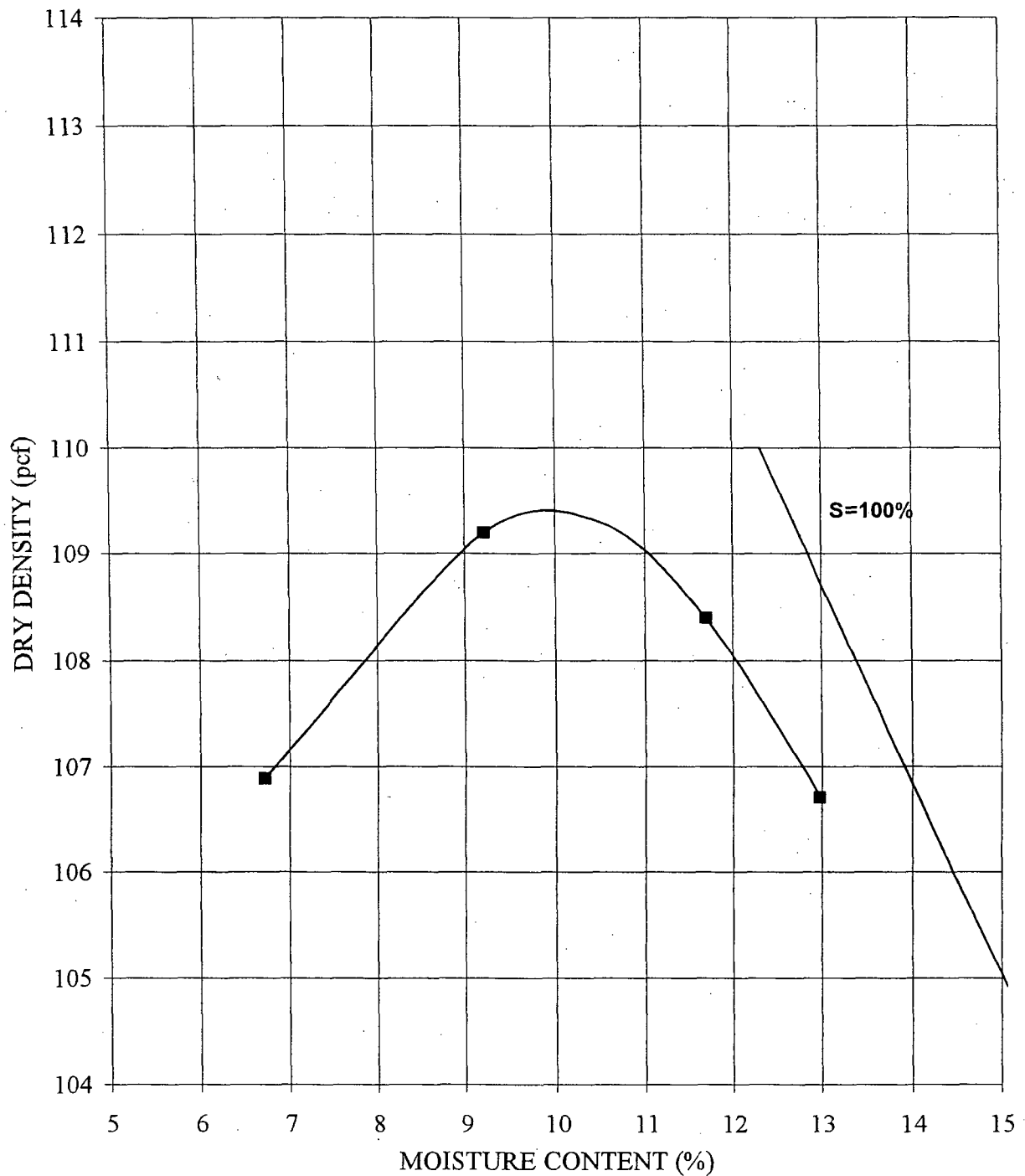


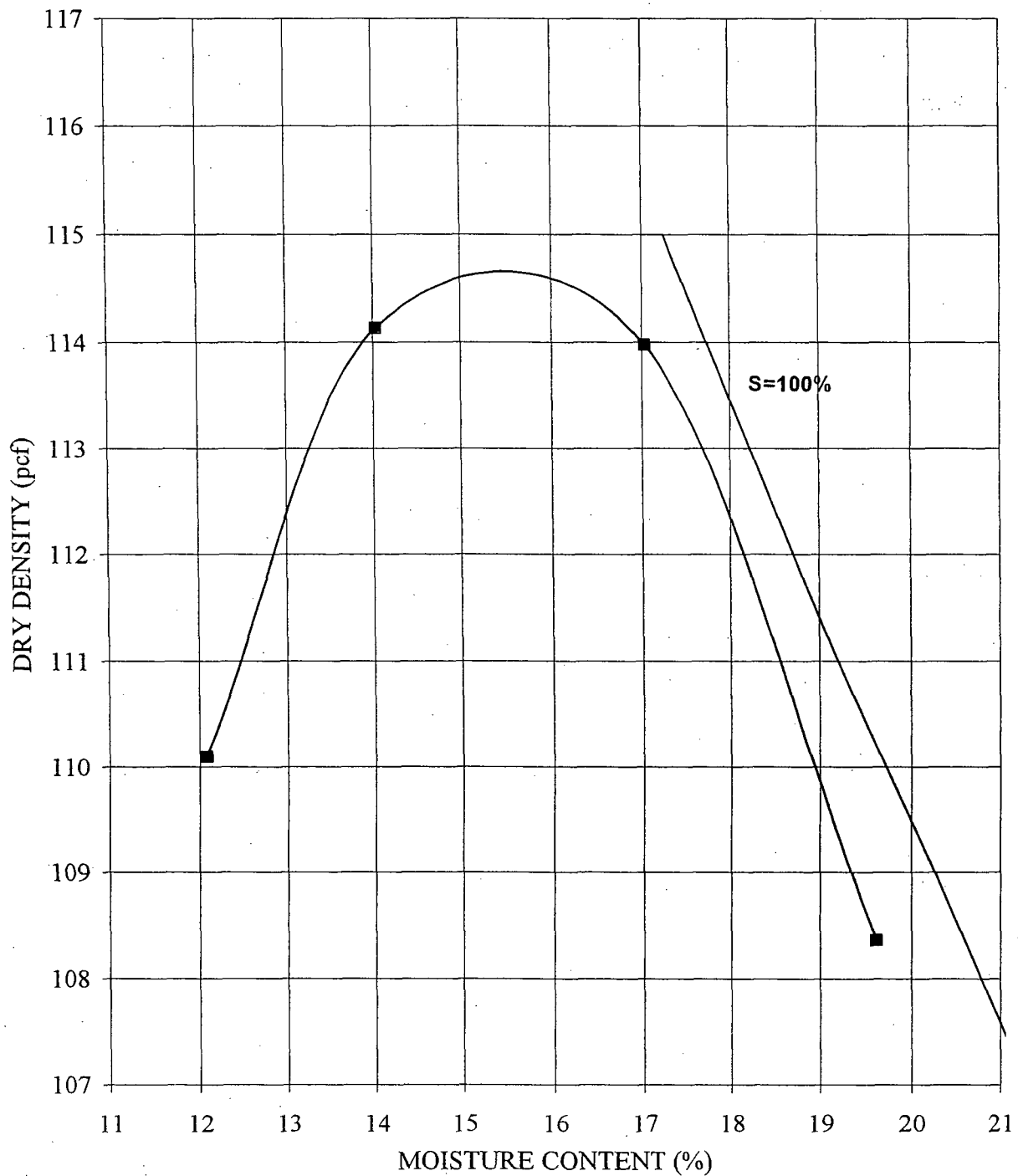
MOISTURE DENSITY RELATIONSHIPS



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

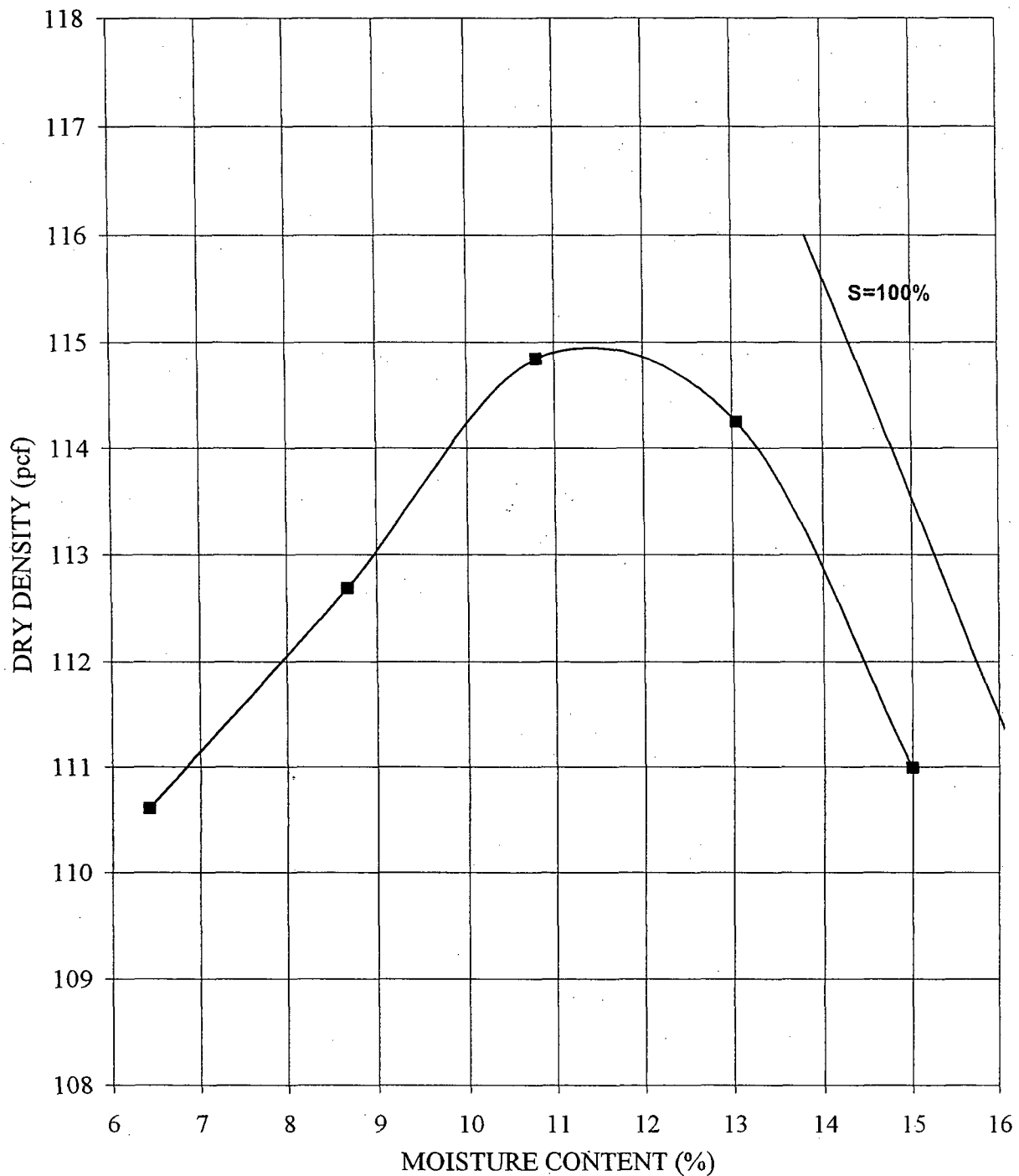
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/14/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-307	4.5-5.5	Poorly Graded SAND, with silt, brown	SP-SM					
Assumed Specific Gravity:		2.25	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		100.0			
Maximum Dry Density (pcf):		109.3	Optimum Moisture Content (%):		10.5			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

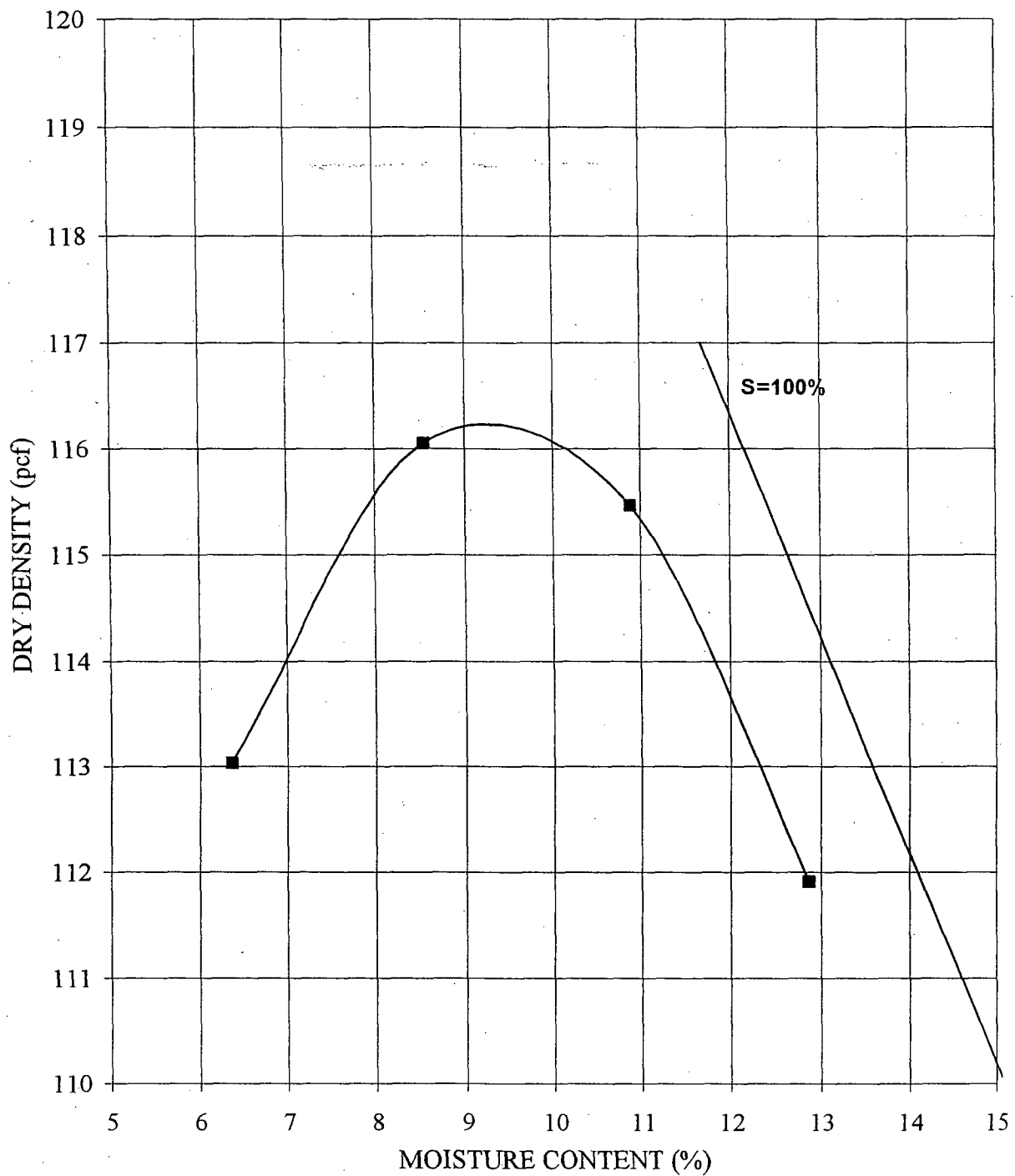
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/26/2006
Boring No.	Depth (ft)	Sample Description	Class	LL	PI			
TP-B-314	4.0-5.0	FAT CLAY, trace sand, gray-brown	CH	71	47			
Assumed Specific Gravity:		2.70	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		100.0			
Maximum Dry Density (pcf):		114.6	Optimum Moisture Content (%):		15.5			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

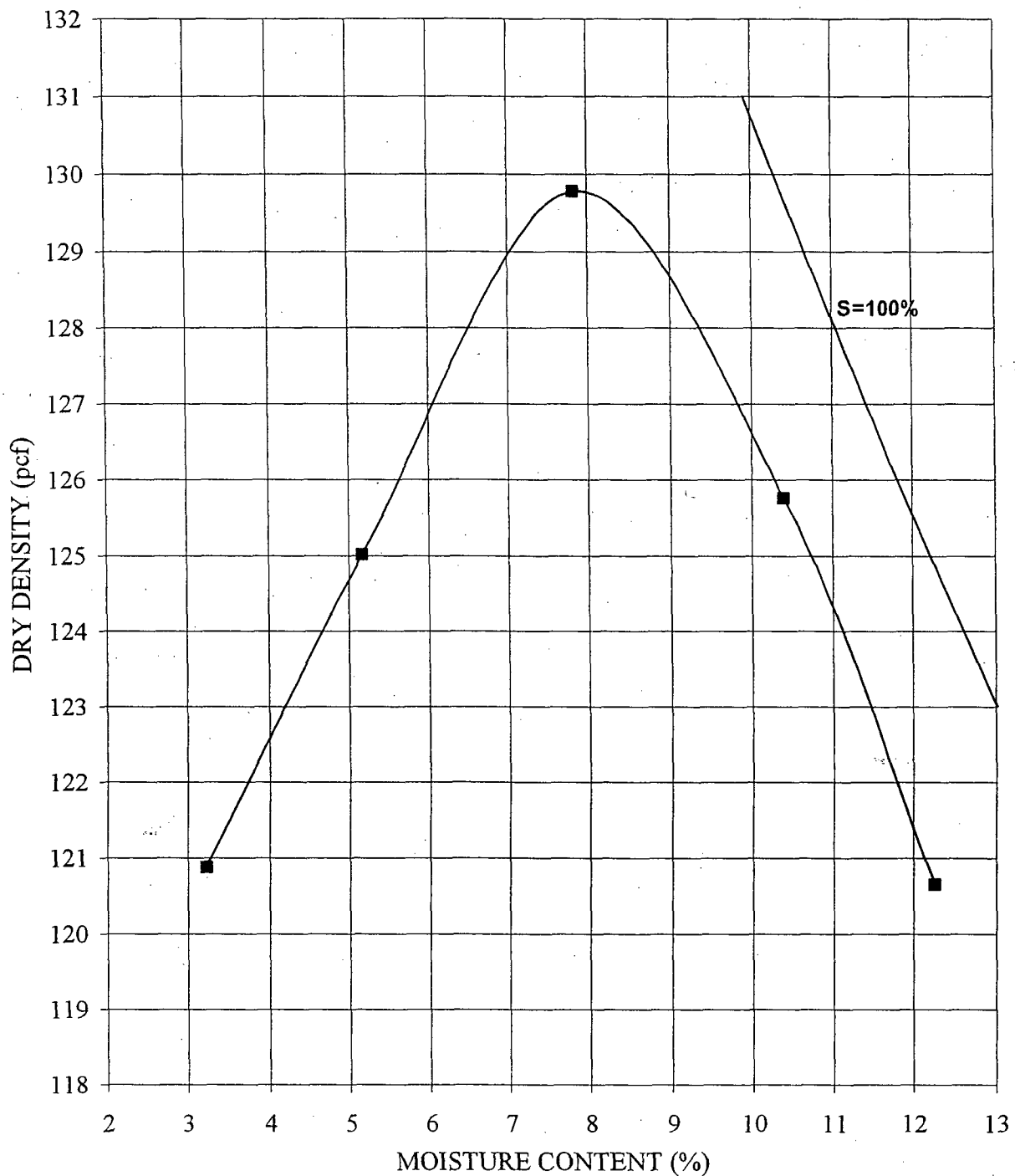
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Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-315	6.0-7.0	Poorly Graded SAND, with silt, tan	SP-SM					
Assumed Specific Gravity:		2.50	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		99.8			
Maximum Dry Density (pcf):		114.9	Optimum Moisture Content (%):		11.4			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

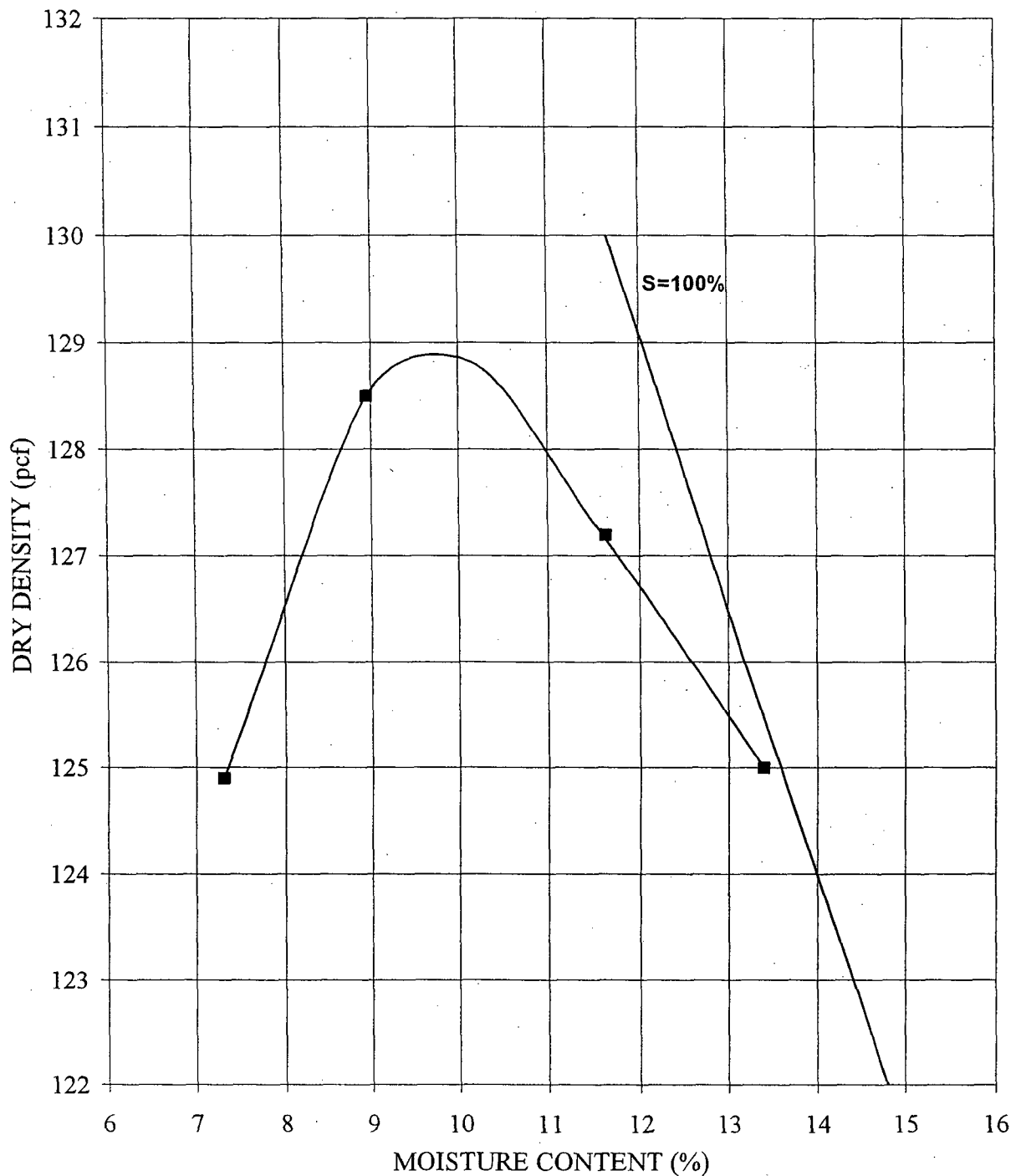
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/20/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-334	3.0-4.0	Silty SAND, brown	SM					
Assumed Specific Gravity:		2.40	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		100.0			
Maximum Dry Density (pcf):		116.3	Optimum Moisture Content (%):		9.3			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

