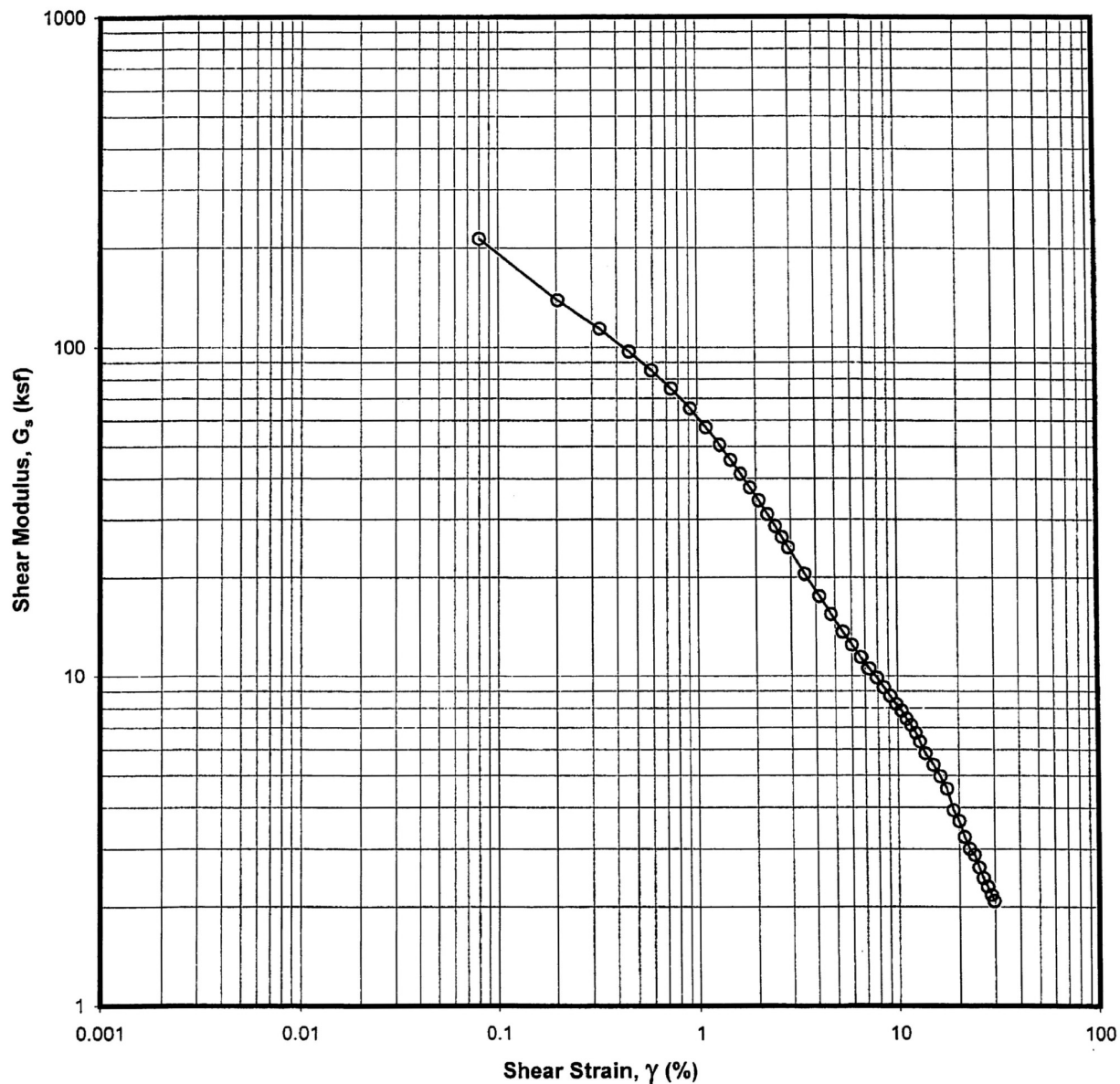
Sample No.: UD-4B

Elapsed Time (min)	Shear Strain γ (%)	Shear Stress τ_h (ksf)	Effective Vertical Stress σ'_v (ksf)	Calculated Pore Press. Change $\Delta U = \Delta \sigma'_v$ (ksf)	Secant Shear Modulus G_s (ksf)	Tangent Modulus G_T (ksf)	Norm. Shear Stress $\tau_h/\sigma'_{v,c}$	Norm. Vert. Stress $\sigma'_v/\sigma'_{v,c}$	Norm. Decr. in V. Stress $\Delta \sigma'_v/\sigma'_{v,c}$	Stress Ratio Angle ϕ_{DSS} (°)
0.0	0.00	-0.012	1.458	0.000	-	-	-0.008	1.000	0.000	-0.48
1.8	0.26	0.160	1.439	0.019	67.360	64.320	0.109	0.987	0.013	6.33
3.6	0.44	0.272	1.368	0.090	64.820	82.328	0.186	0.938	0.062	11.24
5.4	0.51	0.341	1.310	0.149	69.933	63.248	0.234	0.898	0.102	14.60
7.2	0.72	0.390	1.242	0.216	56.210	18.451	0.267	0.852	0.148	17.41
9.0	0.95	0.422	1.201	0.257	45.615	15.175	0.290	0.823	0.177	19.38
10.8	1.09	0.446	1.145	0.314	41.862	14.553	0.306	0.785	0.215	21.28
12.6	1.23	0.463	1.116	0.343	38.569	11.470	0.318	0.765	0.235	22.55
14.4	1.40	0.480	1.080	0.378	35.295	7.890	0.329	0.741	0.259	23.96
16.2	1.66	0.495	1.060	0.399	30.486	5.381	0.339	0.727	0.273	25.02
17.9	1.85	0.504	1.037	0.421	27.976	-4.422	0.346	0.711	0.289	25.94
19.7	1.77	0.515	1.028	0.431	29.698	-5.890	0.353	0.705	0.295	26.60
21.5	2.16	0.524	1.025	0.433	24.882	3.293	0.359	0.703	0.297	27.08
23.3	2.38	0.533	1.009	0.449	22.911	4.407	0.366	0.692	0.308	27.86
25.1	2.56	0.542	0.996	0.462	21.612	3.527	0.372	0.683	0.317	28.55
26.9	2.78	0.547	1.002	0.457	20.105	6.074	0.375	0.687	0.313	28.64
28.7	2.86	0.555	0.998	0.460	19.830	6.243	0.380	0.684	0.316	29.06
30.5	3.11	0.561	0.973	0.485	18.466	3.481	0.385	0.667	0.333	29.98
35.9	3.62	0.583	0.984	0.474	16.445	4.057	0.400	0.675	0.325	30.66
41.3	4.26	0.608	0.984	0.475	14.548	3.959	0.417	0.675	0.325	31.72
46.6	4.83	0.631	0.990	0.468	13.312	4.293	0.433	0.679	0.321	32.51
52.0	5.34	0.654	1.001	0.458	12.479	4.158	0.449	0.686	0.314	33.17
57.4	5.96	0.677	1.031	0.427	11.577	3.554	0.465	0.707	0.293	33.30
62.7	6.66	0.701	1.043	0.415	10.712	5.097	0.480	0.715	0.285	33.88
68.1	7.01	0.725	1.076	0.383	10.519	4.928	0.497	0.738	0.262	33.97
73.5	7.79	0.748	1.106	0.352	9.761	4.070	0.513	0.759	0.241	34.07
78.9	8.27	0.773	1.136	0.322	9.492	4.224	0.530	0.779	0.221	34.23