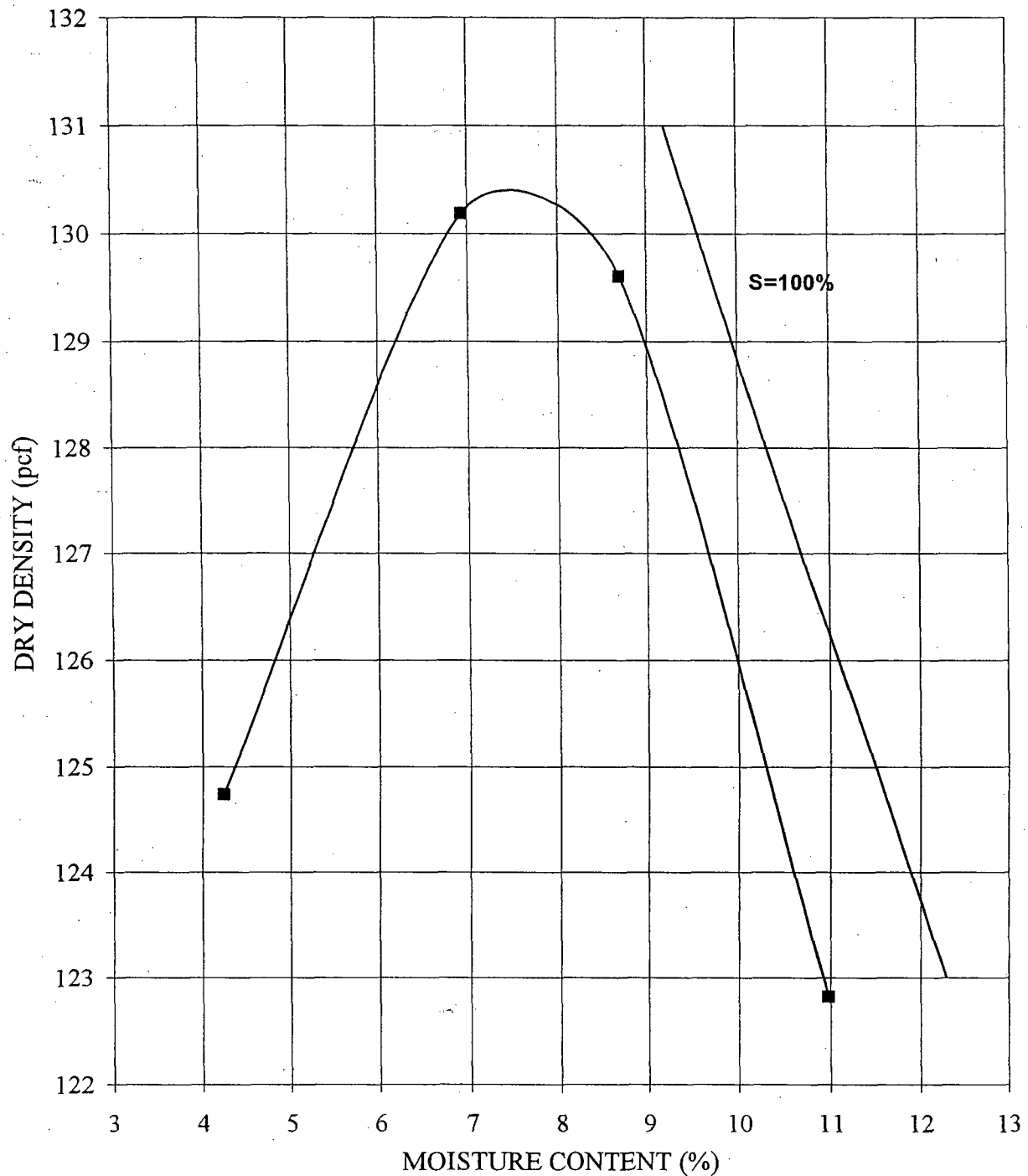
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/28/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-334	6.0-7.0	Silty SAND, brown-gray	SM					
Assumed Specific Gravity:		2.65	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		100.0			
Maximum Dry Density (pcf):		129.8	Optimum Moisture Content (%):		8.0			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

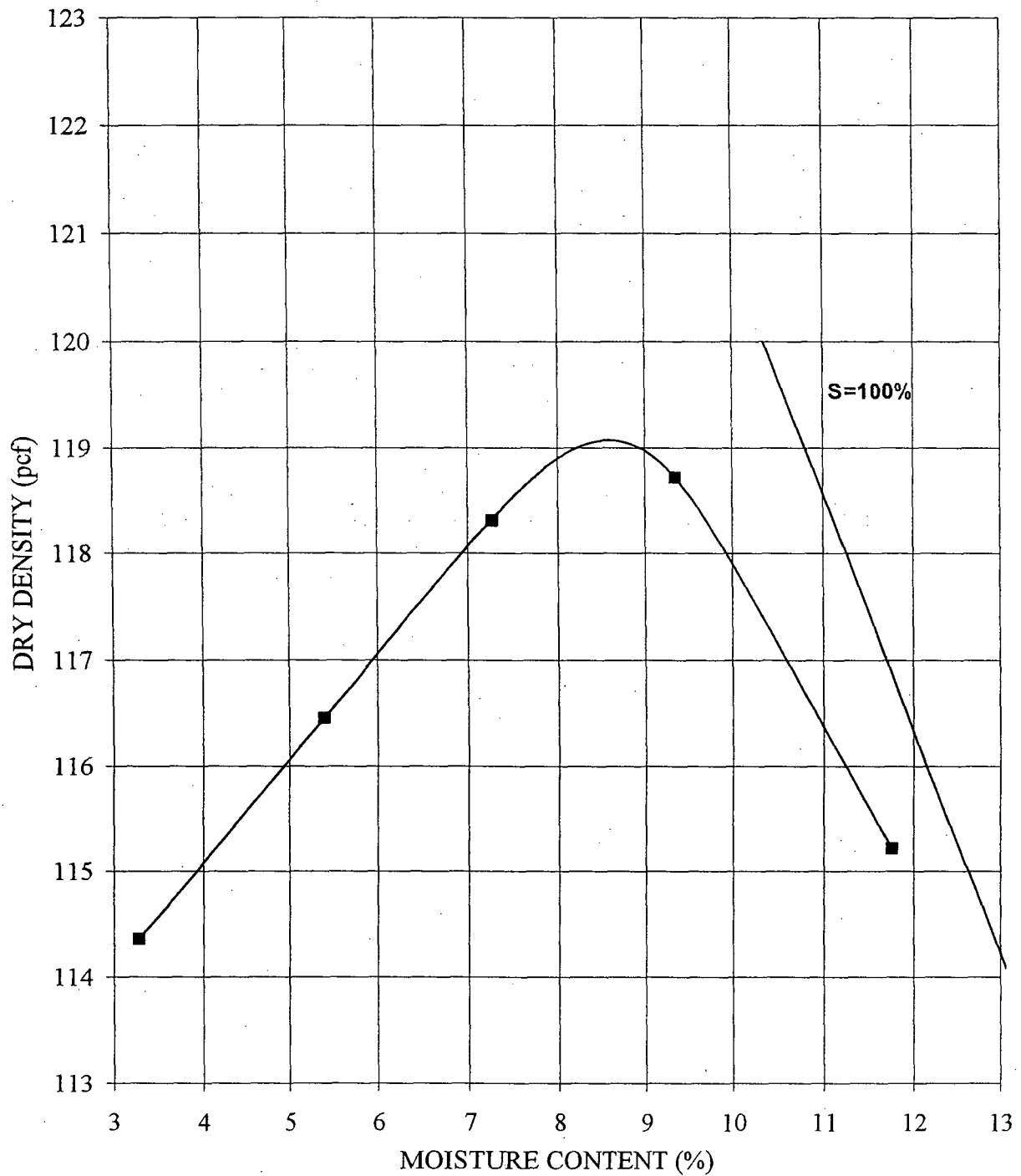
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/13/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-335	3.0-4.0	Sandy LEAN CLAY, dark brown	CL	30	10			
Assumed Specific Gravity:		2.75	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		100.0			
Maximum Dry Density (pcf):		128.8	Optimum Moisture Content (%):		9.9			



MOISTURE-DENSITY RELATION

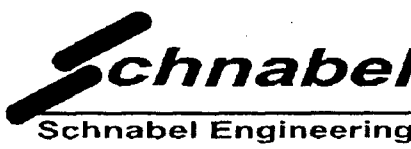
ASTM D-1557 Method A

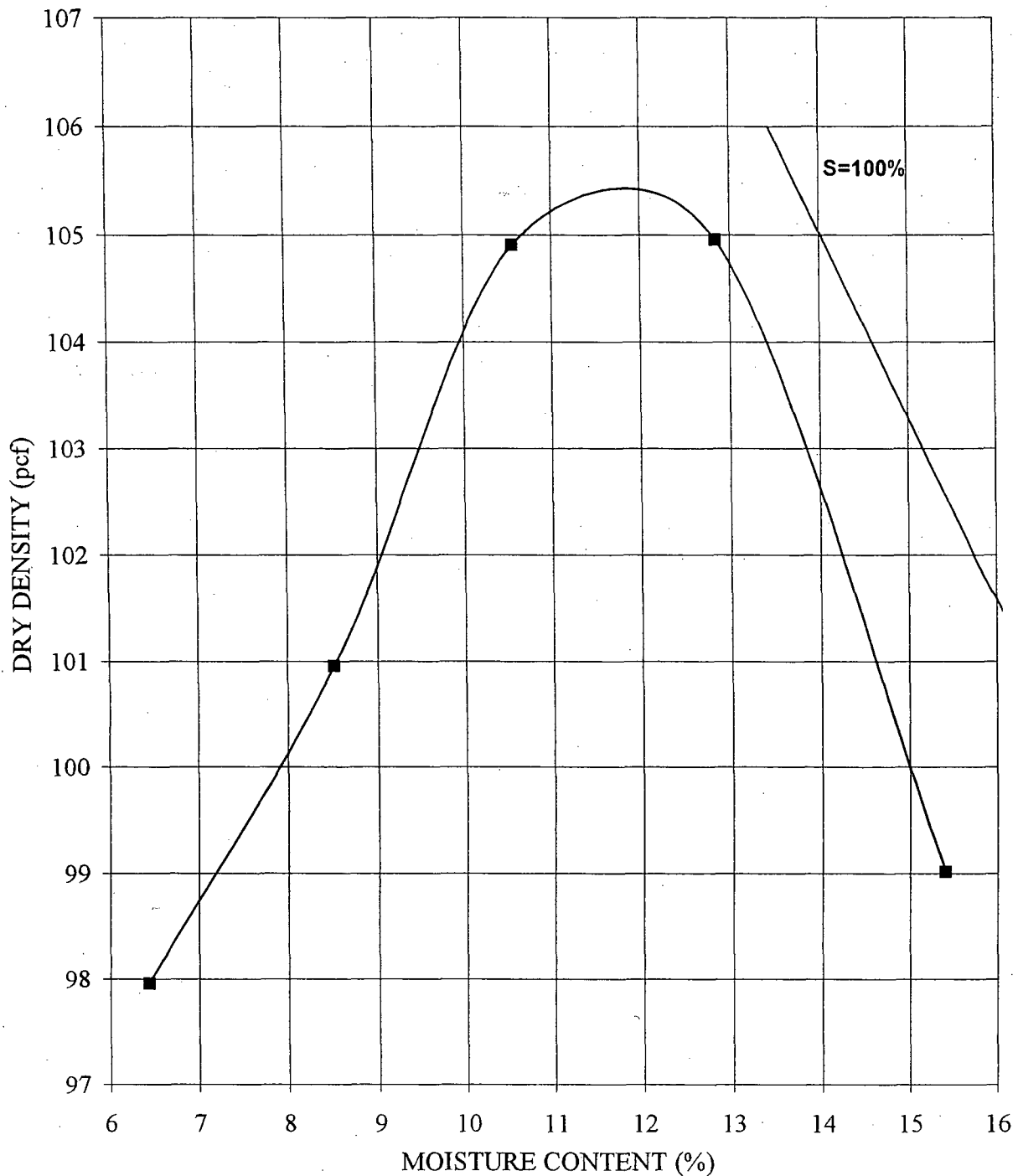
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/20/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-335	5.0-6.0	Silty SAND, brown	SM					
Assumed Specific Gravity:		2.60	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		100.0			
Maximum Dry Density (pcf):		130.5	Optimum Moisture Content (%):		7.6			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

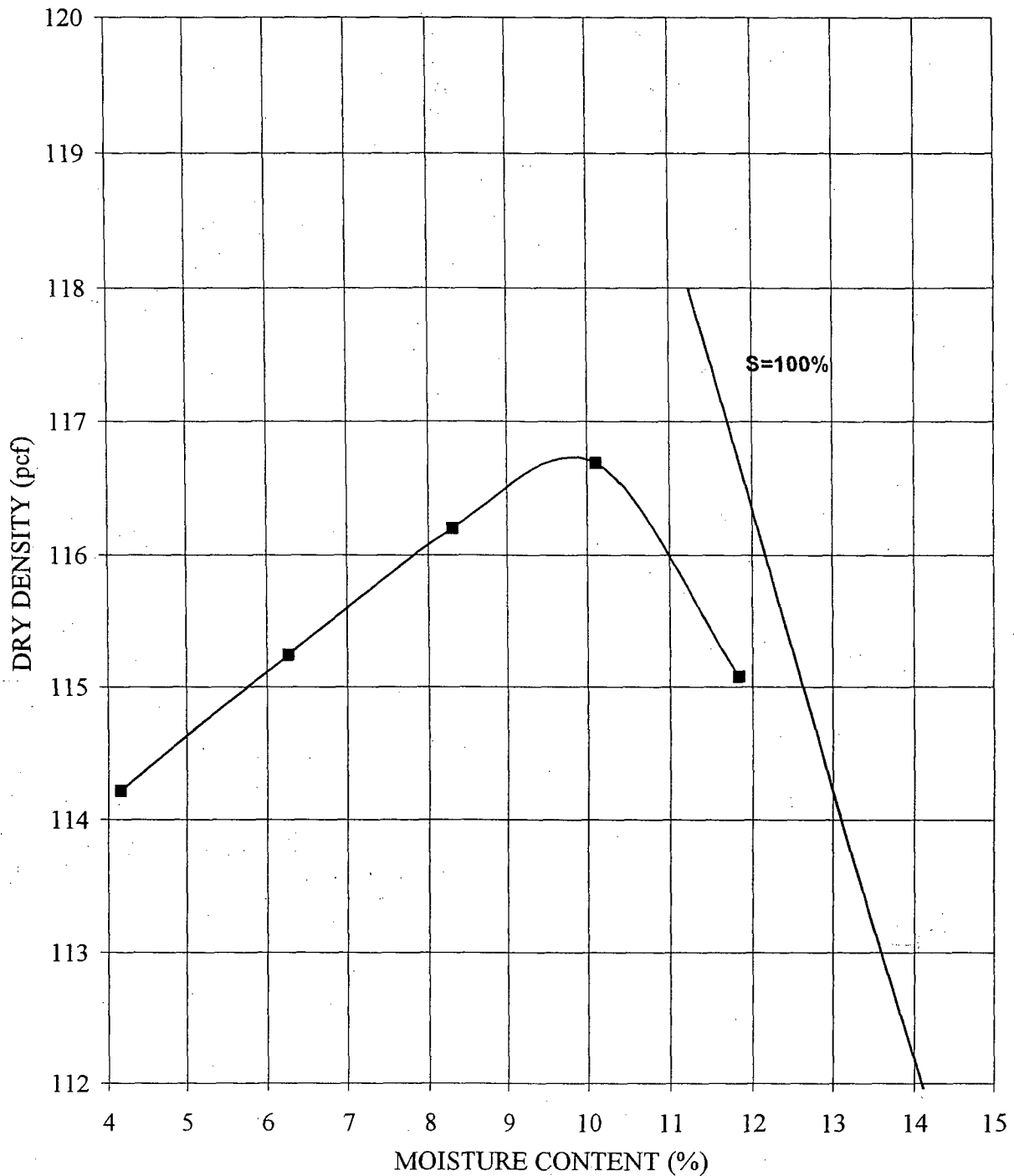
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/18/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-407	4.5-5.5	Well Graded SAND, with silt, trace gravel, dark	SW-SM					
Assumed Specific Gravity:		2.40	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		97.8			
Maximum Dry Density (pcf):		119.1	Optimum Moisture Content (%):		8.6			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

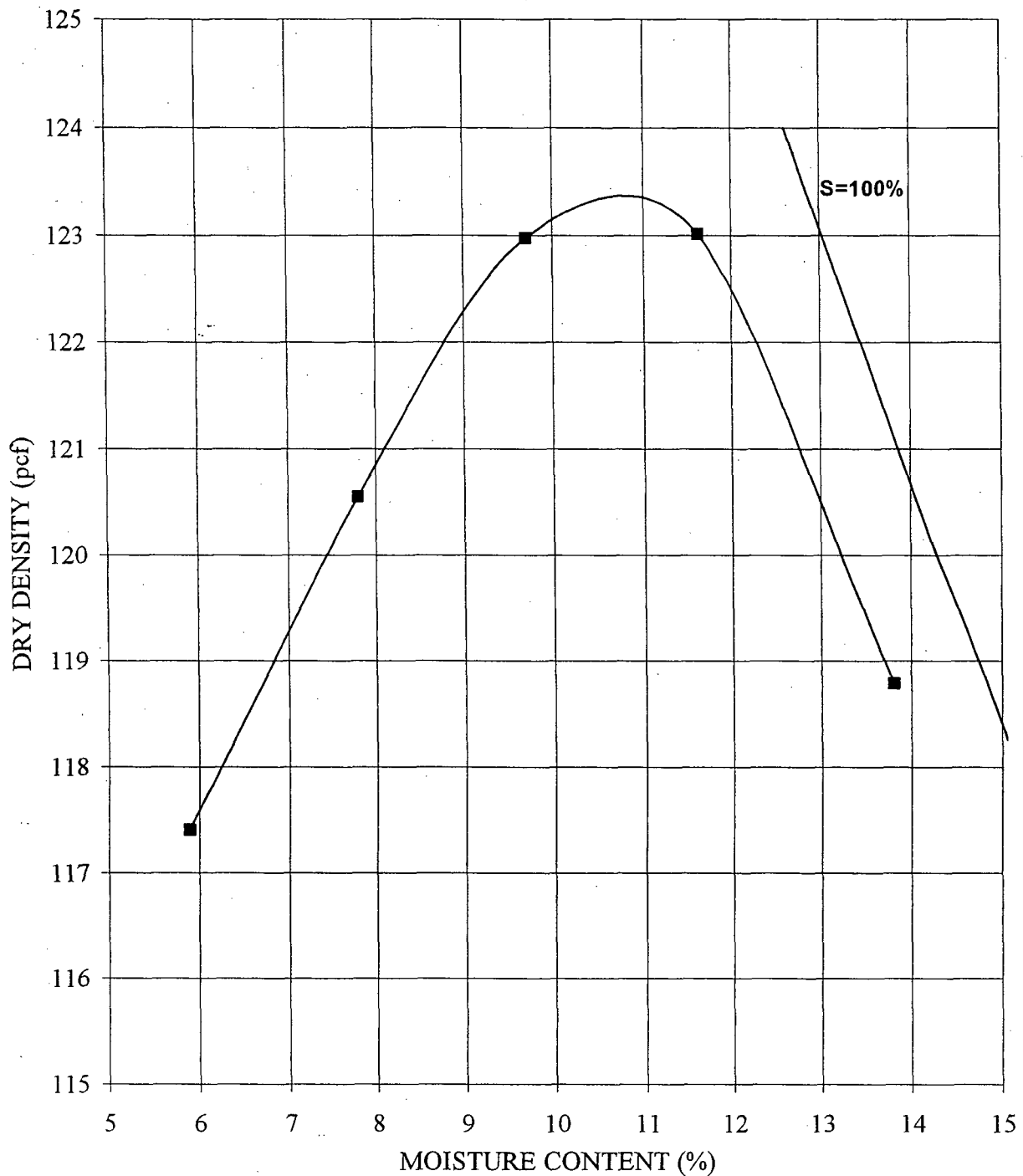
Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland				Contract No.:		06120048.00	Date:	9/21/2006
Boring No.	Depth (ft)	Sample Description	Class	LL	PI				
TP-B-414	6.0-7.0	Poorly Graded SAND, with silt, light brown	SP-SM						
Assumed Specific Gravity:		2.20	% Passing 3/4" Sieve:	100.0					
			% Passing #4 Sieve:	100.0					
Maximum Dry Density (pcf):		105.4	Optimum Moisture Content (%):	11.9					