84.2	9.00	0.797	1.170	0.288	8.995	4.238	0.546	0.802	0.198	34.26
89.6	9.45	0.821	1.211	0.247	8.811	4.672	0.563	0.830	0.170	34.12
95.0	9.96	0.842	1.245	0.214	8.573	3.856	0.577	0.853	0.147	34.07
100.3	10.64	0.866	1.277	0.182	8.254	3.497	0.594	0.875	0.125	34.14
105.7	11.19	0.885	1.317	0.142	8.016	3.008	0.607	0.903	0.097	33.90
111.1	11.82	0.901	1.358	0.100	7.727	2.348	0.618	0.931	0.069	33.56
116.5	12.42	0.914	1.388	0.071	7.456	2.145	0.627	0.952	0.048	33.36
123.6	13.16	0.930	1.433	0.025	7.158	1.873	0.638	0.983	0.017	32.97
134.4	14.43	0.950	1.496	-0.038	6.668	1.495	0.651	1.026	-0.026	32.41
145.1	15.50	0.965	1.533	-0.075	6.303	1.136	0.662	1.051	-0.051	32.19
155.9	16.76	0.976	1.583	-0.125	5.895	0.783	0.669	1.086	-0.086	31.64
166.6	17.94	0.984	1.613	-0.155	5.554	0.477	0.675	1.106	-0.106	31.38
177.3	19.18	0.987	1.643	-0.184	5.212	0.163	0.677	1.126	-0.126	31.01
188.1	20.34	0.988	1.660	-0.201	4.918	0.113	0.678	1.138	-0.138	30.77
198.8	21.44	0.990	1.672	-0.214	4.675	0.020	0.679	1.147	-0.147	30.62
209.5	22.75	0.988	1.684	-0.226	4.398	0.057	0.678	1.155	-0.155	30.40
220.3	23.73	0.990	1.691	-0.232	4.226	-0.015	0.679	1.159	-0.159	30.37
231.0	25.03	0.987	1.702	-0.244	3.992	-0.322	0.677	1.167	-0.167	30.11
241.8	26.27	0.982	1.706	-0.247	3.786	-0.216	0.674	1.170	-0.170	29.94
252.5	27.54	0.982	1.711	-0.253	3.610	-0.529	0.673	1.173	-0.173	29.84
263.2	28.72	0.970	1.701	-0.243	3.419	-0.981	0.665	1.167	-0.167	29.69
274.0	29.80	0.960	1.694	-0.236	3.281	-0.953	0.658	1.162	-0.162	29.53



STATIC DSS TEST
 K_0 Consolidation - OCR = NA
Sample: UD-5B - Depth: 17.0 - 18.7 ft
Boring B-2321UD

KAW 7/16/08



STATIC DSS TEST

K_o Consolidation - OCR = NA

Sample: UD-5B - Depth: 17.0 - 18.7 ft

Boring B-2321UD

DIRECT SIMPLE SHEAR TEST (ASTM D 6528-07): Specimen Setup / Take Down

Project Number: 0411-08-1686 Test Type: SDSS Sta. No.: 9G File Name: B-2321_UD5b
 Task No.: NA Assign, $\sigma'_{v,c}$ = 2.16 ksf $K_{c,DSS} (\tau_{h,c} / \sigma'_{v,c})$ = NA
 Project Name: Exelon (Victoria) Induced OCR = NA $K_{ub,DSS} (\tau_{hu,b} / \sigma'_{v,c})$ = NA
 Test No.: NA Test Series for/on: NA Type Stage: NA = NA NA NA & NA
 Assig. Remarks: Specific Gravity: 2.720 ☒ Meas.; ☐ Assumed