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

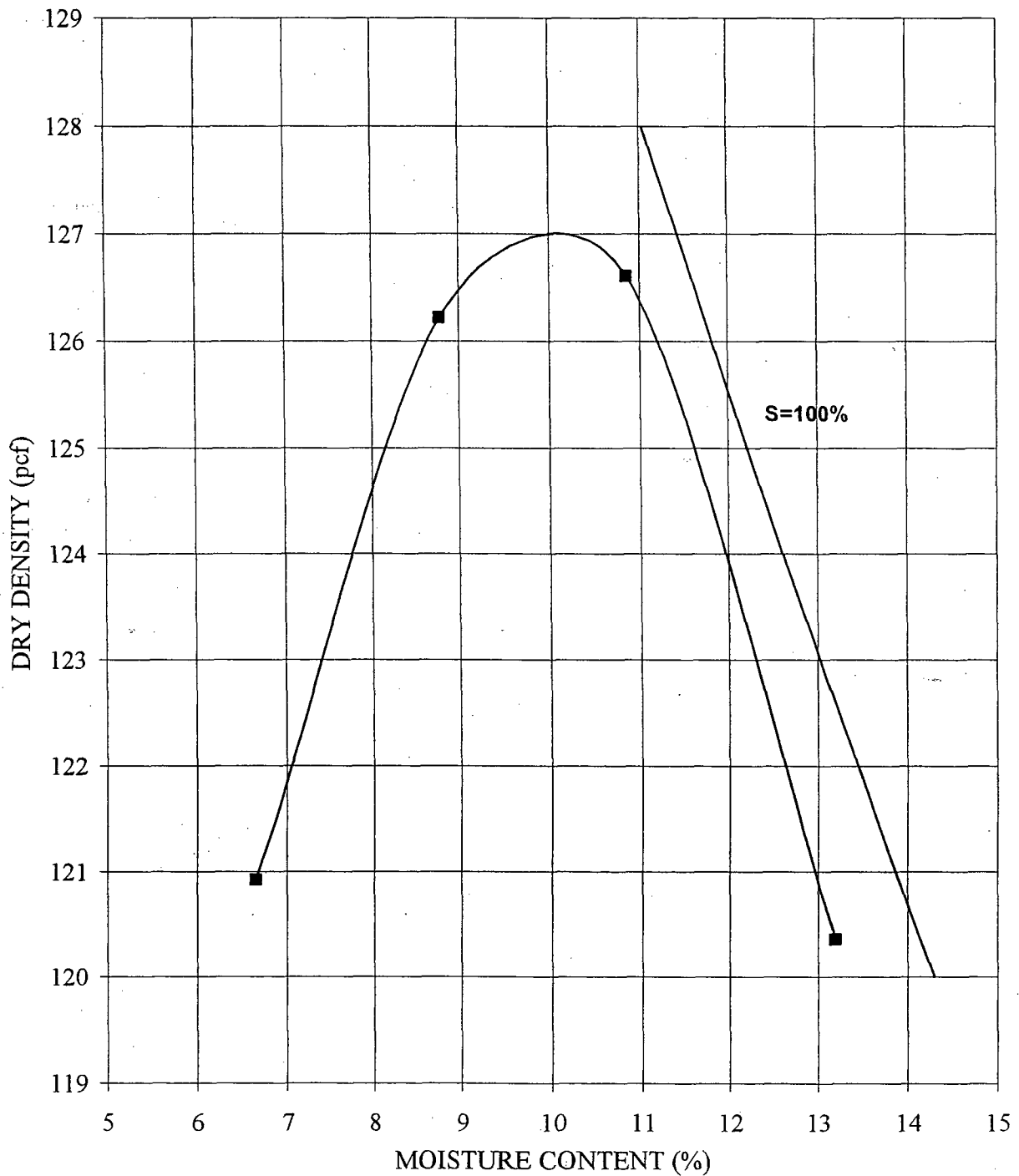
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/14/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-415	3.0-4.0	Poorly Graded SAND, trace silt, light brown	SP					
Assumed Specific Gravity:		2.40	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		99.8			
Maximum Dry Density (pcf):		116.7	Optimum Moisture Content (%):		9.8			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

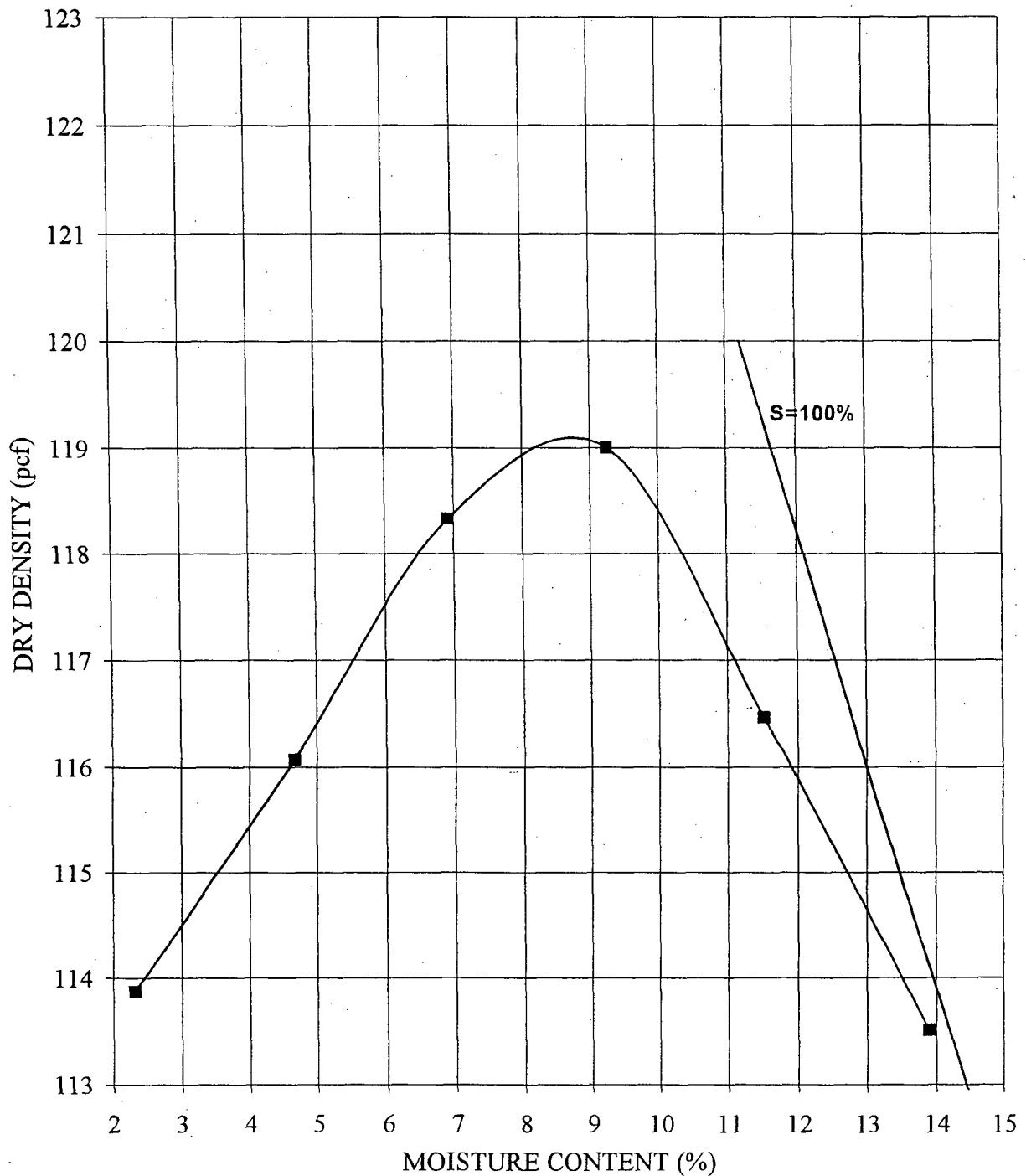
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/18/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-423	5.0-6.0	Sandy LEAN CLAY, dark brown	CL	24	8			
Assumed Specific Gravity:		2.65	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		100.0			
Maximum Dry Density (pcf):		123.4	Optimum Moisture Content (%):		10.8			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

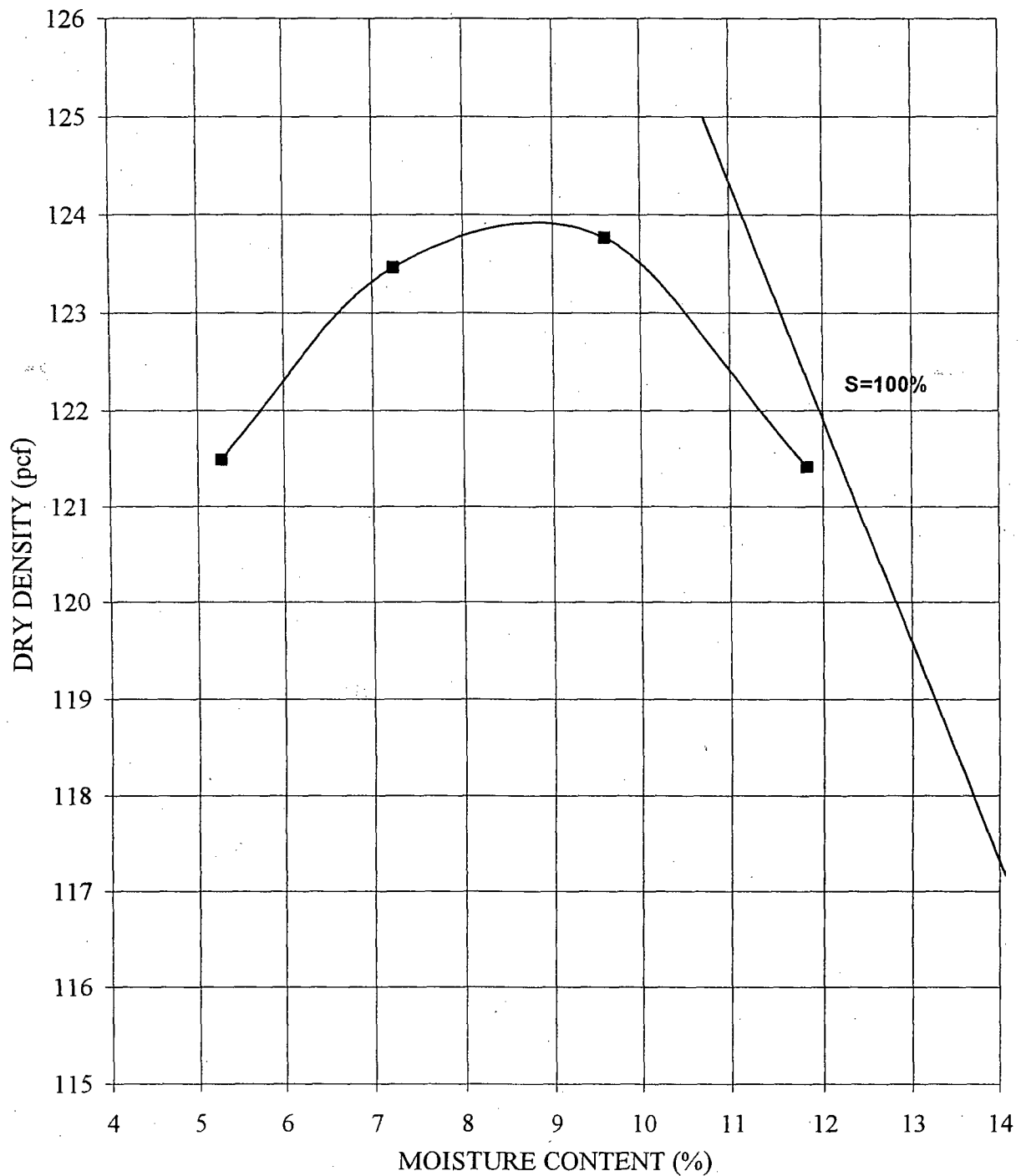
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Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-434	2.0-3.0	Sandy LEAN CLAY, dark brown	CL	25	7			
Assumed Specific Gravity:		2.65	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		99.8			
Maximum Dry Density (pcf):		127.1	Optimum Moisture Content (%):		10.1			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

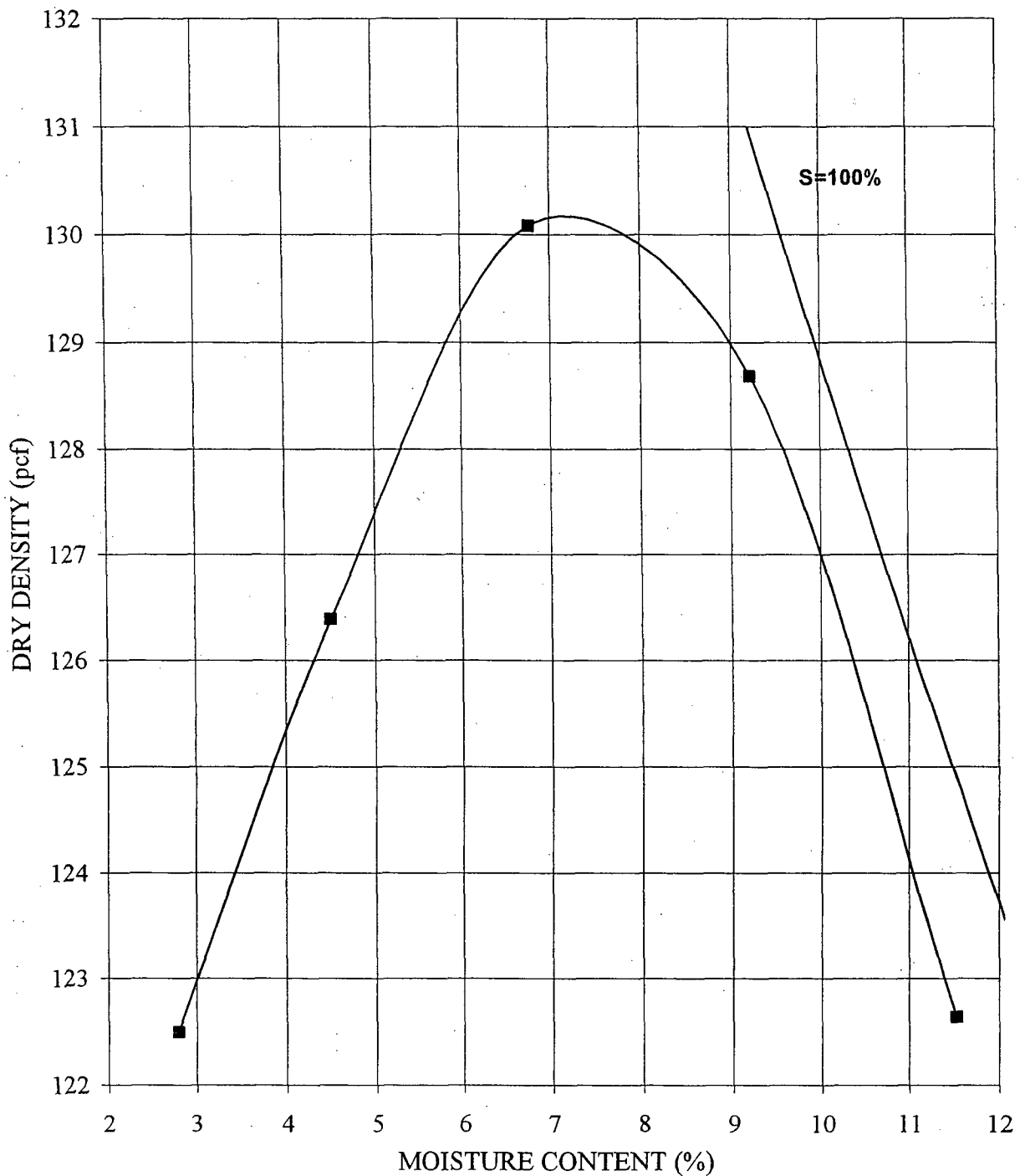
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/26/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
B-435	5.0-6.0	Silty SAND, brown	SM					
Assumed Specific Gravity:		2.45	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		100.0			
Maximum Dry Density (pcf):		119.1	Optimum Moisture Content (%):		8.9			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

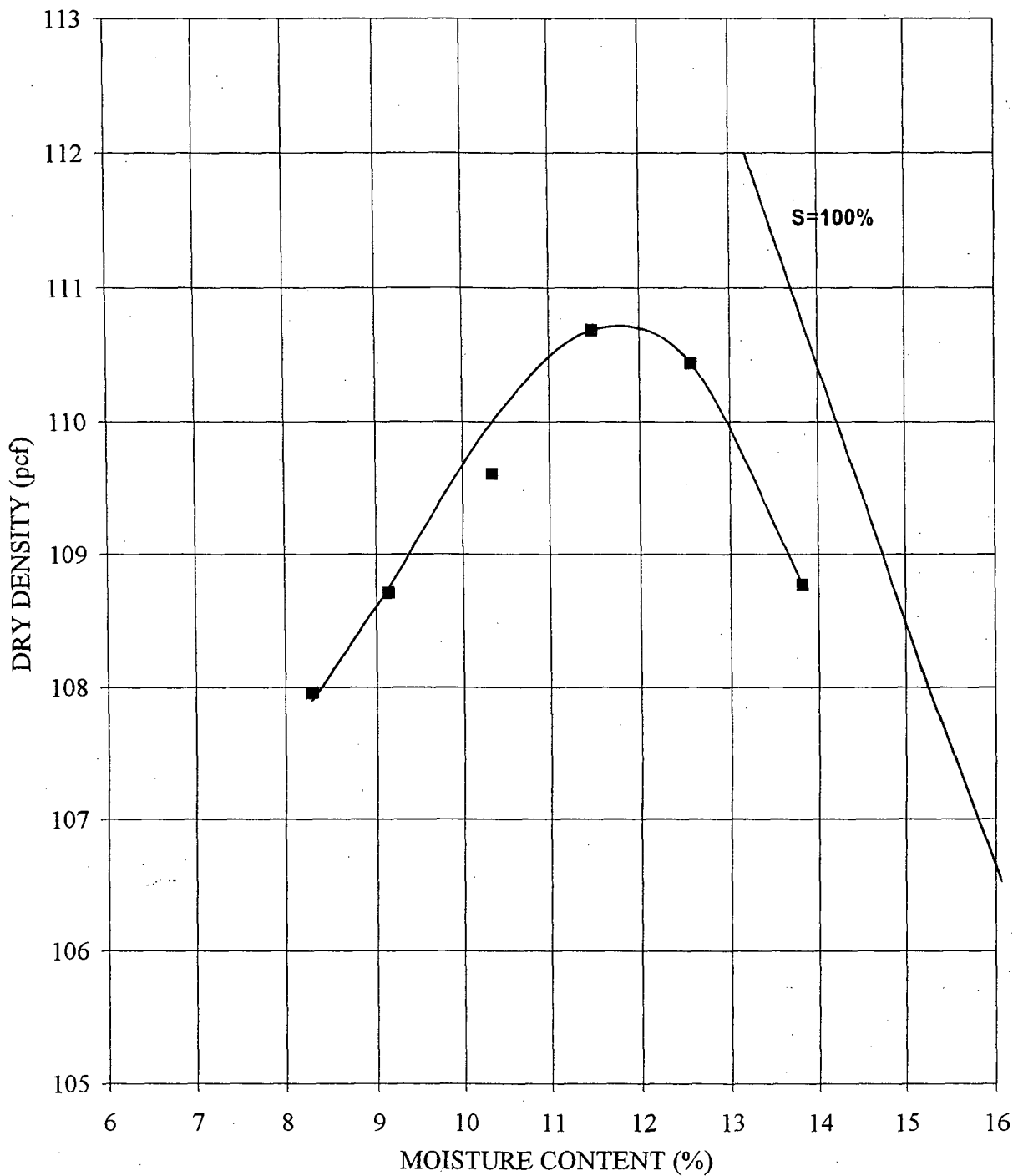
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Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
B-435	7.0-8.0	Poorly Graded SAND, with silt, trace gravel, light brown	SP-SM					
Assumed Specific Gravity:		2.55	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		99.2			
Maximum Dry Density (pcf):		123.9	Optimum Moisture Content (%):		8.9			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

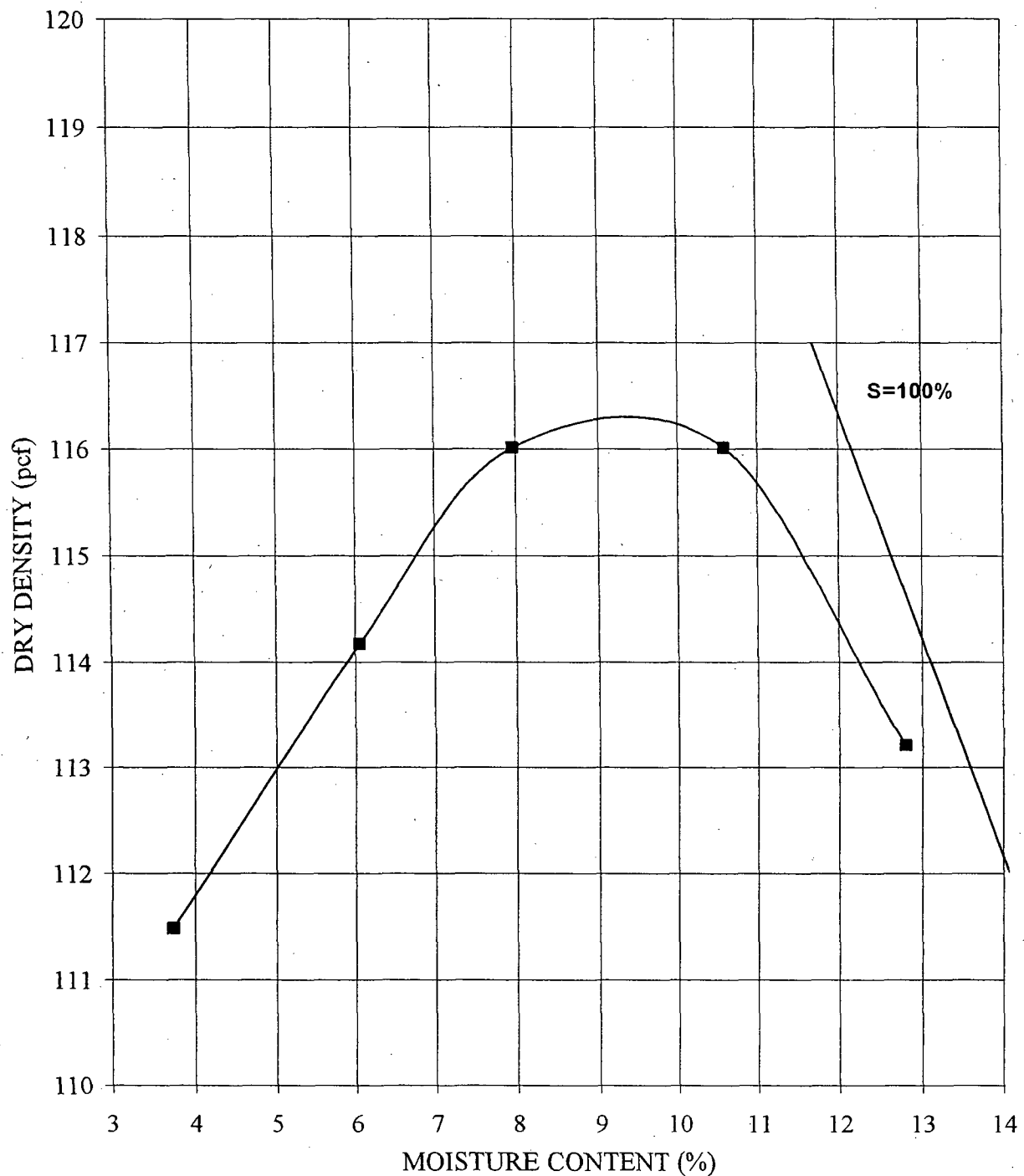
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Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
B-435	9.0-10.0	Clayey SAND, brown	SC	34	17			
Assumed Specific Gravity:		2.60	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		100.0			
Maximum Dry Density (pcf):		130.2	Optimum Moisture Content (%):		7.3			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