☒ Tube	☐ Field Extruded	☐ Liner	☐ Remolded	☐ Tamping	Constant Effort: Blows/Tamps per Layer =
Boring No.: B-2321UD	☐ LPC Core			Impact/Rammer	Rammer Wgt. (lbf) = No. Layers =
Sample No.: UD-5	Compostite No.:			Pluviated:	Tamper Force (lbf) = Drop (in.) =
Depth (ft): 17.0 - 18.7	Specimen No.: B			Kneading	Undercompaction: U_{ni} (%) = Dia. (in.) =
☐ Spec. Selection by X-ray;	☐ Geomarine Sample			Ref. Effort =	% Comp. = $\pm$ Opt. =

Type Consolidation:	☒ K_o at:	☒ Incremental CRS	☐ Anisotropic at:	Inclined Stress Path, $K_{c,DSS}$	☐ Used Automated System
				90° Stress Path	Remarks:
Loading Conditions:	☒ Static	☒ Strain	☐ Creep	☒ Const. Vol./Ht	☒ Without - Water
	☐ Rapid	☐ Stress	☐ Post Cyclic	☐ Drained	☐ With - Bath
					Cyclic (Hz) Rate: 0.1; Strain 1; Other:

Water Content (WC);	Initial - Trimming Location			Final, W_{at} (see below)	Soil and Ring Masses		Initial	Final
	Top ($W_{o,1}$)	Bottom ($W_{o,2}$)	Sides ($W_{o,3}$)		Mass Moist Soil + Tare (g)	Mass Tare (g)		
Container No.	124	4155	5059	4072	Mass Moist Soil, $M_{t,o}$ $M_{t,at}$ (g)	309.75	129.13	
Mass Moist Soil + Cont. (g)	58.63	154.14	61.42	72.81	Mass Tare (g)	186.86	4.24	
Mass Dry Soil + Container (g)	54.37	134.10	55.98	64.94	Mass Moist Soil, $M_{t,o}$ $M_{t,at}$ (g)	122.89	124.89	
Mass Container (g)	30.51	29.89	30.58	30.11	Excess Dry Soil (soil not included in final mass above)			
WATER CONTENT (%)	17.85	19.23	21.42	22.60	Container No.			
Avg. Initial WC, $W_{o,avg}$ (%)	19.50	Final W_{at} : ☒ Slice ; ☐ Whole Spec.			Mass Dry Soil + Container (g)			
See attached data sheet(s) for additional water contents					Mass Container (g)			
					Mass Excess Dry Soil (g)	0.00		

Specimen Trimming:			
☐ Trimming Ring for Fugro Apparatus	NL3	Large-ring ID #	
☒ Trimming Ring for NGI Apparatus		Small-ring ID #	
$H_{s,t}$ (mm):	18.60	$A_{s,t}$ (cm ²):	34.87
$D_{s,t}$ (mm):	66.63	$V_{s,t}$ (cm ³):	64.86
Remarks:			
☐ Free Standing by Wire Saw Lathe or Reconstituted Spec. (mm)			
Height (H_{tr})	Diameter (D_o)	Remarks:	
1 18.630	1-T NA		
2 18.620	2-M NA		
3 18.580	3-B NA		
4 18.540	1'-T NA	For Free Standing or Reconstituted Spec.:	
5 18.600	2'-M NA		
Avg.	3'-B NA	A_{tr} (cm ²):	NA
= 18.600	Avg	V_{tr} (cm ³):	NA

Note: NA indicates not applicable.

F or G in the Sta. No. indicates Fugro or GEOTAC apparatus.

Estimated Initial Unit Weight	
Total, $\gamma_{t,o}$ (lb/ft ³) =	118.28
Dry, $\gamma_{d,o}$ (lb/ft ³) =	98.98

Specimen Lateral Confinement by:				
Wire Reinforced, Model:		Thickness (mm) =		
Stress Level	Dia. by PiTape (mm) Meas.	Corr.	Area, $A_{c,n}$ (cm ²)	(in ²)
0				
$\sigma'_{v,c}$				
$\sigma'_{v,max}$				
☒ Regular Membrane with Ring Set No. 9	ID, Rings (mm)			
Thickness (mm):	Top: 0.59		= 67.21	
☐ Single	Bottom: 0.57		Corr. for mem.	
☒ Double Membr. Thick. = 0.29			= 66.630	
Area Ring with mem., A_o (cm ²) = 34.87		; (in ²) = 5.405		
Mass Top Cap, etc., M_{tc} = 528.7 g		1.17 lbf		
Data corr. for M_{tc} :	☒ Yes;	☐ No	Plattens with Pins:	☐ Yes; ☒ No

Final Visual Description: Mottled Brownish Yellow and Light Gray Lean CLAY (CL)

Other Remarks :

Trim./ Recon. By: HC

Setup By: HC

Take Down By: HC

Date: 3/24/2008

Date: 3/25/2008

Date: 3/27/2008

Prelim. Calc. By: HC

Final Calc. By: LF

Reviewed By: HP **HP**

Specimen Take Down: ☒ Spec. removed right after shearing
☐ Spec. unloaded to zero stress with access to water