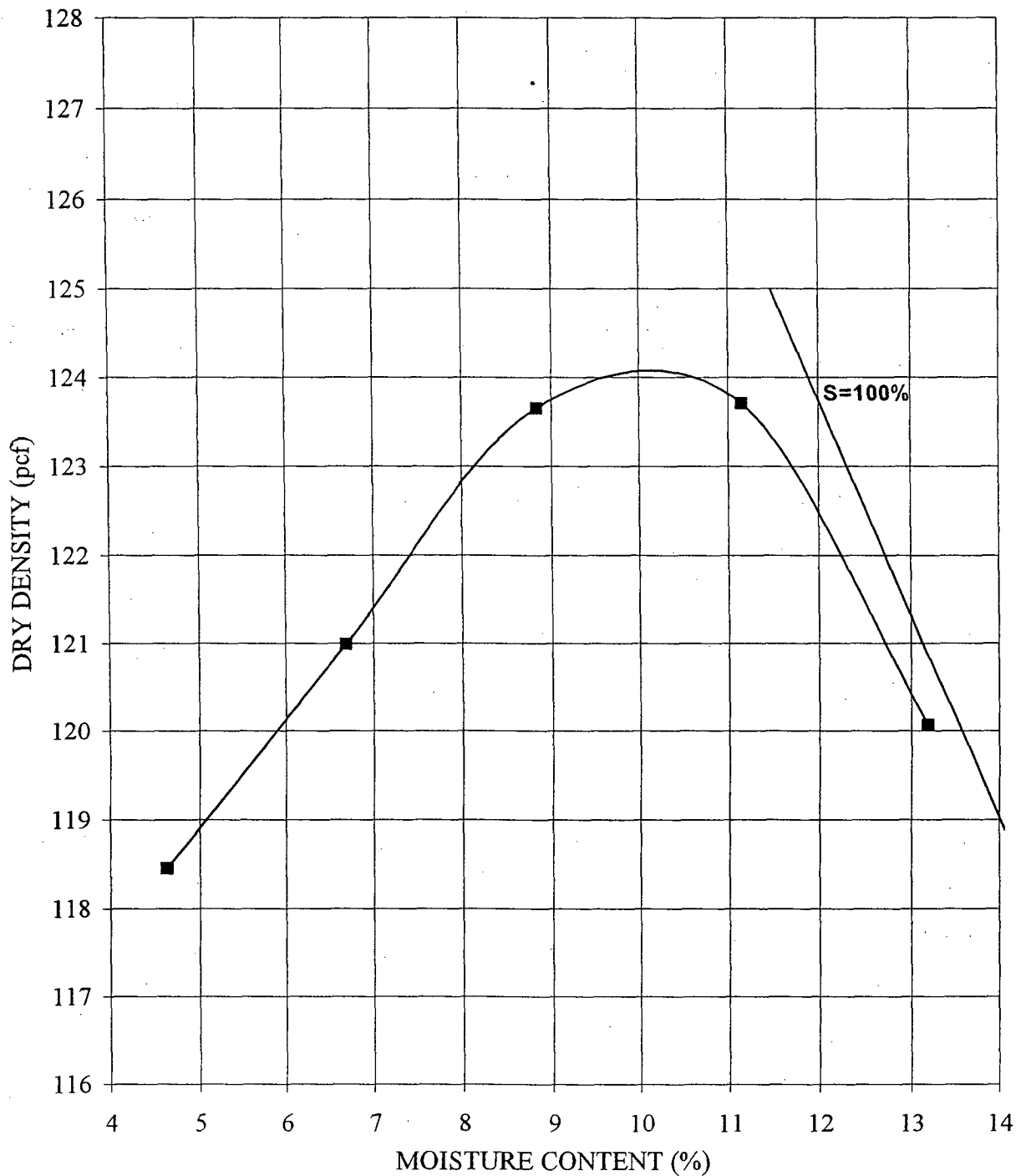
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Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-715	5.5-6.5	Poorly Graded SAND, with silt, trace gravel, tan	SP-SM					
Assumed Specific Gravity:		2.35	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		99.1			
Maximum Dry Density (pcf):		110.7	Optimum Moisture Content (%):		11.8			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

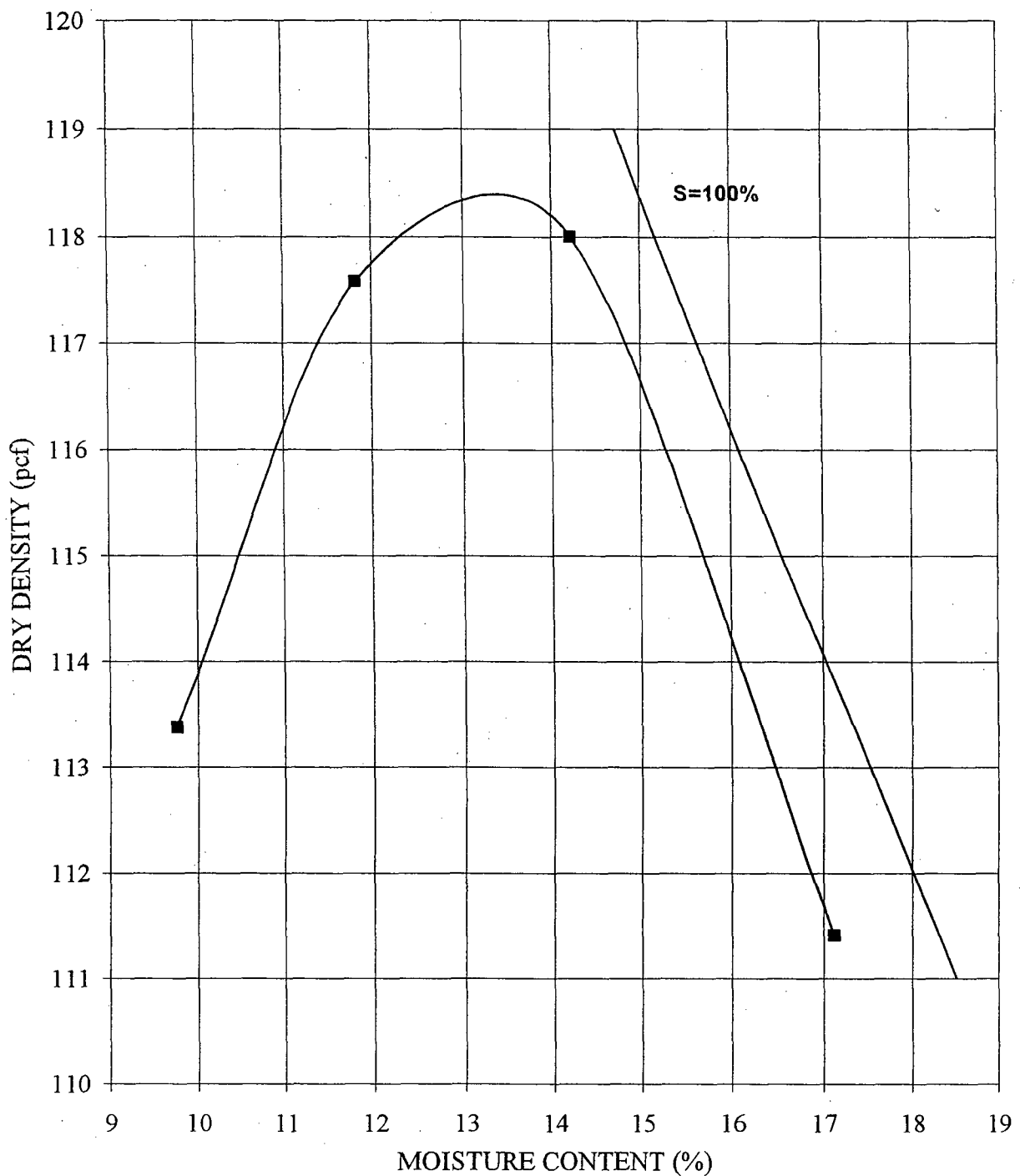
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Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-716	6.0-7.0	Poorly Graded SAND, with silt, trace gravel, brown	SP-SM					
Assumed Specific Gravity:		2.40	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		99.0			
Maximum Dry Density (pcf):		116.3	Optimum Moisture Content (%):		9.4			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

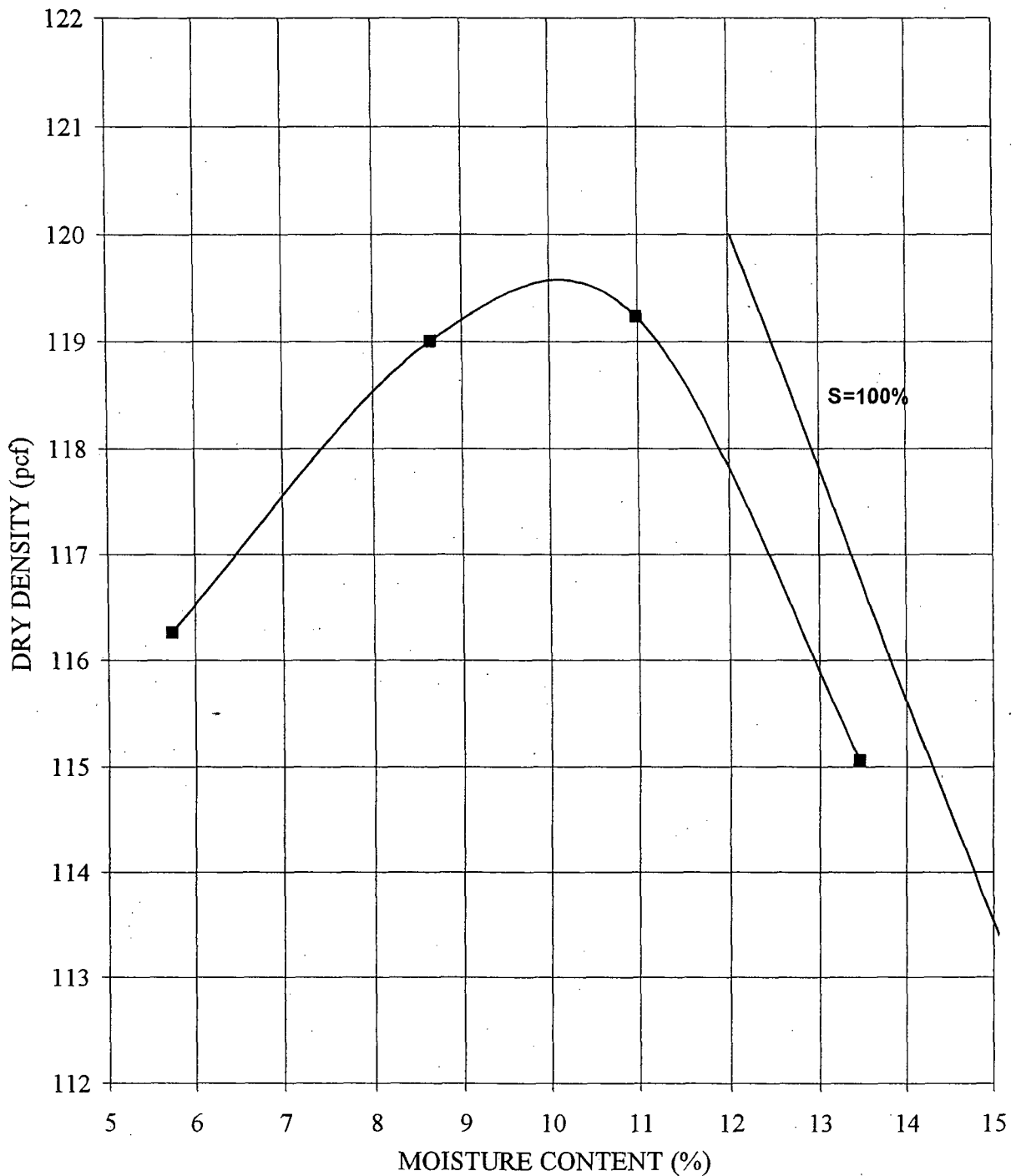
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/15/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-717	7.0-8.0	Poorly Graded SAND, with silt, trace gravel, light brown	SP-SM					
Assumed Specific Gravity:		2.60	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		97.4			
Maximum Dry Density (pcf):		123.8	Optimum Moisture Content (%):		10.2			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

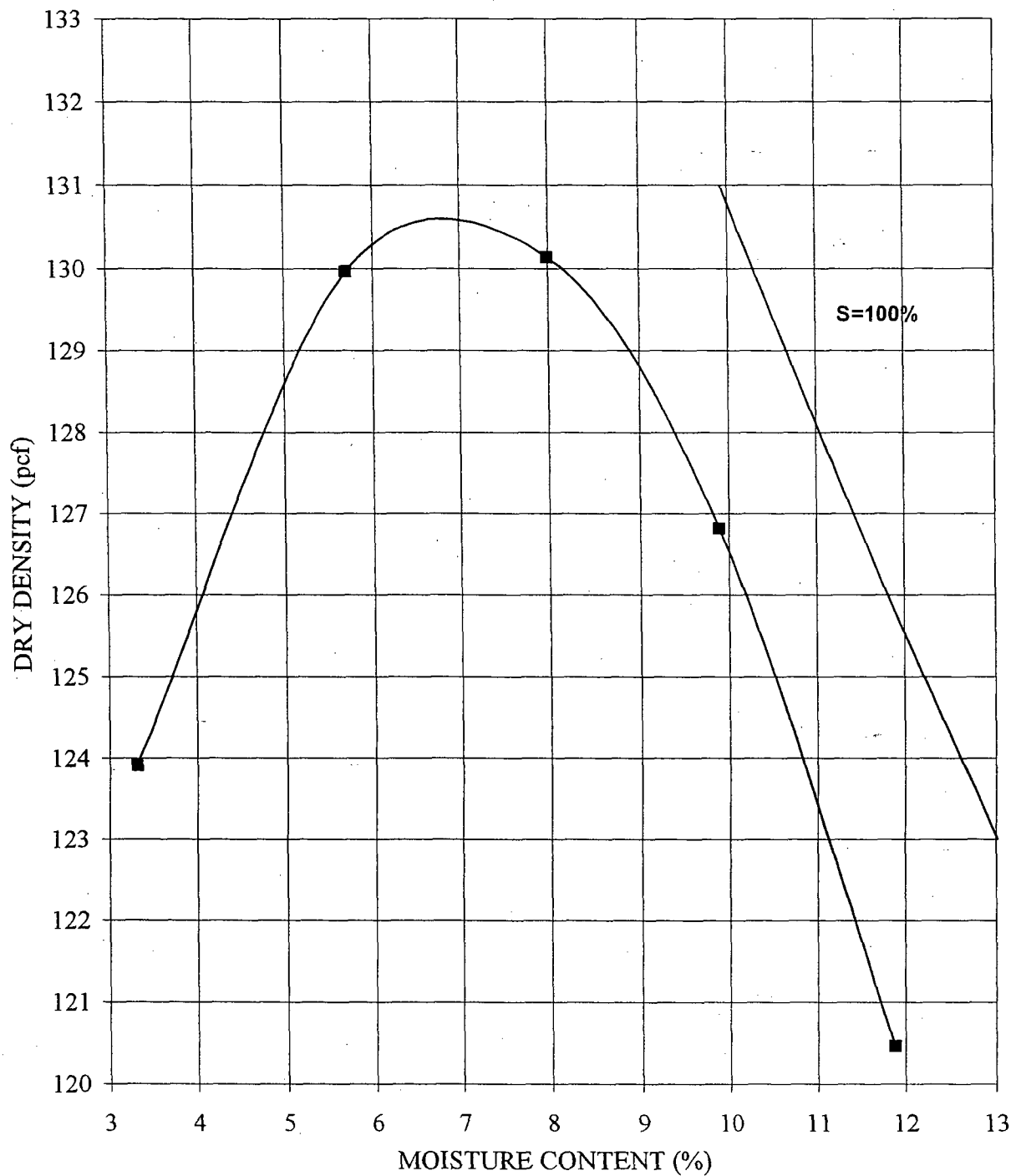
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/28/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-719	0.5-1.5	LEAN CLAY, with sand, dark brown	CL	35	13			
Assumed Specific Gravity:		2.65	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		100.0			
Maximum Dry Density (pcf):		118.4	Optimum Moisture Content (%):		13.5			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

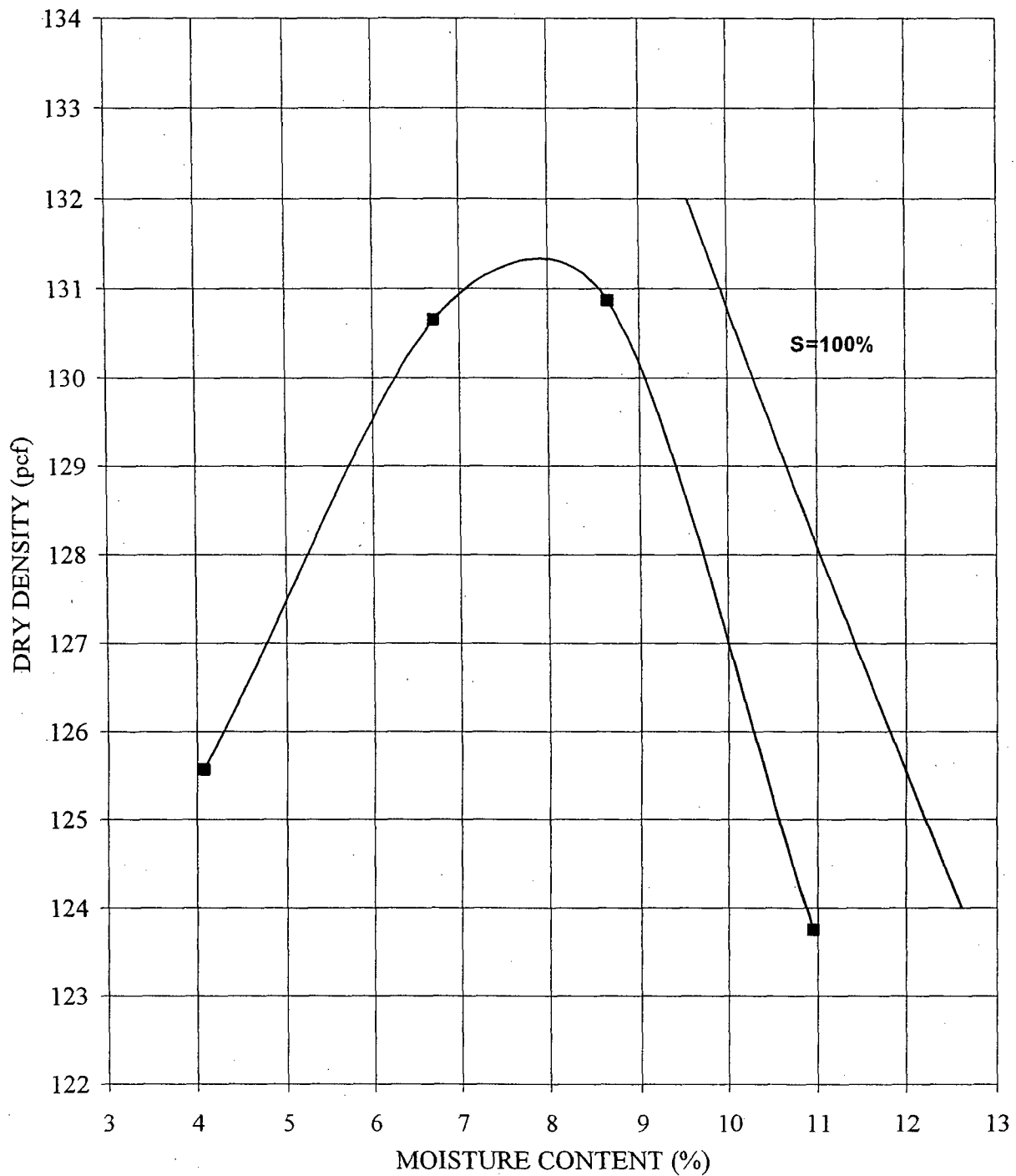
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/18/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-719	7.0-8.0	Silty SAND, gray	SM	35	13			
Assumed Specific Gravity:		2.50	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		100.0			
Maximum Dry Density (pcf):		119.6	Optimum Moisture Content (%):		10.0			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