Remarks:

KAW 7/16/08

DIRECT SIMPLE SHEAR TEST (ASTM D 6528-07): Specimen Calculations & Summary

Project Number: 0411-08-1686 Test Station No.: 9G File Name: B-2321_UD5b
 Task Number: NA Specific Gravity: 2.720 ☒ Measured; ☐ Assumed
 Type Test: SDSS Specimen: ☒ "Undisturbed"; ☐ Reconstituted; ☐ Remolded
 Calculations Corr. for Salt (dissolved solids): ☒ No or, ☐ Yes, with concentration = ppm

Consolidation Stress Summary and Loading Summary											
Test Stage:		Max. Stress	Pre-Shear	Post Cyclic	X	Static Strain Rate = NA (%/hr or)					
Nominal Vertical Stress, σ'_v (ksf)		NA	2.16	NA		Cyclic Rate (Hz):		0.1;		1; Other =	
Axial/Vertical Force, $P_{v,n}$ (lbf)		NA	NA	NA	During/End of Loading				Static		Cyclic
Horizontal Force, $P_{h,n}$ (lbf)		NA	0	NA	Change in Height, $\Delta H_{L,n}$ (mm)				NA		NA
Nominal OCR		NA	NA	NA	Change in Vol., $\Delta V_{L,n}$ (cm ³)				NA		NA
t_c (ON,days,hrs)		NA	1.05 days	NA	Post Cy.Displ. Reset to Null Position:				Yes;		No
Undrained ambient stress applied:		with Delta shear force (lbf) =		NA		& Duration (min) =		NA		& Delta disp., $\Delta d_{h,ua}$ (mm) = NA	

Trimmed Specimen (TS) - Initial Water Contents over Saturation (%):					
	Top, $W_{o,1}$	Bottom, $W_{o,2}$	Sides, $W_{o,3}$	Avg., $W_{o,avg}$	Selct., $W_{o,s}$
W_o	17.85	19.23	21.42	19.50	19.50
S_o	70.5	73.8	78.7	74.4	74.4
Measured final mass of moist soil, $M_{t,at}$ (g)					124.89
Final mass of moist soil corrected for excess dry soil, $M_{t,at,c}$ (g)					124.89

Calculated Mass of Dry Soil (g)	
Initial Selected Water Content (%)	19.50
Initial, $M_{d,o}$	102.84
Final, $M_{d,at}$	101.87
Selected, M_d	102.35

Initial Back Cal. Specific Gravity (TS):	
Selected S_o (%)	
Selected W_o (%)	
Specific Gravity, $G_{s,bc}$	

Height/Volume Change Summary			
Variation in Height & Volume During Consol.	During Initial Consol. to $\sigma'_{v,c}$ or $\sigma'_{v,max}$	During Rebound to $\sigma'_{v,c}$	Specimen Unloaded After Test To
Stress Units (ksf)	2.160	NA	NA
Sign Convention: (+) ΔV out & ΔH down; (-) ΔV in & ΔH up			
Delta Def. Read., $\Delta d_{ar,n}$ (mm)	0.370		
Total Equip. Comp., $\Sigma \Delta d_{atc}$ (mm)	0.000		
Corr. Total Def. $\Delta H_{c,n}$ (mm)	0.370		
ΔV_n using A_o - spec. (cm ³)	1.29		
ΔV_n using $A_{c,n}$ - app. (cm ³)	1.29		
ΔV_n using burette meas. (cm ³)	-3.40		
Selected ΔV_n (cm ³)	1.29	NA	NA = ΔV_{UL}
After Test WC Corr. for ΔV during Shear & Unloading, $W_{at,c}$ (%)			
NA			

Calculation of ΔV_c by Different Procedures			
By Selected Volumes		By Change in Mass	
ΔV_c (cm ³)	1.29	$\sim M_{t,o} - (M_{t,at,c} + \Delta V_L + \Delta V_{UL})$	
By Cal. Height & App. Area		ΔV_c (cm ³)	-2.00
ΔV_c (cm ³)	1.29	By Saturation = 100% and Spec. Unloaded to 0 Stress	
By Cal. Ht. & Init. Spec. Area		ΔV_c (cm ³)	NA
ΔV_c (cm ³)	1.29		

Back Cal. Water Content During Consol. - Based on the Consolidation Conclusions Given Below	
Assumed Saturation (%)	100.00
Back Cal. WC before Loading, $W_{c,bc}$ (%)	25.23
Back Cal. WC at Max. Stress, $W_{cmax,bc}$ (%)	NA

Consolidation & Preshear Conclusions	ΔV_c (cm ³) =	1.30	ΔH_c (mm) =	0.370	$\varepsilon_{a,c}$ (%) =	1.99	$\Delta V_{c,max}$ (cm ³) =	NA
	V_c (cm ³) =	63.56	H_c (mm) =	18.230	$\varepsilon_{v,c}$ (%) =	2.00	$\varepsilon_{ac,max}$ (%) =	NA
	A_c (cm ²) =	34.87	$\Delta \gamma_c$ (mm) =	NA	γ_c (%) =	NA	Preshear: γ_{ub} (%) =	NA

Summary of Specimen Physical Properties:								
Specific Gravity: $G_s = 2.720$ Measured	Height	Volume	Area	Water Content	Total Unit Weight	Dry Unit Weight	Saturation	Void Ratio, e
Condition:	(mm)	(cm ³)	(cm ²)	(%)	(pcf)	(pcf)	(%)	
Initial (as trimmed)	18.600	64.86	34.87	20.1	118.3	98.5	75.7	0.724
After to $\sigma'_{v,c}$	18.230	63.56	34.87	25.2	125.9	100.5	100.0	0.689
Consol.: to $\sigma'_{v,max}$	NA	NA	NA	NA	NA	NA	NA	NA

LCA-Method: 1- Initial measured value remains constant. 4 - Based on change in height & volume. Calculated By: LF
 & Note(s) 2 - Initial measured value corrected for applied stress. NA - Not Applicable Reviewed By: MP
 3 - Uses measured value at appropriate stress level (NA for rings).
 Remarks: t_{95} for max stress = 2.7 min

Project Number: 0411-08-1686 Test Type: SDSS Test Sta. No.: 9G File Name: B-2321_UD5b
 Project Name: Exelon (Victoria) Task No.: NA Test No.: NA Test Series for: NA

☒ Tube	☐ Field Extruded	☐ Liner	☐ Remolded	☐ Tamping	☐ Constant Effort:	Blows/Tamps per Layer =
Boring No.: B-2321UD	☐ LPC Core	☐ Impact/Rammer		Rammer Wgt.(lbf)=	No. Layers =	
Sample No.: UD-5	Composited No.:	☐ Pluviated:		Tamper Force (lbf)=	Drop (in.) =	
Depth (ft): 17.0 - 18.7	Specimen No.: B	☐ Kneading		☐ Undercompaction:	U _{ni} (%) =	Dia. (in.) =
☐ Spec. Selection by X-ray;	☐ Geomarine Sample			Ref. Effort=	% Comp. =	± Opt.=

Type Consolidation:	☒ K _o at:	☒ Incremental CRS	☐ Anisotropic at:	☐ Inclined Stress Path, K _{c,DSS}	☐ Used Automated System	Remarks:
Loading Conditions:	☒ Static	☒ Strain Stress	☐ Creep Post Cyclic	☒ Const. Vol./Ht Drained	☒ Without - Water With - Bath	☐ Cyclic (Hz) Rate: 0.1; 1; Other:

Summary of Specimen Physical Properties									
Specific Gravity: G _s = 2.720 Measured	Height (mm)	Volume (cm ³)	Area (cm ²)	Water Content (%)	Total Unit Weight (pcf)	Dry Unit Weight (pcf)	Saturation (%)	LL PL	-200 %
Condition: Initial	18.60	64.86	34.87	20.06	118.3	98.5	75.7	40	90.4
After to σ _{v,c}	18.23	63.56	34.87	25.23	125.9	100.5	100.0	15	NA
Consol.: to σ _{vc,max}	NA	NA	NA	NA	NA	NA	NA	25	NA

Consolidation Stress Summary and Loading Summary									
Item	Unit	Max. Stress	Pre-Shear	Post Cyclic	X	Static Strain Rate = 5.0 %/hr.			
Vert. Consol. Stress, $\sigma'_{v,c}$	(ksf)	NA	2.217	NA		Cyclic Rate (Hz):	0.1;	1;	Other =
Induced OCR:	-	NA	NA	NA		During/End of Loading		Static	Cyclic
Axial Strain during Consol., $\epsilon_{a,c}$	%	NA	1.99	NA		Change in Height, $\Delta H_{L,n}$ (mm):		NA	NA
Horiz. Consol. Stress, $\tau_{h,c}$	(ksf)	NA	NA	NA		Change in Vol., $\Delta V_{L,n}$ (cm ³):		NA	NA
Consol. Stress Ratio, $\tau_{h,c} / \sigma'_{v,c}$	-	NA	NA	NA		Post Cy.Displ. Reset to Null Pos.:	Yes;		No
Shear Strain during Consol., $\epsilon_{h,c}$	%	NA	NA	NA		Number of Loading Cycles, N = NA			
Undr. Ambient Shear Stress, $\tau_{h,ua}$	(ksf)	NA	NA	NA		$\pm \tau_h =$ NA (ksf)	$\pm \gamma =$ NA %		
Undr. Ambient Shear Strain, $\epsilon_{h,a}$	%	NA	NA	NA		at end of cyclic loading, $\sigma'_{vcy,r} =$ NA (ksf)			

Weight Top Cap, etc., M _{tc} (lbf): 1.17	Data Normalization: ☒ Yes ☐ No	Value: 2.217 (ksf)
Data corr. for M _{tc} : ☒ Yes; ☐ No	Plattens with Pins: ☐ Yes; ☒ No	Using Effective Vertical Stress:
Wire Reinforced Membrane, Model: _____	Data corr. for Membr. strength: ☒ Yes ☐ No	☒ Pre-Shear Conditions ☐ Post-Cyclic Conditions
☒ Regular Membrane with Rings	☐ Yes ☒ No	Maximum Stress during Consol. ☐

Notes: See Fugro South, Inc. Notation Listing for definition of symbols and acronyms.

F or G in the Test Sta. No. indicates Fugro or GEOTAC apparatus.