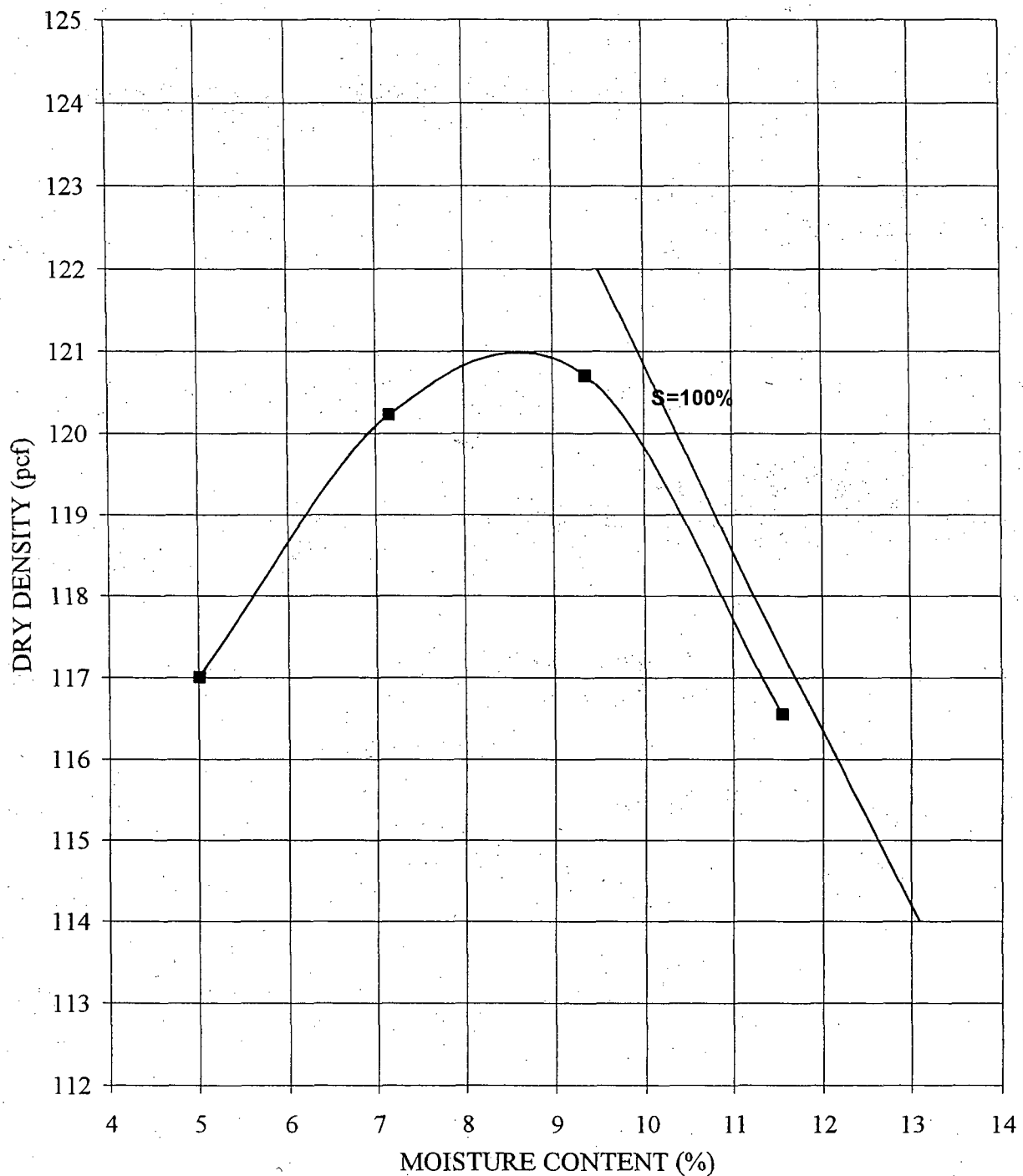
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/22/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-727	6.0-7.0	Silty SAND, dark brown	SM					
Assumed Specific Gravity:		2.65	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		100.0			
Maximum Dry Density (pcf):		130.5	Optimum Moisture Content (%):		6.8			



MOISTURE-DENSITY RELATION

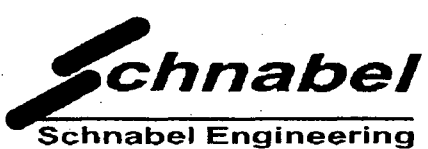
ASTM D-1557 Method A

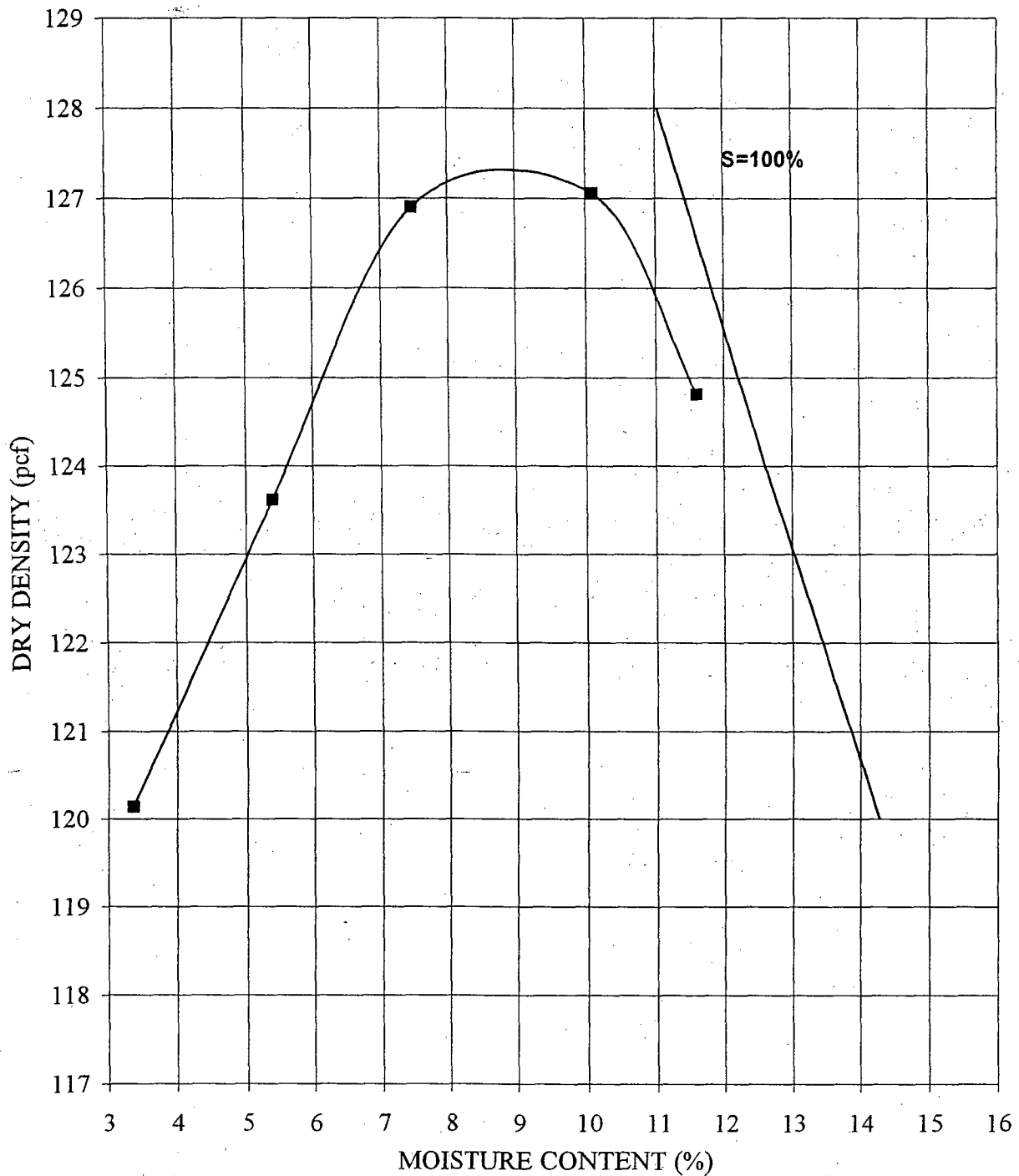
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Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-744	1.5-2.5	Sandy LEAN CLAY, dark brown	CL	25	8			
Assumed Specific Gravity:		2.65	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		100.0			
Maximum Dry Density (pcf):		131.2	Optimum Moisture Content (%):		8.0			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

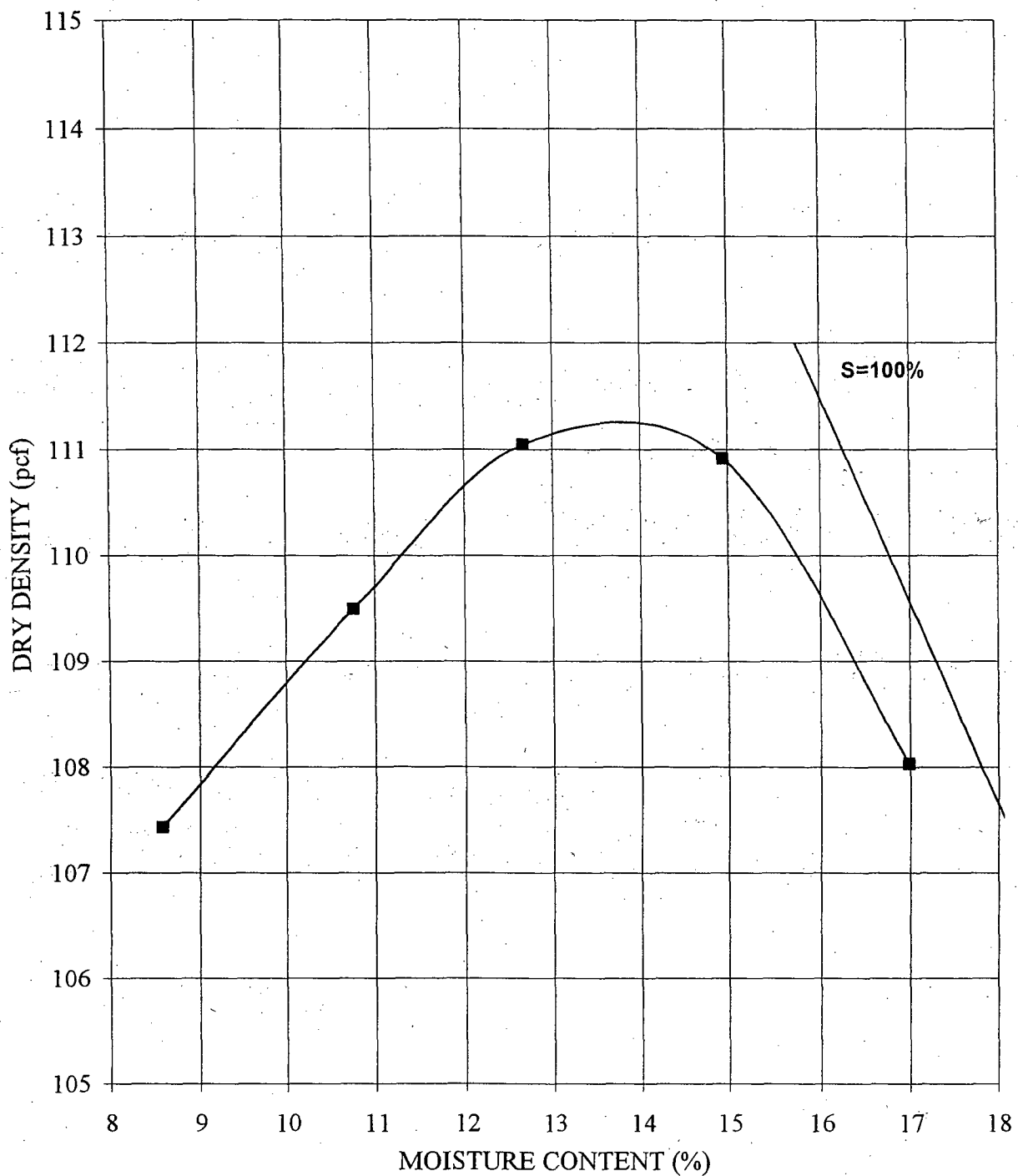
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/21/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-758	2.0-3.0	Poorly Graded SAND, with silt, trace gravel, brown	SP-SM					
Assumed Specific Gravity:		2.40	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		99.2			
Maximum Dry Density (pcf):		121.0	Optimum Moisture Content (%):		8.8			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

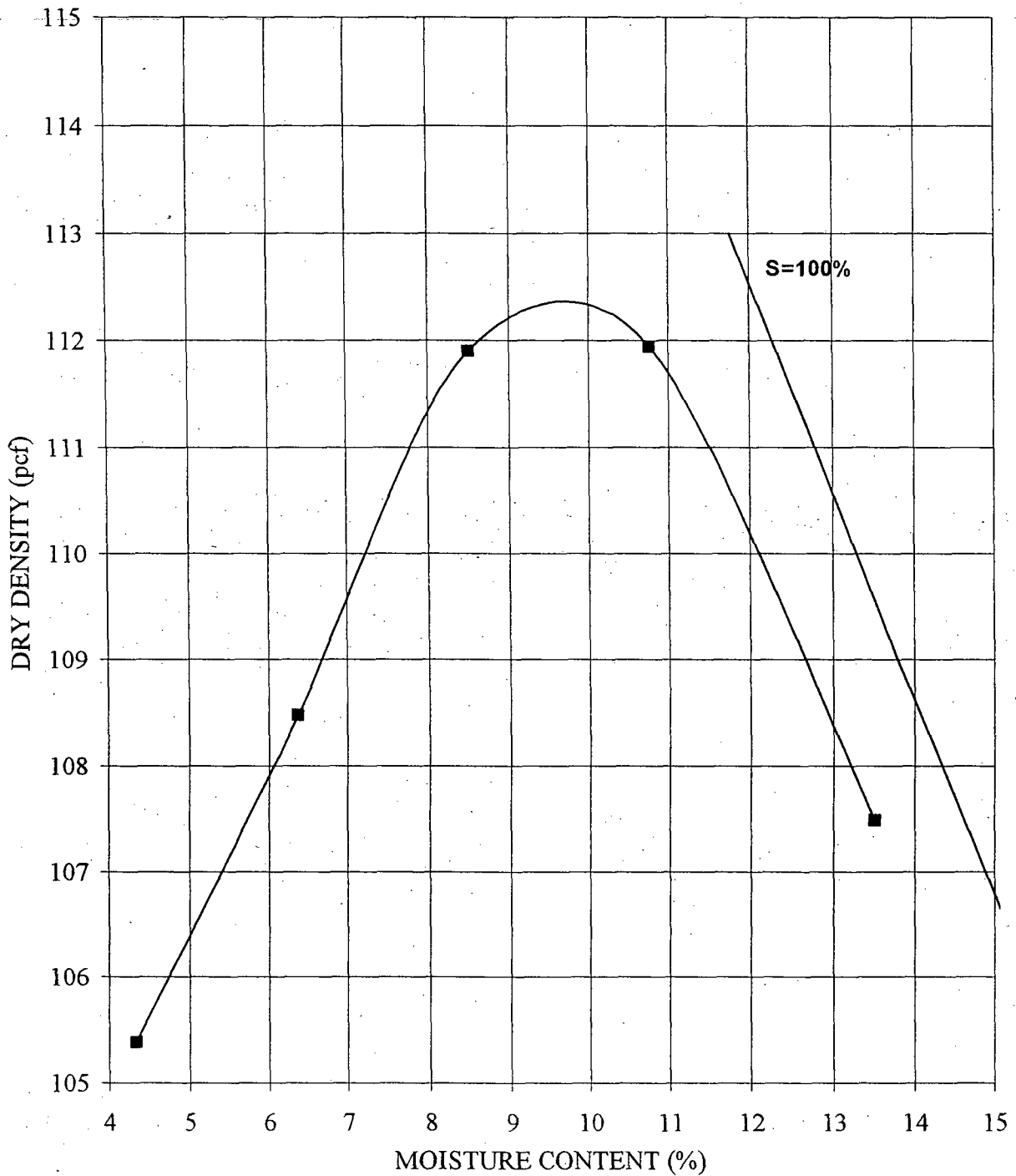
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/18/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-B-758	7.5-8.5	Silty SAND, trace gravel, light brown	SM					
Assumed Specific Gravity:		2.65	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		97.4			
Maximum Dry Density (pcf):		127.3	Optimum Moisture Content (%):		8.9			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

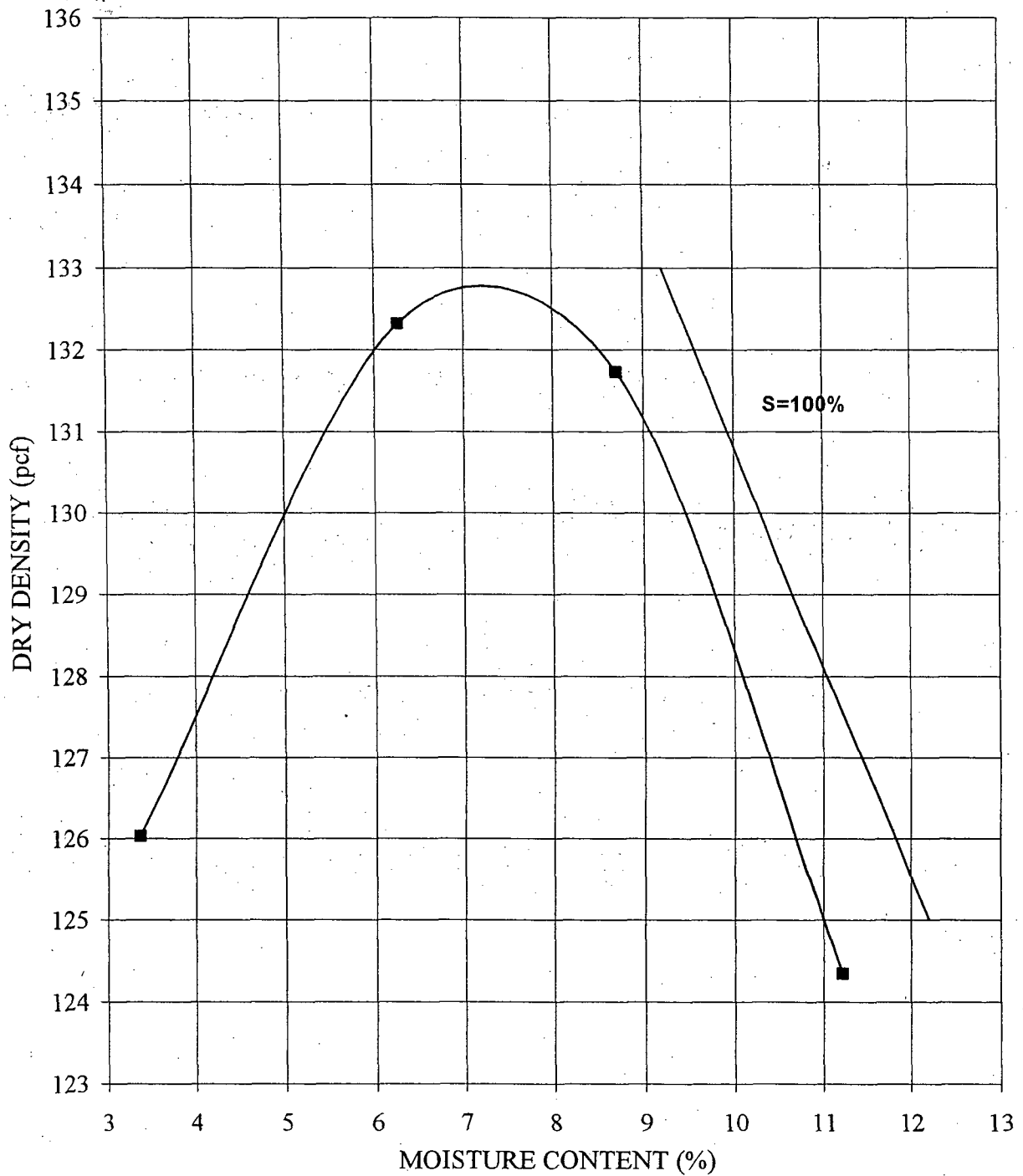
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Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-C-309	2.0-3.0	Poorly Graded SAND, trace silt and gravel, brown	SP					
Assumed Specific Gravity:		2.50	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		98.8			
Maximum Dry Density (pcf):		111.2	Optimum Moisture Content (%):		13.9			



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

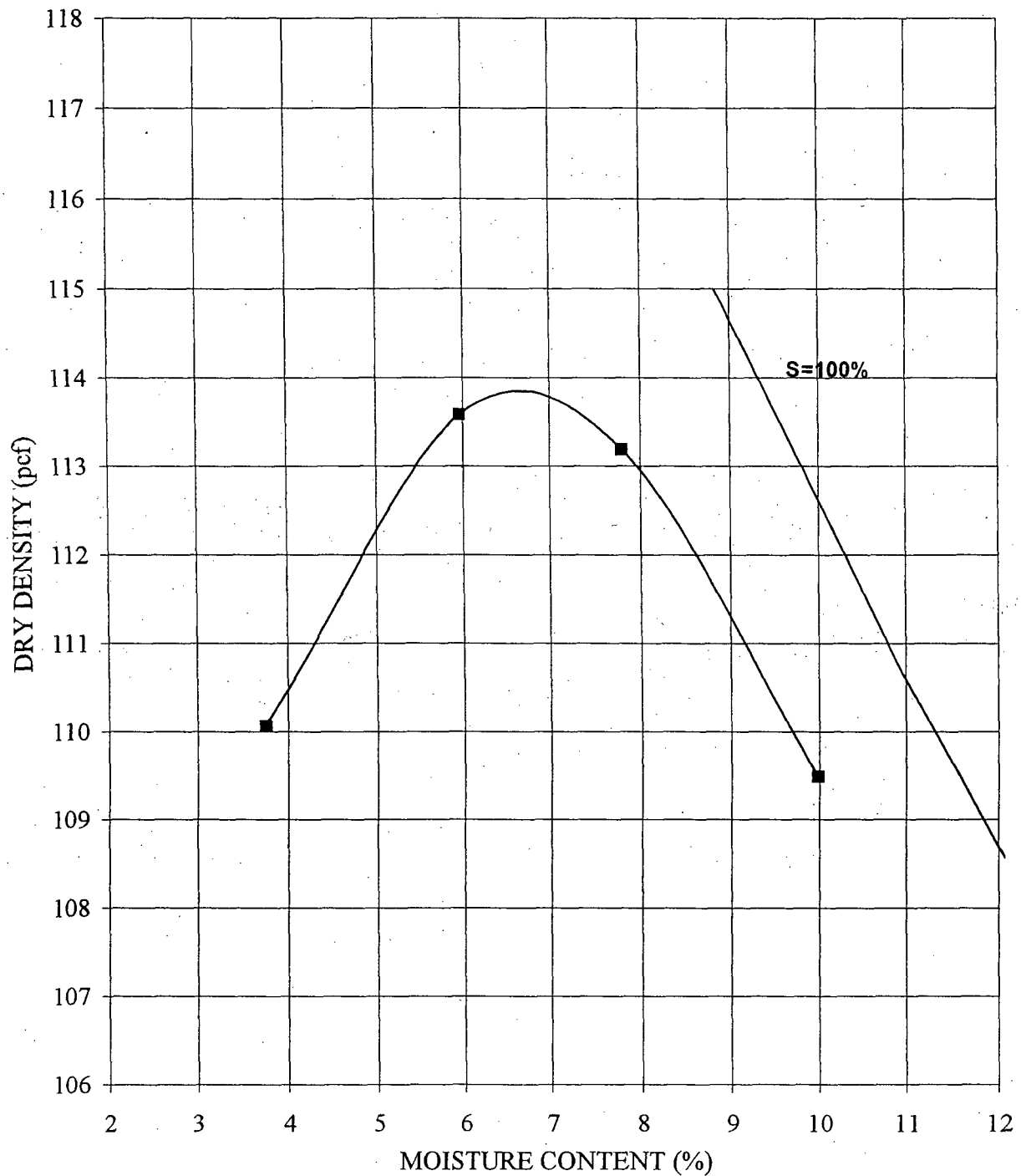
Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9/26/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-C-309	7.0-8.0	Poorly Graded SAND, with silt, light brown	SP-SM					
Assumed Specific Gravity:		2.30	% Passing 3/4" Sieve:	100.0				
			% Passing #4 Sieve:	100.0				
Maximum Dry Density (pcf):		112.3	Optimum Moisture Content (%):	9.8				



MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland				Contract No.:	06120048.00	Date:	9-18-06
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI			
TP-C-723	2.5-3.5	Clayey SAND, dark brown	SC	30	15			
Assumed Specific Gravity:		2.65	% Passing 3/4" Sieve:		100.0			
			% Passing #4 Sieve:		100.0			
Maximum Dry Density (pcf):		132.8	Optimum Moisture Content (%):		7.3			



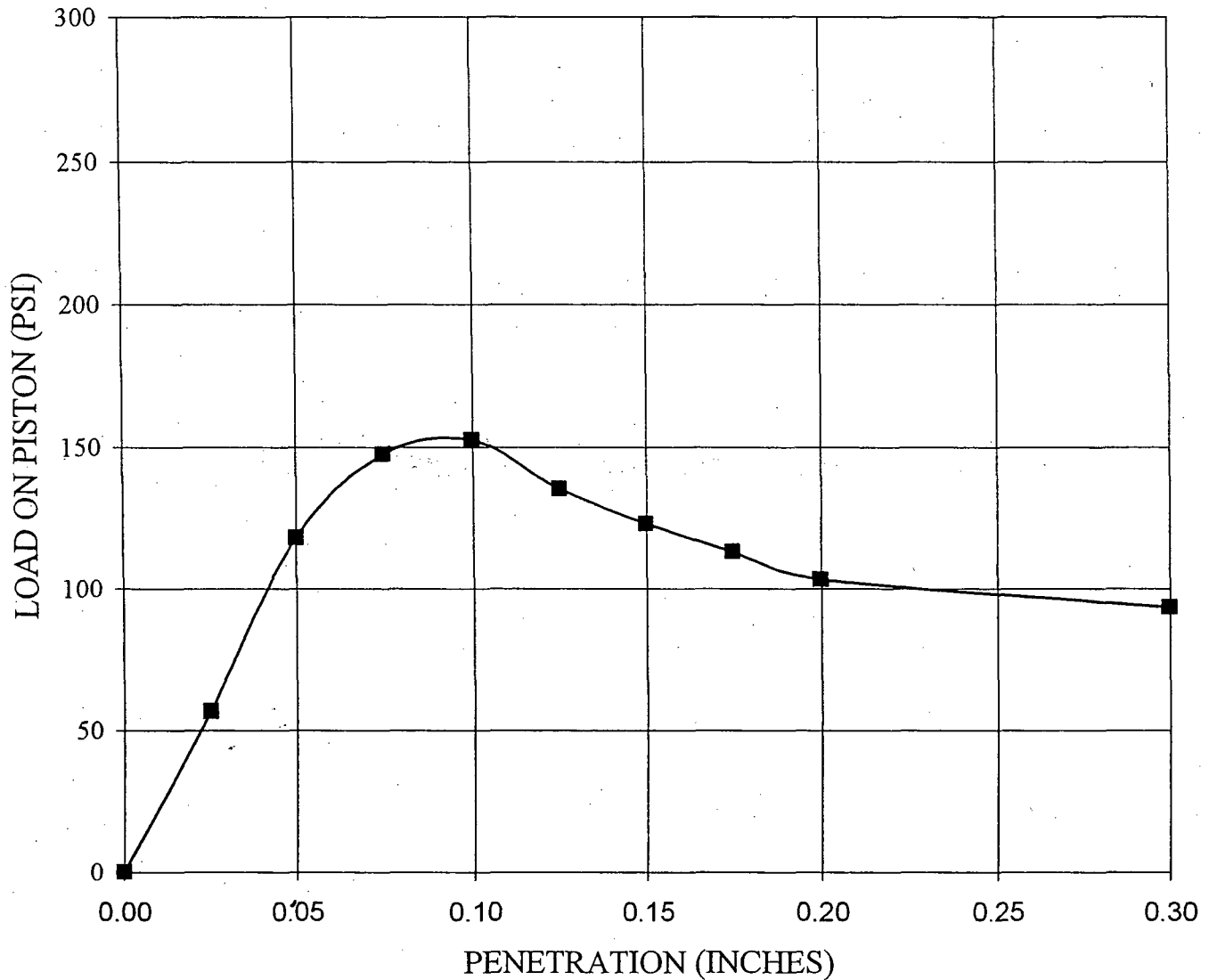
MOISTURE-DENSITY RELATION

ASTM D-1557 Method A

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland					Contract No.:	06120048.00	Date:	9/26/2006
Boring No.	Depth (ft)	Sample Description	Class.	LL	PI				
TP-C-723	6.0-7.0	Poorly Graded SAND, with silt, trace gravel, brown	SP-SM	30	15				
Assumed Specific Gravity:		2.20	% Passing 3/4" Sieve:		100.0				
			% Passing #4 Sieve:		98.8				
Maximum Dry Density (pcf):		113.8	Optimum Moisture Content (%):		6.8				

CALIFORNIA BEARING RATIO RESULTS

UNSOAKED CBR



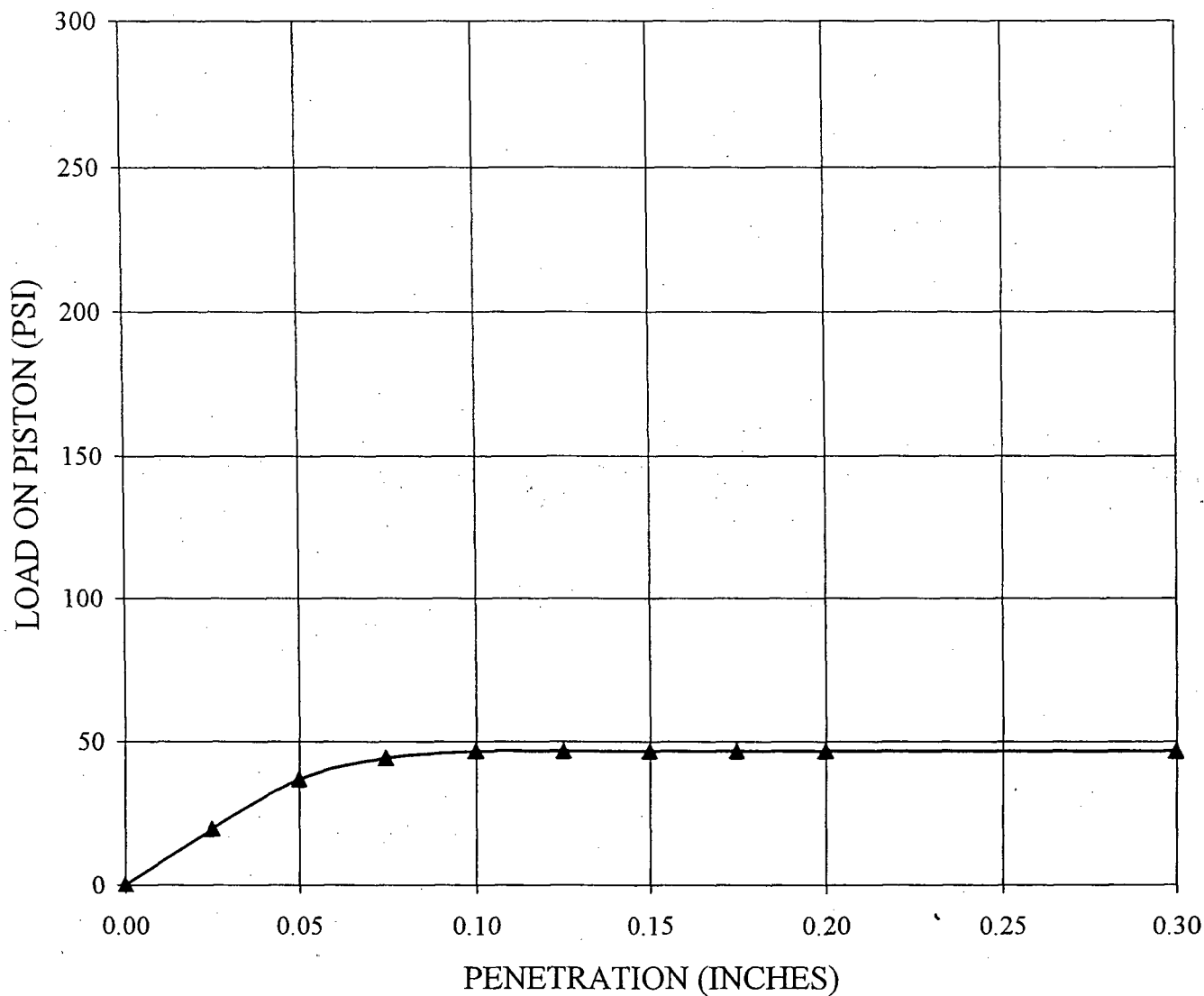
CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland			Contract No.:	06120048.00	Date:	9/25/2006
Boring No.	Depth (ft)	Sample Description					
TP-B-307	4.5-5.5	Poorly Graded SAND, with silt, brown					
CBR (Unsoaked):	14.8	Soaking Time:	N/A				
Surcharge:	50 PSF	Swell:	N/A				
DRY DENSITY, PCF			MOISTURE CONTENT, %				
Before Soaking:	103.8	Before Soaking:	9.7				
After Soaking:	N/A	After Soaking:	N/A				
Max. Dry Density:	109.3	Optimum Moisture:	10.5				


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SOAKED CBR

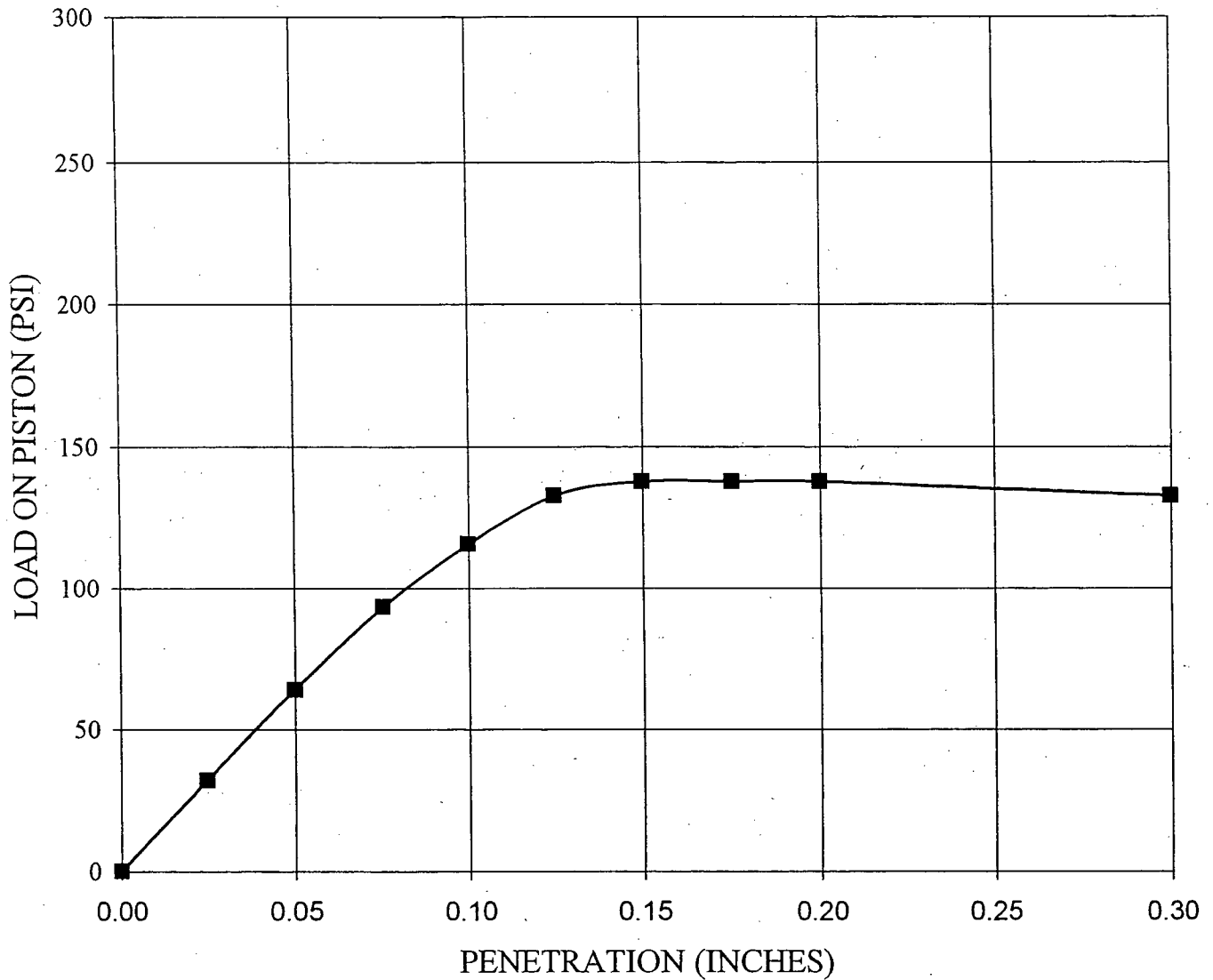


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/25/2006
Boring No.	Depth (ft)	Sample Description				
TP-B-307	4.5-5.5	Poorly Graded SAND, with silt, brown				
CBR (Soaked):	4.4	Soaking Time:	4 Days			
Surcharge:	50 PSF	Swell:	0.0%			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	103.8	Before Soaking:	9.7			
After Soaking:	103.7	After Soaking:	12.8			
Max. Dry Density:	109.3	Optimum Moisture:	10.5			

UNSOAKED CBR

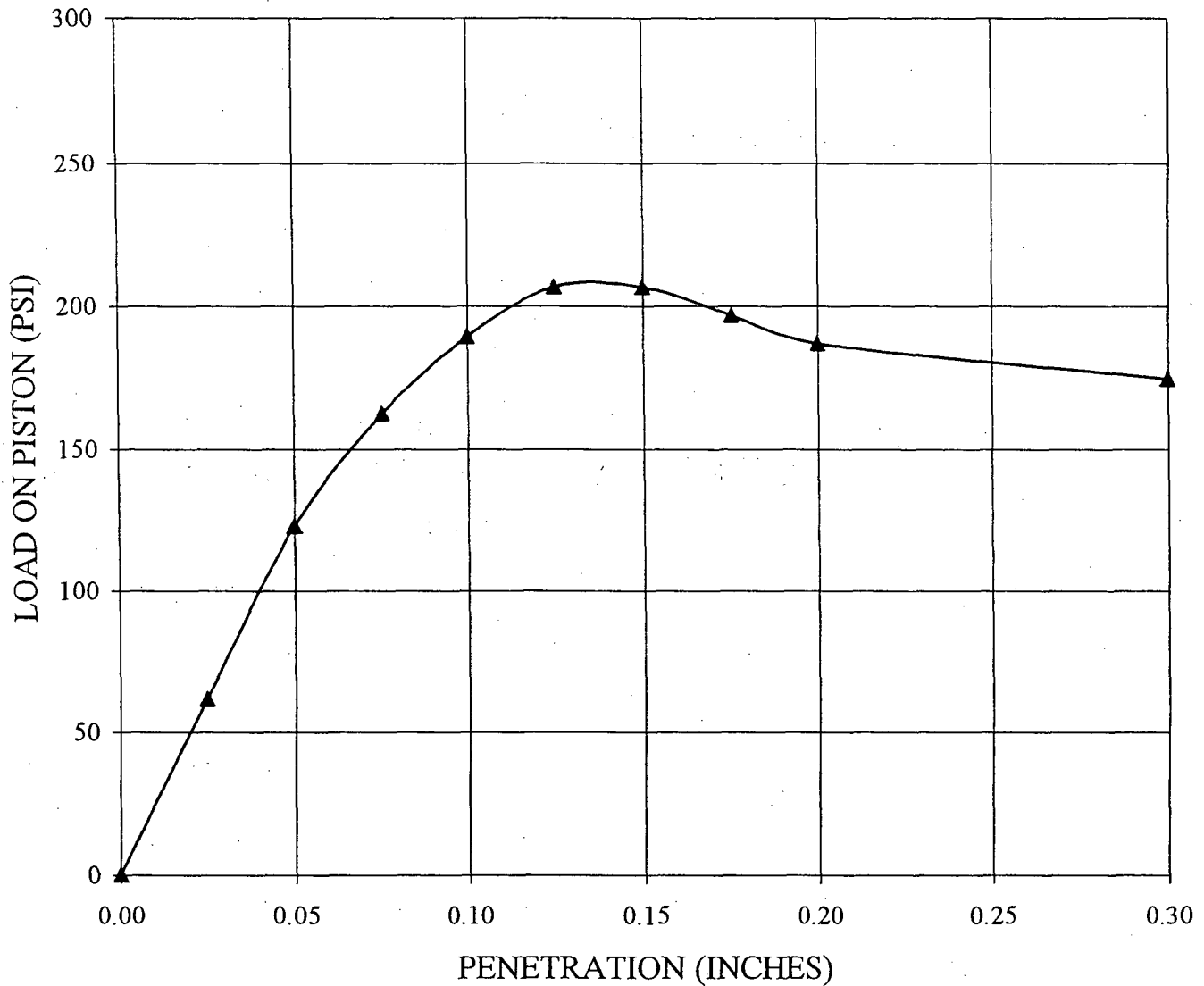


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/26/2006
Boring No.	Depth (ft)	Sample Description				
TP-B-315	6.0-7.0	Poorly Graded SAND, with silt, tan				
CBR (Unsoaked):	11.6	Soaking Time:	N/A			
Surcharge:	50 PSF	Swell:	N/A			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	109.2	Before Soaking:	11.6			
After Soaking:	N/A	After Soaking:	N/A			
Max. Dry Density:	114.9	Optimum Moisture:	11.4			

SOAKED CBR

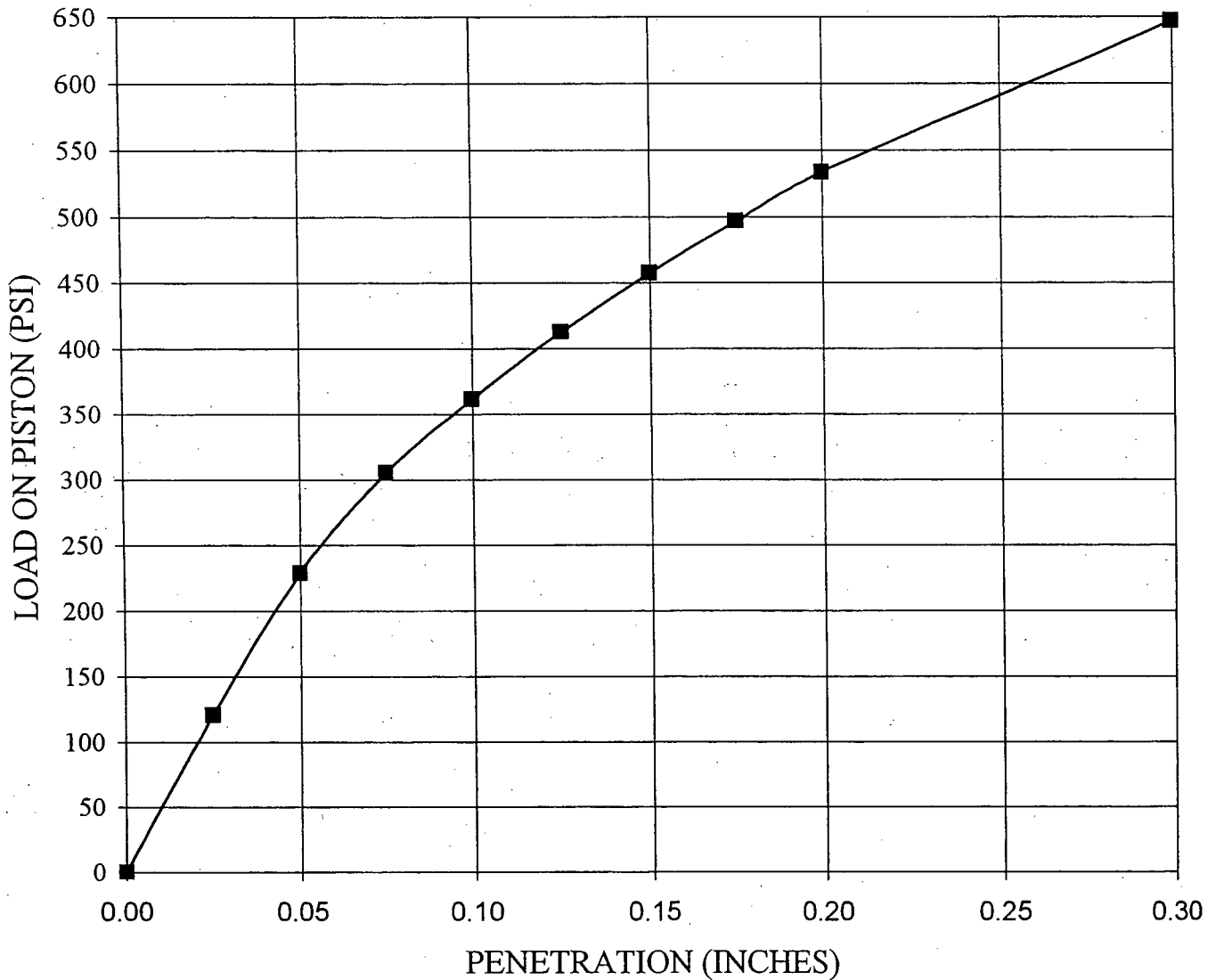


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland			Contract No.:	06120048.00	Date:	9/26/2006
Boring No.	Depth (ft)	Sample Description					
TP-B-315	6.0-7.0	Poorly Graded SAND, with silt, tan					
CBR (Soaked):	18.9	Soaking Time:		4 Days			
Surcharge:	50 PSF	Swell:					
DRY DENSITY, PCF		MOISTURE CONTENT, %					
Before Soaking:	109.2	Before Soaking:		11.6			
After Soaking:	109.1	After Soaking:		12.3			
Max. Dry Density:	114.9	Optimum Moisture:		11.4			