NA - Not Applicable

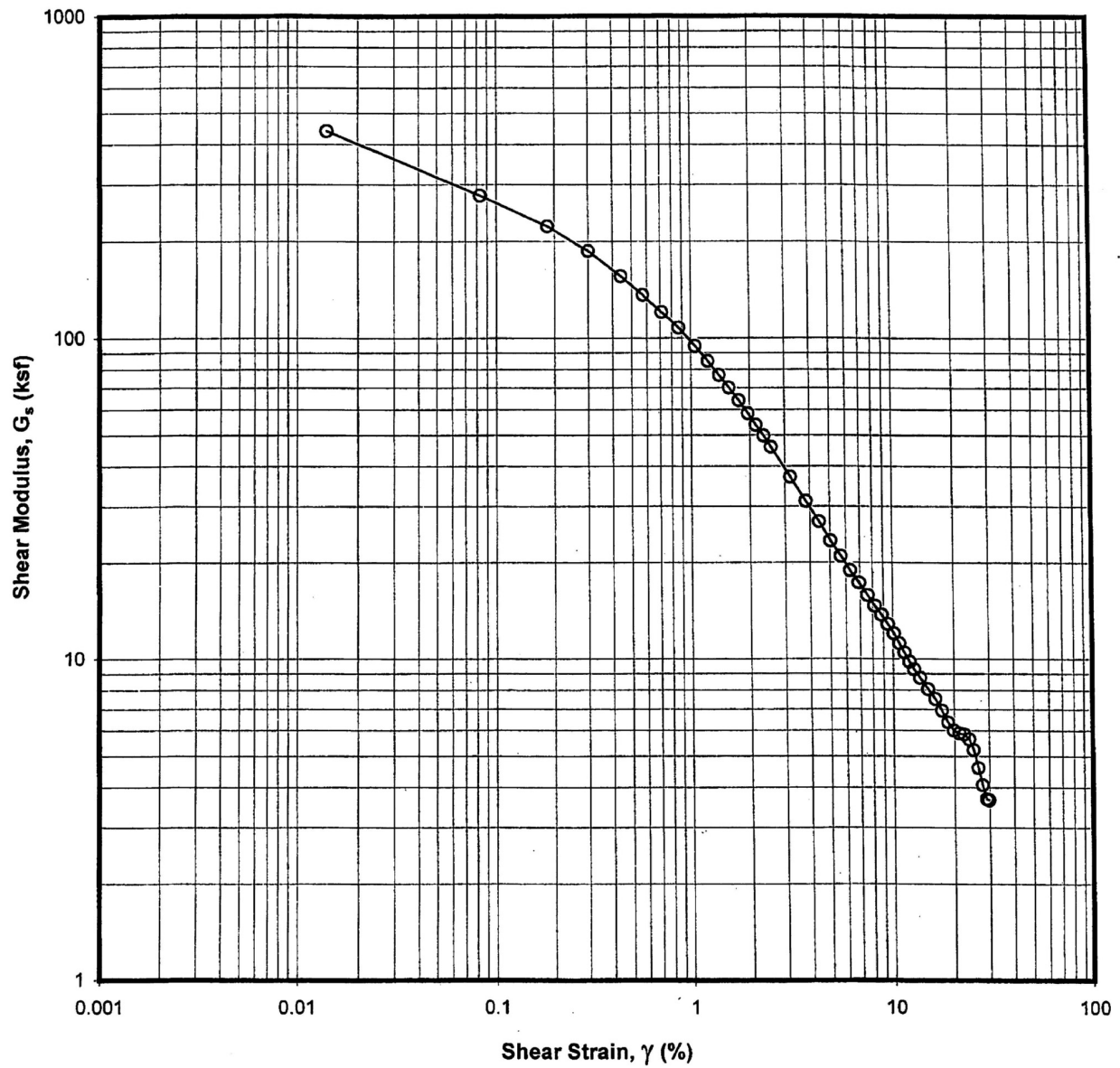
Final Visual Description and Remarks: Mottled Brownish Yellow and Light Gray Lean CLAY (CL)

Loading Summary						
	τ _h (ksf)	γ (%)	σ _v (ksf)	τ _h /σ _v	Δσ _v /σ _{v,c}	c _v /σ _{v,c}
at Peak Shear Stress	0.821	11.67	1.220	0.673	0.450	0.370
at Maximum Strain	0.611	29.72	0.966	0.632	0.565	-