UNSOAKED CBR

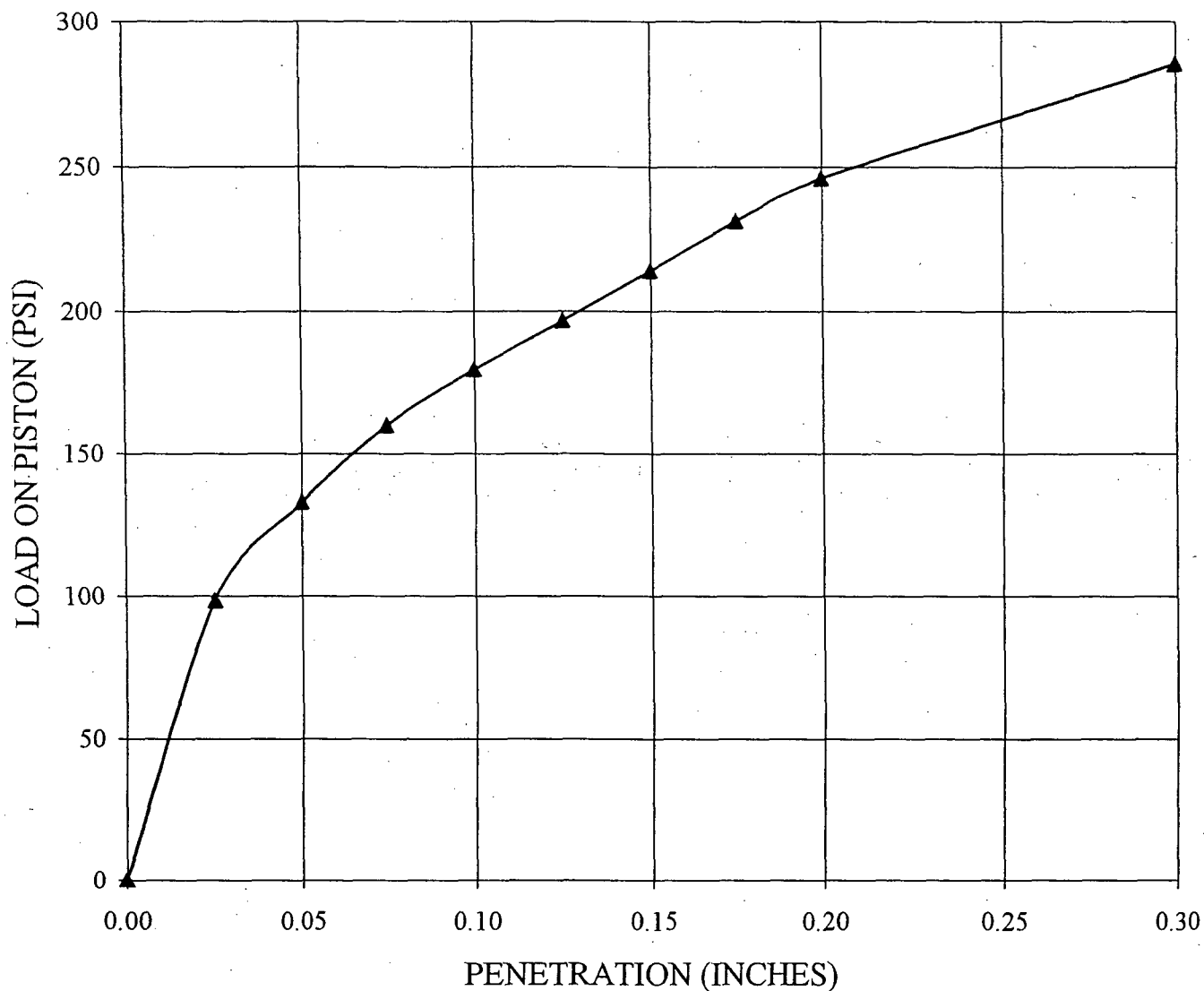


CALIFORNIA BEARING RATIO

ASTM D-1883

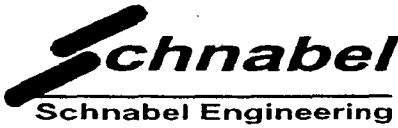
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/27/2006
Boring No.	Depth (ft)	Sample Description				
TP-B-335	5.0-6.0	Silty SAND, brown				
CBR (Unsoaked):	36.2	Soaking Time:	N/A			
Surcharge:	50 PSF	Swell:	N/A			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	124.0	Before Soaking:	7.6			
After Soaking:	N/A	After Soaking:	N/A			
Max. Dry Density:	130.5	Optimum Moisture:	7.6			

SOAKED CBR

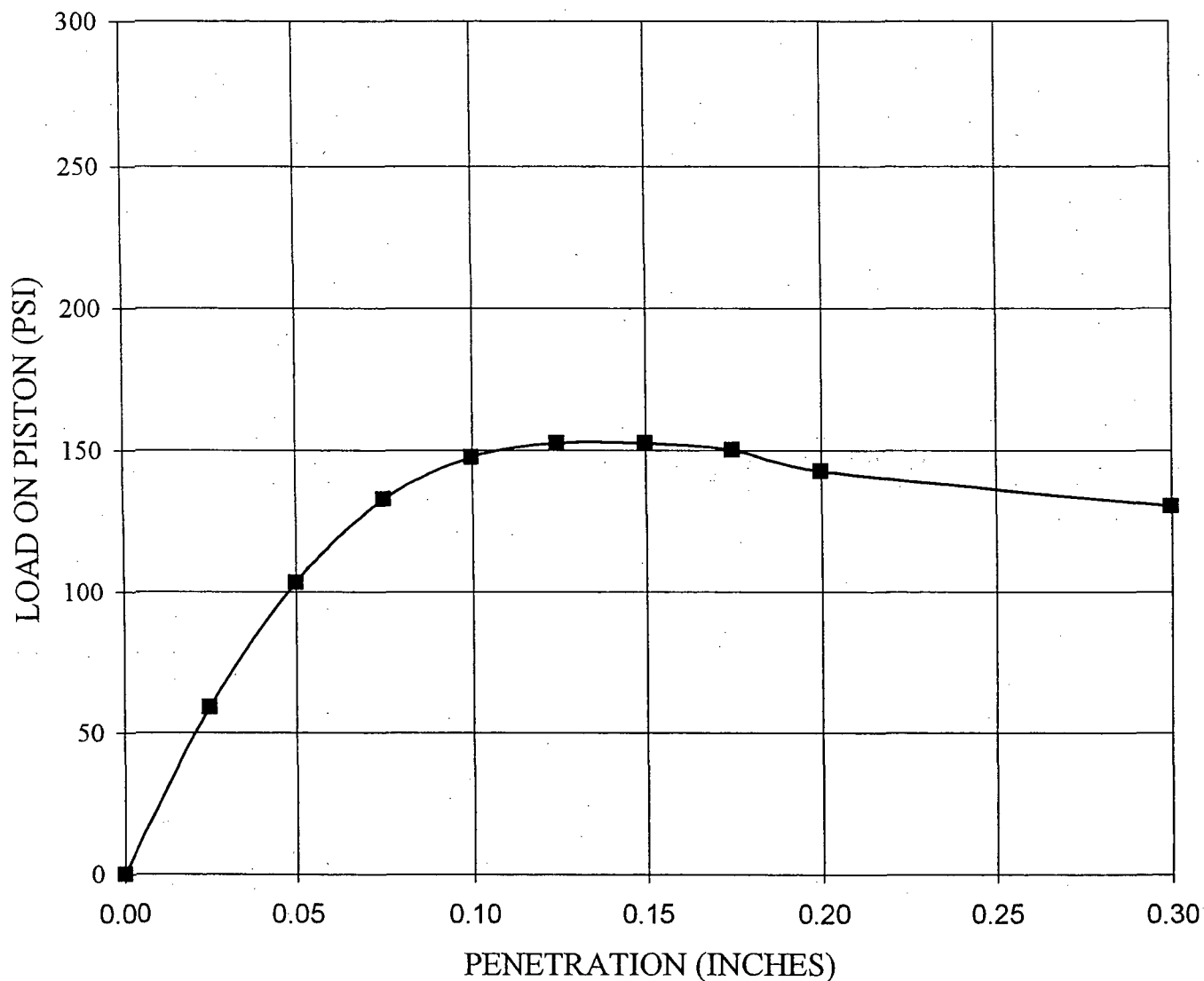


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/27/2006
Boring No.	Depth (ft)	Sample Description				
TP-B-335	5.0-6.0	Silty SAND, brown				
CBR (Soaked):	18.0	Soaking Time:	4 Days			
Surcharge:	50 PSF	Swell:	0.0%			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	124.0	Before Soaking:	7.6			
After Soaking:	123.8	After Soaking:	9.0			
Max. Dry Density:	130.5	Optimum Moisture:	7.6			

UNSOAKED CBR

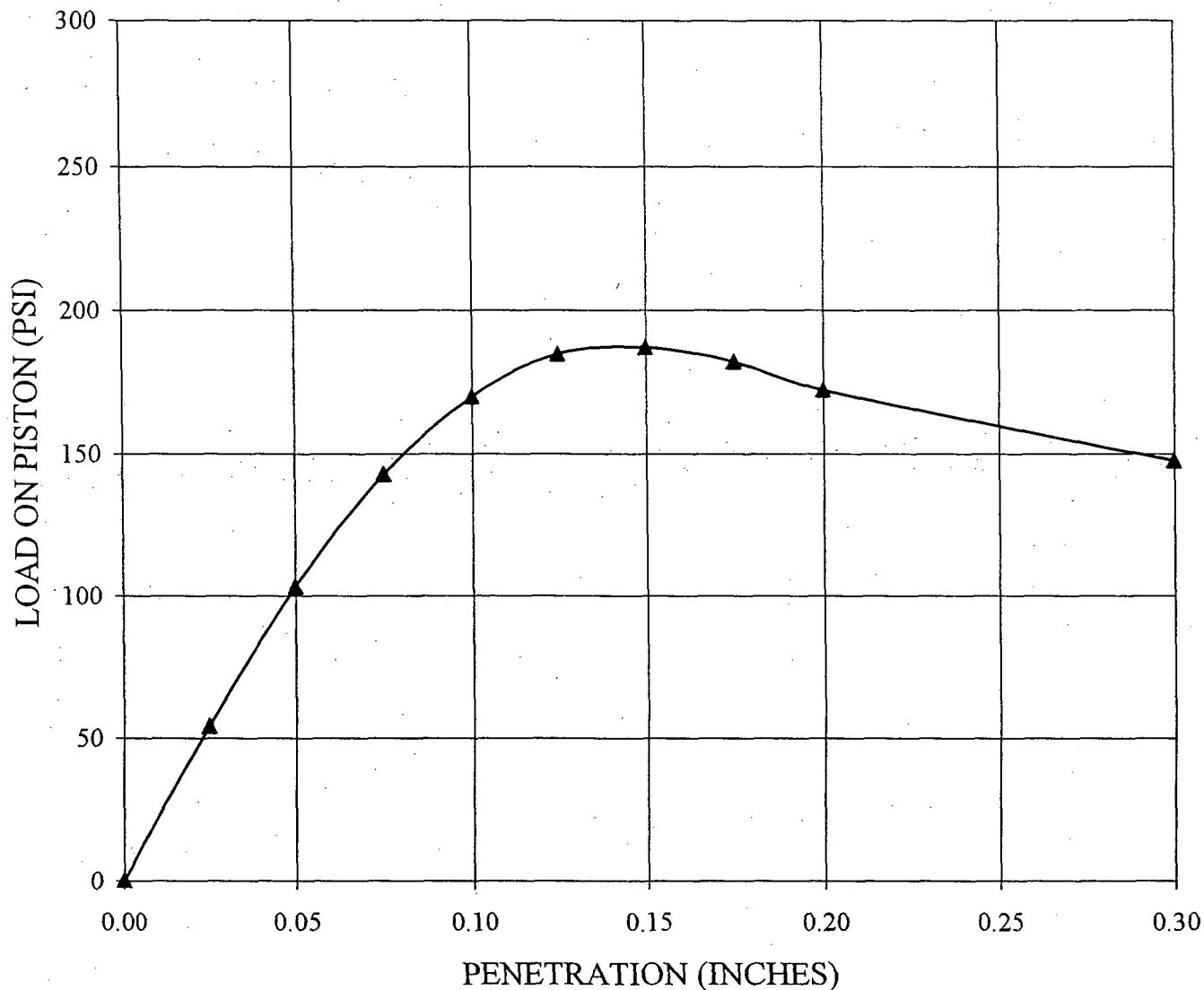


CALIFORNIA BEARING RATIO

ASTM D-1883

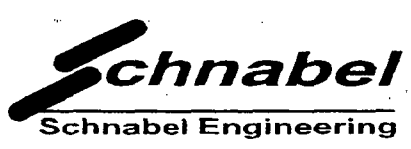
Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/25/2006
Boring No.	Depth (ft)	Sample Description				
TP-B-407	4.5-5.5	Well Graded SAND, with silt, trace gravel, dark				
CBR (Unsoaked):	14.8	Soaking Time:	N/A			
Surcharge:	50 PSF	Swell:	N/A			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	113.1	Before Soaking:	8.7			
After Soaking:	N/A	After Soaking:	N/A			
Max. Dry Density:	119.1	Optimum Moisture:	8.6			

SOAKED CBR

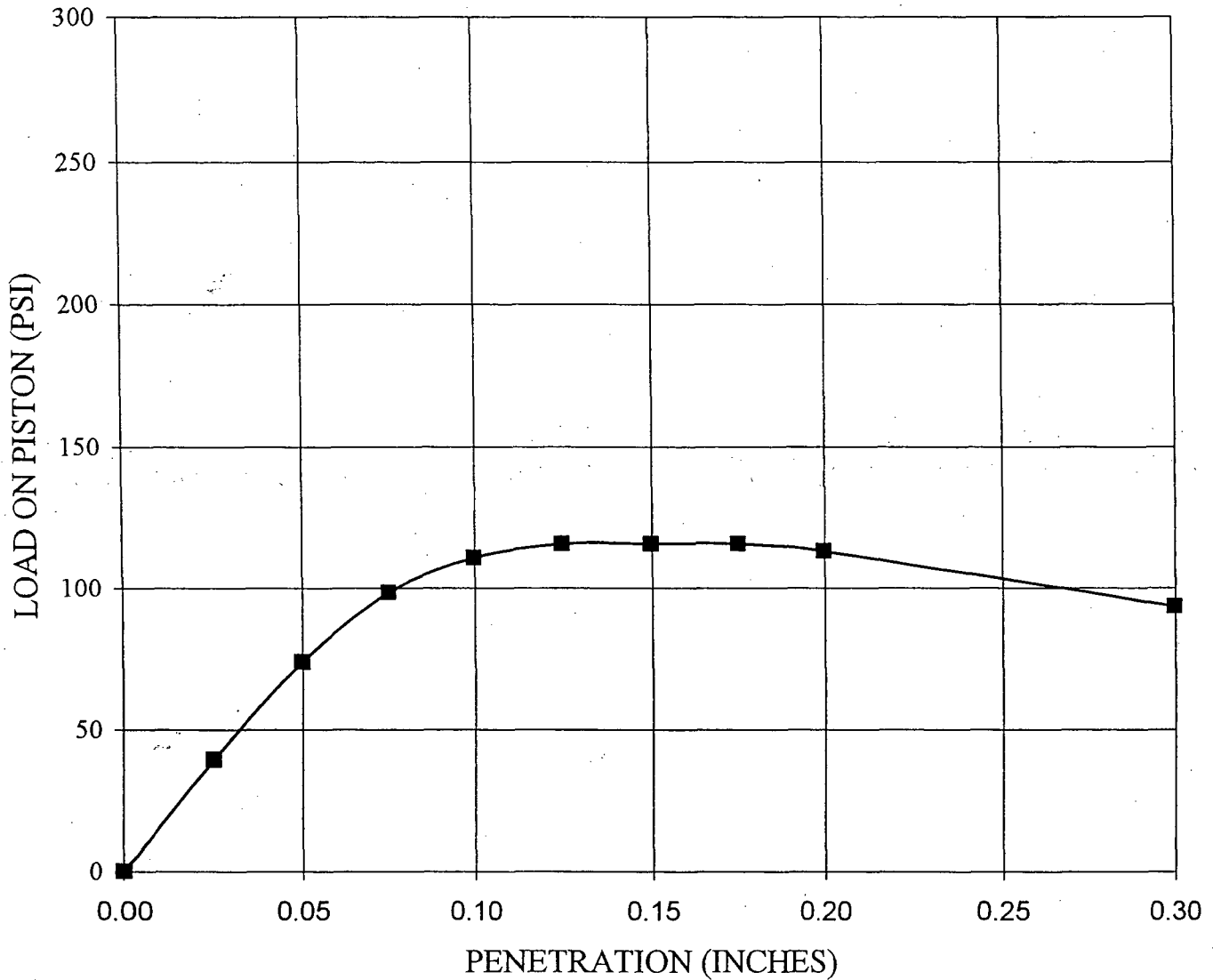


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/25/2006
Boring No.	Depth (ft)	Sample Description				
TP-B-407	4.5-5.5	Well Graded SAND, with silt, trace gravel, dark				
CBR (Soaked):	17.0	Soaking Time:	4 Days			
Surcharge:	50 PSF	Swell:				
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	113.1	Before Soaking:	8.7			
After Soaking:	113.0	After Soaking:	11.9			
Max. Dry Density:	119.1	Optimum Moisture:	8.6			

UNSOAKED CBR

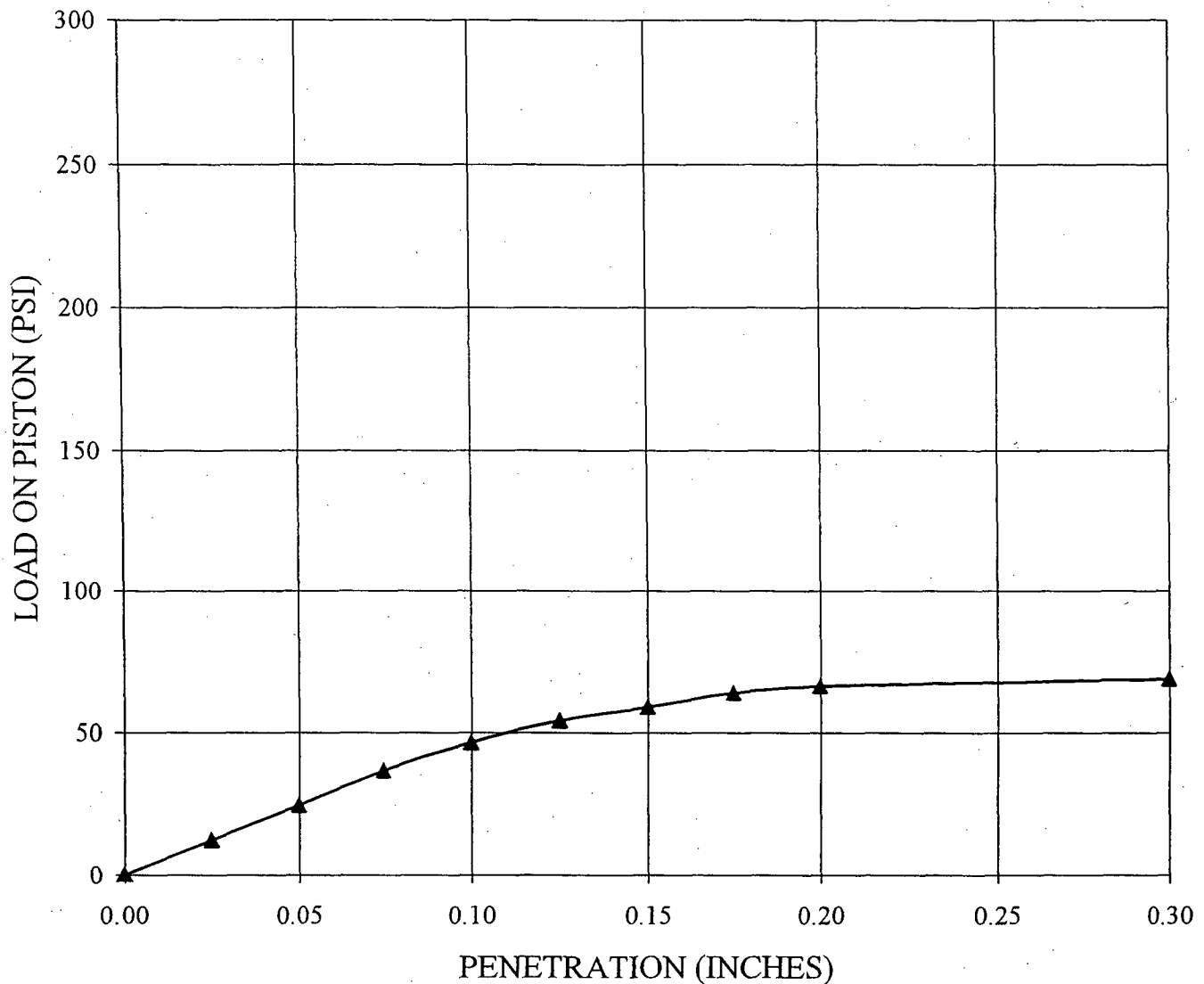


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/25/2006
Boring No.	Depth (ft)	Sample Description				
TP-B-415	3.0-4.0	Poorly Graded SAND, trace silt, light brown				
CBR (Unsoaked):	11.1	Soaking Time:	N/A			
Surcharge:	50 PSF	Swell:	N/A			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	111.1	Before Soaking:	9.7			
After Soaking:	N/A	After Soaking:	N/A			
Max. Dry Density:	116.7	Optimum Moisture:	9.8			