Boring No.: B-2321UD

Sample No.: UD-5B

Elapsed Time (min)	Shear Strain γ (%)	Shear Stress τ_h (ksf)	Effective Vertical Stress σ'_v (ksf)	Calculated Pore Press. Change $\Delta U = \Delta \sigma'_v$ (ksf)	Secant Shear Modulus G_s (ksf)	Tangent Modulus G_T (ksf)	Norm. Shear Stress $\tau_h/\sigma'_{v,c}$	Norm. Vert. Stress $\sigma'_v/\sigma'_{v,c}$	Norm. Decr. in V. Stress $\Delta \sigma'_v/\sigma'_{v,c}$	Stress Ratio Angle ϕ'_{DSS} (°)
0.0	0.00	-0.007	2.217	0.000	-	-	-0.003	1.000	0.000	-0.19
2.5	0.08	0.163	2.207	0.010	212.762	151.706	0.074	0.995	0.005	4.23
4.9	0.20	0.275	2.203	0.015	138.764	81.660	0.124	0.993	0.007	7.12
7.4	0.33	0.367	2.170	0.047	113.487	63.751	0.165	0.979	0.021	9.59
9.9	0.46	0.438	2.112	0.105	96.842	49.091	0.198	0.953	0.047	11.72
12.3	0.59	0.495	2.057	0.160	85.038	39.153	0.223	0.928	0.072	13.52
14.8	0.74	0.547	1.988	0.230	74.853	29.937	0.247	0.896	0.104	15.40
17.3	0.92	0.592	1.913	0.305	65.105	21.358	0.267	0.863	0.137	17.20
19.7	1.11	0.626	1.831	0.387	57.110	15.139	0.282	0.826	0.174	18.87
22.2	1.30	0.650	1.751	0.466	50.406	11.366	0.293	0.790	0.210	20.36
24.7	1.49	0.669	1.696	0.521	45.372	8.983	0.302	0.765	0.235	21.53
27.2	1.68	0.683	1.646	0.571	41.226	6.448	0.308	0.743	0.257	22.54
29.6	1.87	0.694	1.593	0.624	37.481	4.896	0.313	0.718	0.282	23.53
32.1	2.08	0.703	1.548	0.670	34.202	3.102	0.317	0.698	0.302	24.43
34.6	2.30	0.707	1.491	0.726	31.076	1.566	0.319	0.673	0.327	25.35
37.0	2.51	0.710	1.459	0.759	28.555	1.254	0.320	0.658	0.342	25.95
39.5	2.72	0.712	1.423	0.794	26.452	0.680	0.321	0.642	0.358	26.58
42.0	2.93	0.713	1.391	0.826	24.603	0.537	0.321	0.627	0.373	27.13
49.4	3.55	0.717	1.317	0.901	20.433	0.847	0.323	0.594	0.406	28.56
56.8	4.18	0.723	1.268	0.950	17.471	1.128	0.326	0.572	0.428	29.71
64.2	4.79	0.731	1.225	0.992	15.413	1.027	0.330	0.553	0.447	30.81
71.6	5.47	0.736	1.210	1.007	13.599	1.226	0.332	0.546	0.454	31.33
79.0	6.06	0.746	1.199	1.019	12.432	1.686	0.337	0.541	0.459	31.90
86.4	6.71	0.757	1.195	1.023	11.399	1.354	0.342	0.539	0.461	32.37
93.8	7.32	0.763	1.194	1.024	10.531	1.577	0.344	0.538	0.462	32.59
101.2	7.95	0.777	1.197	1.020	9.864	1.652	0.350	0.540	0.460	32.99
108.6	8.59	0.784	1.196	1.021	9.218	1.345	0.354	0.540	0.460	33.25
116.0	9.22	0.794	1.203	1.015	8.692	1.320	0.358	0.542	0.458	33.44
123.4	9.86	0.801	1.200	1.018	8.200	1.399	0.361	0.541	0.459	33.73
130.8	10.46	0.811	1.204	1.013	7.829	1.090	0.366	0.543	0.457	33.97
138.2	11.09	0.814	1.215	1.002	7.409	0.791	0.367	0.548	0.452	33.83
145.7	11.67	0.821	1.220	0.997	7.096	0.470	0.370	0.550	0.450	33.93
153.1	12.30	0.820	1.222	0.996	6.723	-1.030	0.370	0.551	0.449	33.86
160.5	12.89	0.809	1.224	0.994	6.329	-1.857	0.365	0.552	0.448	33.46
170.3	13.76	0.793	1.212	1.005	5.814	-0.643	0.357	0.547	0.453	33.18
185.1	15.03	0.800	1.208	1.010	5.369	0.263	0.361	0.545	0.455	33.51
199.9	16.26	0.799	1.201	1.017	4.963	-0.467	0.360	0.542	0.458	33.65
214.7	17.51	0.788	1.196	1.022	4.544	-2.665	0.355	0.539	0.461	33.38
229.6	18.82	0.730	1.149	1.068	3.917	-2.534	0.329	0.518	0.482	32.42
244.4	20.07	0.722	1.127	1.090	3.633	-1.804	0.326	0.508	0.492	32.63
259.2	21.31	0.685	1.093	1.124	3.250	-2.164	0.309	0.493	0.507	32.08
274.0	22.57	0.668	1.064	1.153	2.992	-0.272	0.301	0.480	0.520	32.12
288.8	23.85	0.678	1.043	1.175	2.876	-0.572	0.306	0.470	0.530	33.05
303.6	25.12	0.653	1.024	1.193	2.630	-1.668	0.295	0.462	0.538	32.53
318.4	26.39	0.636	1.008	1.210	2.438	-0.968	0.287	0.455	0.545	32.25
333.2	27.67	0.629	0.983	1.234	2.299	-0.630	0.284	0.444	0.556	32.59
348.0	28.91	0.620	0.968	1.249	2.170	-0.935	0.280	0.437	0.563	32.63
357.9	29.72	0.611	0.966	1.252	2.079	-1.177	0.275	0.435	0.565	32.31



STATIC DSS TEST

K_o Consolidation - OCR = NA

Sample: UD-6B - Depth: 28.5 - 30.2 ft

Boring B-2321UD

KAW 7/16/08

DIRECT SIMPLE SHEAR TEST (ASTM D 6528-07): Specimen Setup / Take Down

Project Number: 0411-08-1686 Test Type: SDSS Sta. No.: 7G File Name: B-2321_UD6b
 Task No.: NA Assign, $\sigma'_{v,c}$ = 3.60 ksf $K_{c,DSS} (\tau_{h,c} / \sigma'_{v,c})$ = NA
 Project Name: Exelon (Victoria) Induced OCR = NA $K_{ub,DSS} (\tau_{hu,b} / \sigma'_{v,c})$ = NA
 Test No.: NA Test Series for/on: NA Type Stage: NA = NA, NA & NA
 Assig. Remarks: Specific Gravity: 2.720 ☒ Meas.; ☐ Assumed

☒ Tube	☐ Field Extruded	☐ Liner	☐ Remolded	☐ Tamping	☐ Constant Effort:	Blows/Tamps per Layer =
Boring No.: B-2321UD	☐ LPC Core			☐ Impact/Rammer	Rammer Wgt. (lbf) =	No. Layers =
Sample No.: UD-6	Composite No.:			☐ Pluviated:	Tamper Force (lbf) =	Drop (in.) =
Depth (ft): 28.5 - 30.2	Specimen No.: B			☐ Kneading	Undercompaction: U_{ni} (%) =	Dia. (in.) =
☐ Spec. Selection by X-ray;	☐ Geomarine Sample				Ref. Effort =	% Comp. = $\pm$ Opt. =

Type Consolidation:	☒ K_o at:	☒ Incremental	;	☐ Anisotropic at:	Inclined Stress Path, $K_{c,DSS}$	☐ Used Automated System
		CRS			90° Stress Path	Remarks:
Loading Conditions:	☒ Static	☒ Strain	☐ Creep	☒ Const. Vol./Ht	☒ Without - Water	☐ Cyclic (Hz)
	Rapid	Stress	Post Cyclic	Drained	With - Bath	Rate: 0.1; 1; Other:

Water Content (WC);	Initial - Trimming Location			Final, W_{at} (see below)	Soil and Ring Masses	Initial	Final
	Top ($W_{o,1}$)	Bottom ($W_{o,2}$)	Sides ($W_{o,3}$)		Mass Moist Soil + Tare (g)		
Container No.	191	4208	5005	4229	Mass Tare (g)	304.22	127.06
Mass Moist Soil + Cont. (g)	75.60	140.54	62.41	47.19	Mass Moist Soil, $M_{t,o}$ $M_{t,at}$ (g)	182.70	3.90
Mass Dry Soil + Container (g)	66.87	118.71	56.02	43.42		121.52	123.16
Mass Container (g)	30.76	30.65	31.54	30.29	Excess Dry Soil (soil not included in final mass above)		
WATER CONTENT (%)	24.18	24.79	26.10	28.71	Container No.		
Avg. Initial WC, $W_{o,avg}$ (%)	25.02	Final W_{at} :	☒ Slice ;	Whole Spec.	Mass Dry Soil + Container (g)		
See attached data sheet(s) for additional water contents					Mass Container (g)		
					Mass Excess Dry Soil (g)		0.00

Specimen Trimming:			
☐ Trimming Ring for Fugro Apparatus	NL5	Large-ring ID #	
☒ Trimming Ring for NGI Apparatus		Small-ring ID #	
$H_{s,t}$ (mm):	18.65	$A_{s,t}$ (cm ²):	34.90
$D_{s,t}$ (mm):	66.66	$V_{s,t}$ (cm ³):	65.09
Remarks:			
☐ Free Standing by Wire Saw Lathe or Reconstituted Spec. (mm)			
Height (H_{tr})	Diameter (D_o)	Remarks:	
1 18.670	1-T NA	For Free Standing or Reconstituted Spec.:	
2 18.640	2-M NA		
3 18.650	3-B NA		
4 18.600	1'-T NA		
5 18.670	2'-M NA		
Avg.	3'-B NA	A_{tr} (cm ²):	NA
= 18.650	Avg NA	V_{tr} (cm ³):	NA

Note: NA indicates not applicable.

F or G in the Sta. No. indicates Fugro or GEOTAC apparatus.

Estimated Initial Unit Weight	
Total, $\gamma_{t,o}$ (lb/ft ³) =	116.55
Dry, $\gamma_{d,o}$ (lb/ft ³) =	93.23

Specimen Lateral Confinement by:				
Wire Reinforced, Model:		Thickness (mm) =		
Stress Level	Dia. by PiTape (mm)	Area, $A_{c,n}$		
	Meas.	Corr.	(cm ²)	(in ²)
0				
$\sigma'_{v,c}$				
$\sigma'_{v,max}$				
☒ Regular Membrane with Ring Set No. 7	ID, Rings (mm)			
Thickness (mm):	Top: 0.57		=	67.23
☐ Single	Bottom: 0.56		Corr. for mem.	
☒ Double	Membr. Thick. = 0.28		=	66.660
Area Ring with mem., $A_{o,}$ (cm ²) =		34.90	; (in ²) =	5.409
Mass Top Cap, etc., M_{tc} =		527.2 g,	1.16 lbf	
Data corr. for M_{tc} :	☒ Yes;	☐ No	Plattens with Pins:	☐ Yes; ☒ No

Final Visual Description: Mottled Brownish Yellow and Light Gray Fat CLAY (CH)

Other Remarks :

Trim./ Recon. By: HC

Setup By: HC

Take Down By: HC

Date: 3/25/2008

Date: 3/26/2008

Date: 3/28/2008

Prelim. Calc. By: HC

Final Calc. By: LF

Reviewed By: HP

Specimen Take Down: ☒ Spec. removed right after shearing

☐ Spec. unloaded to zero stress with access to water

Remarks:

KAW 7/16/08