SOAKED CBR

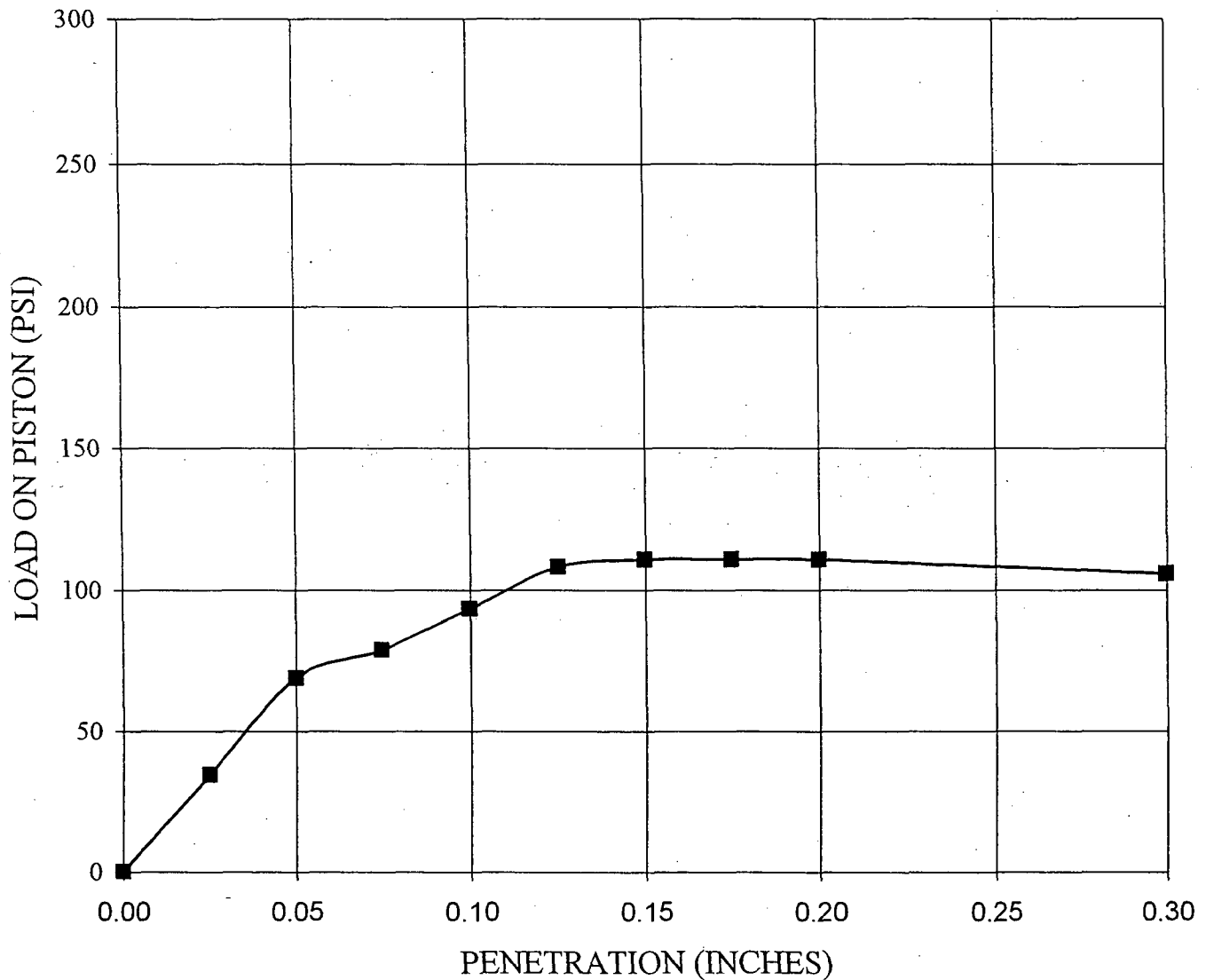


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/25/2006
Boring No.	Depth (ft)	Sample Description				
TP-B-415	3.0-4.0	Poorly Graded SAND, trace silt, light brown				
CBR (Soaked):	4.7	Soaking Time:	4 Days			
Surcharge:	50 PSF	Swell:				
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	111.1	Before Soaking:	9.7			
After Soaking:	111.0	After Soaking:	13.0			
Max. Dry Density:	116.7	Optimum Moisture:	9.8			

UNSOAKED CBR

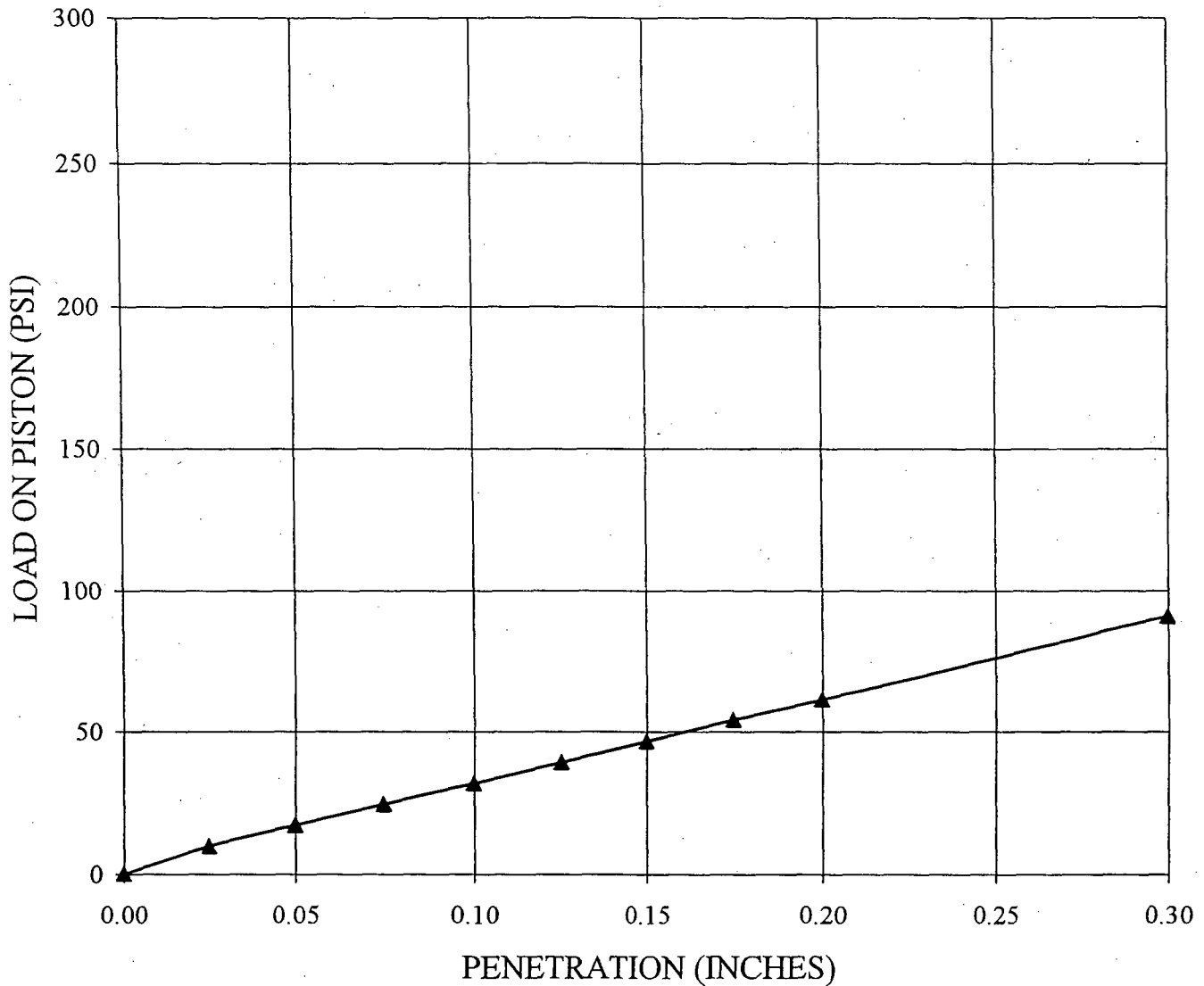


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/27/2006
Boring No.	Depth (ft)	Sample Description				
TP-B-434	2.0-3.0	Sandy LEAN CLAY, dark brown				
CBR (Unsoaked):	9.3	Soaking Time:	N/A			
Surcharge:	50 PSF	Swell:	N/A			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	120.6	Before Soaking:	10.1			
After Soaking:	N/A	After Soaking:	N/A			
Max. Dry Density:	127.1	Optimum Moisture:	10.1			

SOAKED CBR

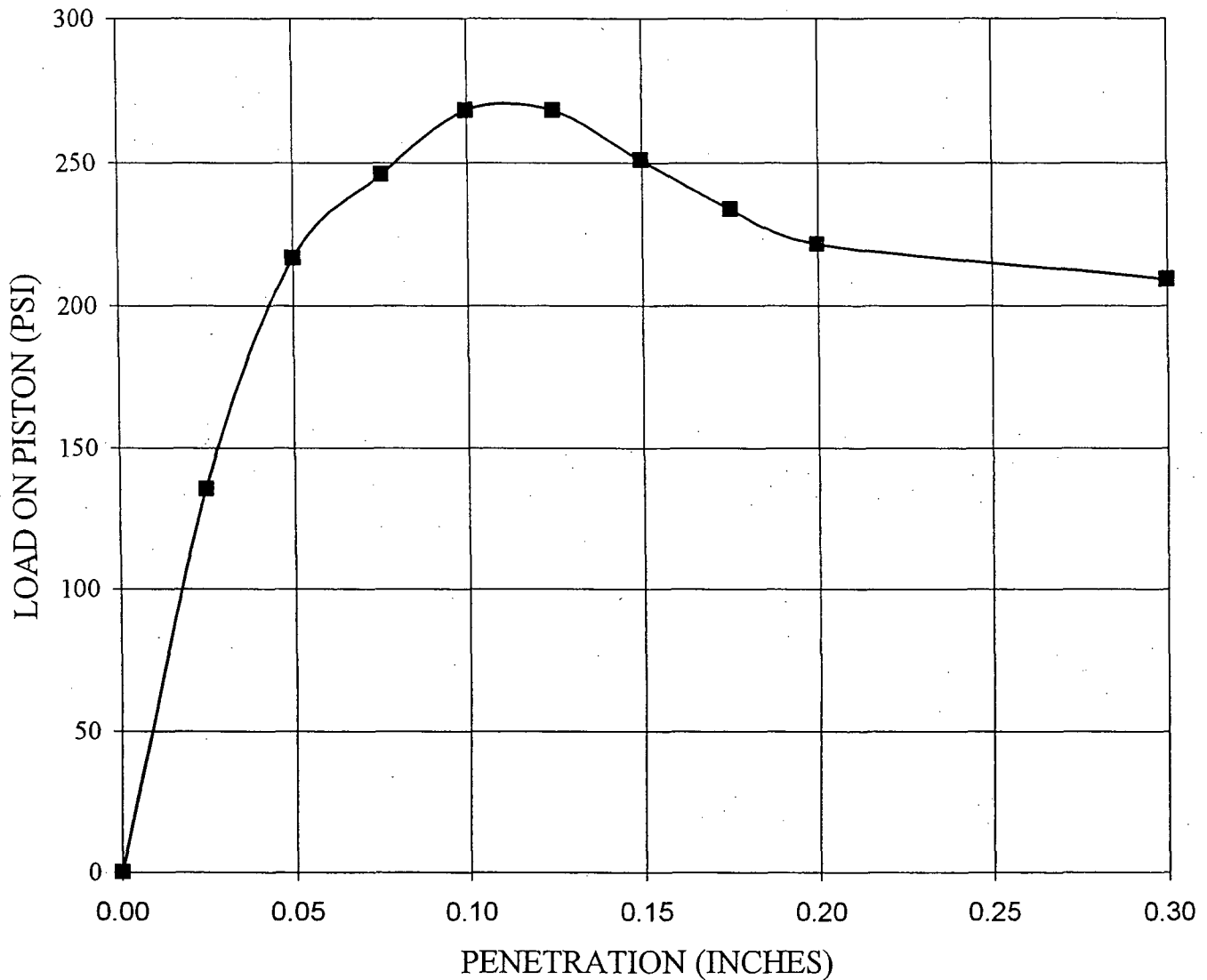


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/27/2006
Boring No.	Depth (ft)	Sample Description				
TP-B-434	2.0-3.0	Sandy LEAN CLAY, dark brown				
CBR (Soaked):	3.2	Soaking Time:	4 Days			
Surcharge:	10 PSF	Swell:	0.0%			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	120.6	Before Soaking:	10.1			
After Soaking:	120.5	After Soaking:	13.3			
Max. Dry Density:	127.1	Optimum Moisture:	10.1			

UNSOAKED CBR

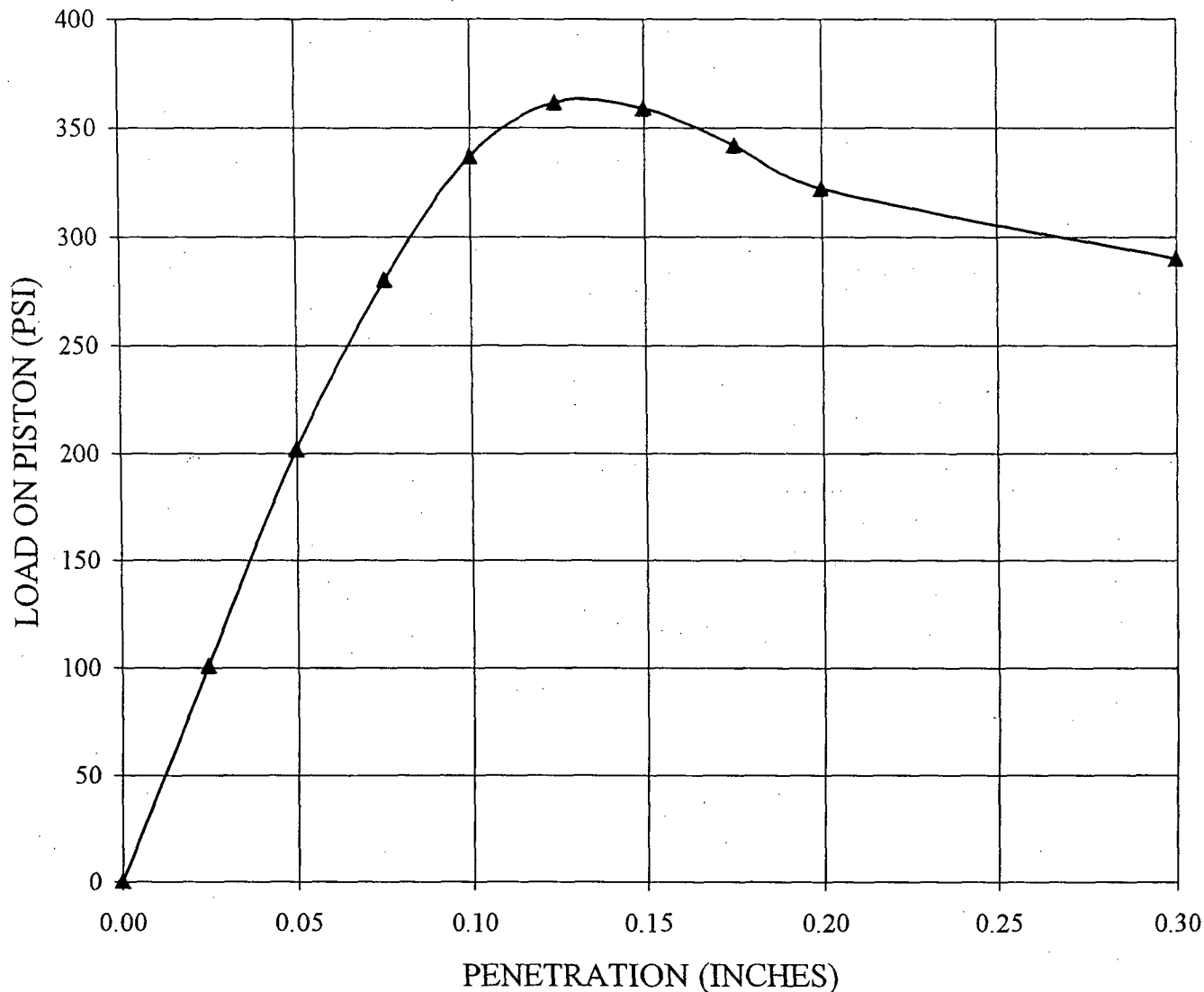


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/25/2006
Boring No.	Depth (ft)	Sample Description				
B-435	7.0-8.0	Poorly Graded SAND, with silt, trace gravel, light brown				
CBR (Unsoaked):	26.8	Soaking Time:	N/A			
Surcharge:	50 PSF	Swell:	N/A			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	118.2	Before Soaking:	8.9			
After Soaking:	N/A	After Soaking:	N/A			
Max. Dry Density:	123.9	Optimum Moisture:	8.9			

SOAKED CBR

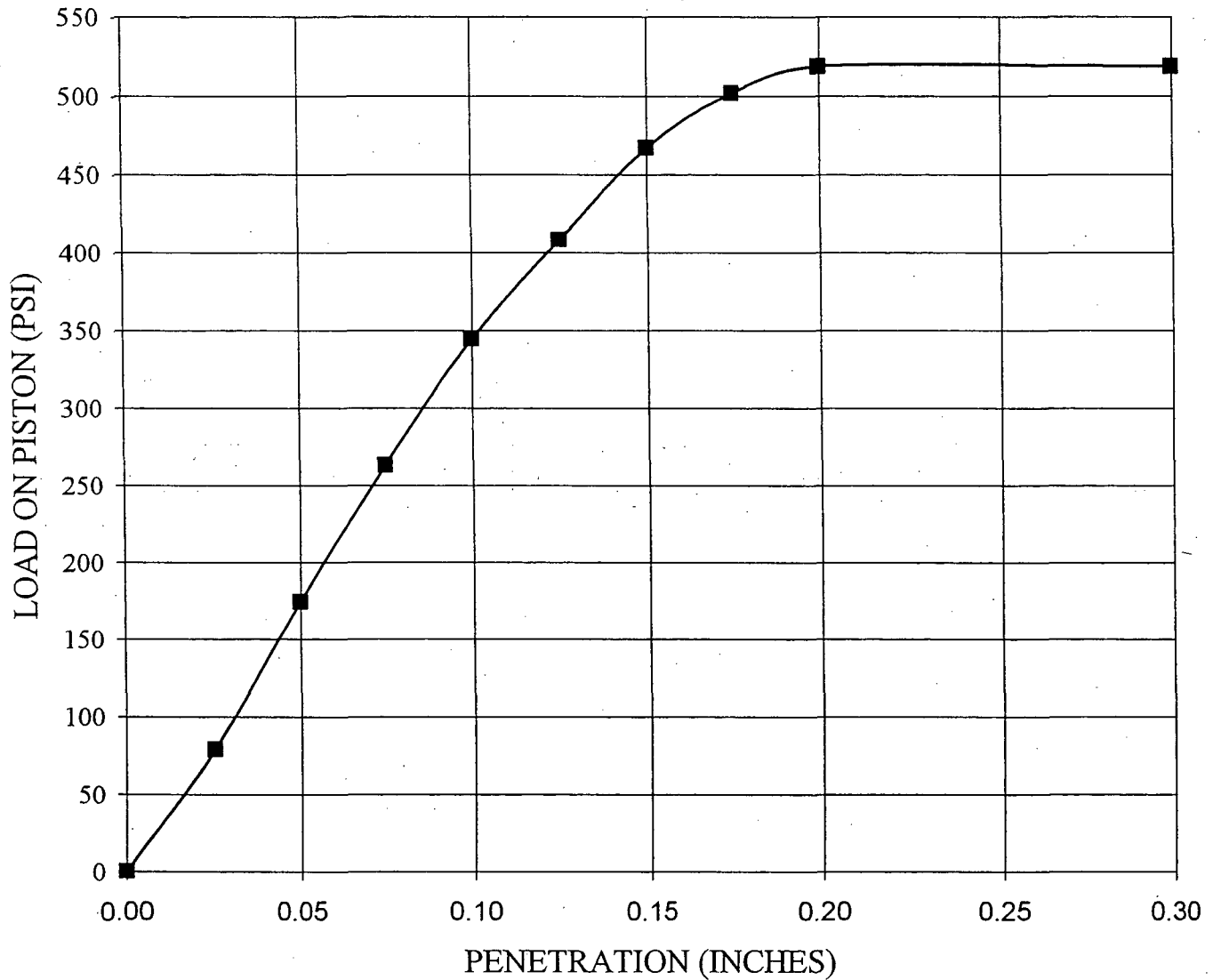


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/25/2006
Boring No.	Depth (ft)	Sample Description				
B-435	7.0-8.0	Poorly Graded SAND, with silt, trace gravel, light brown				
CBR (Soaked):	33.7	Soaking Time:	4 Days			
Surcharge:	50 PSF	Swell:	0.0%			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	118.2	Before Soaking:	8.9			
After Soaking:	118.1	After Soaking:	12.0			
Max. Dry Density:	123.9	Optimum Moisture:	8.9			

UNSOAKED CBR



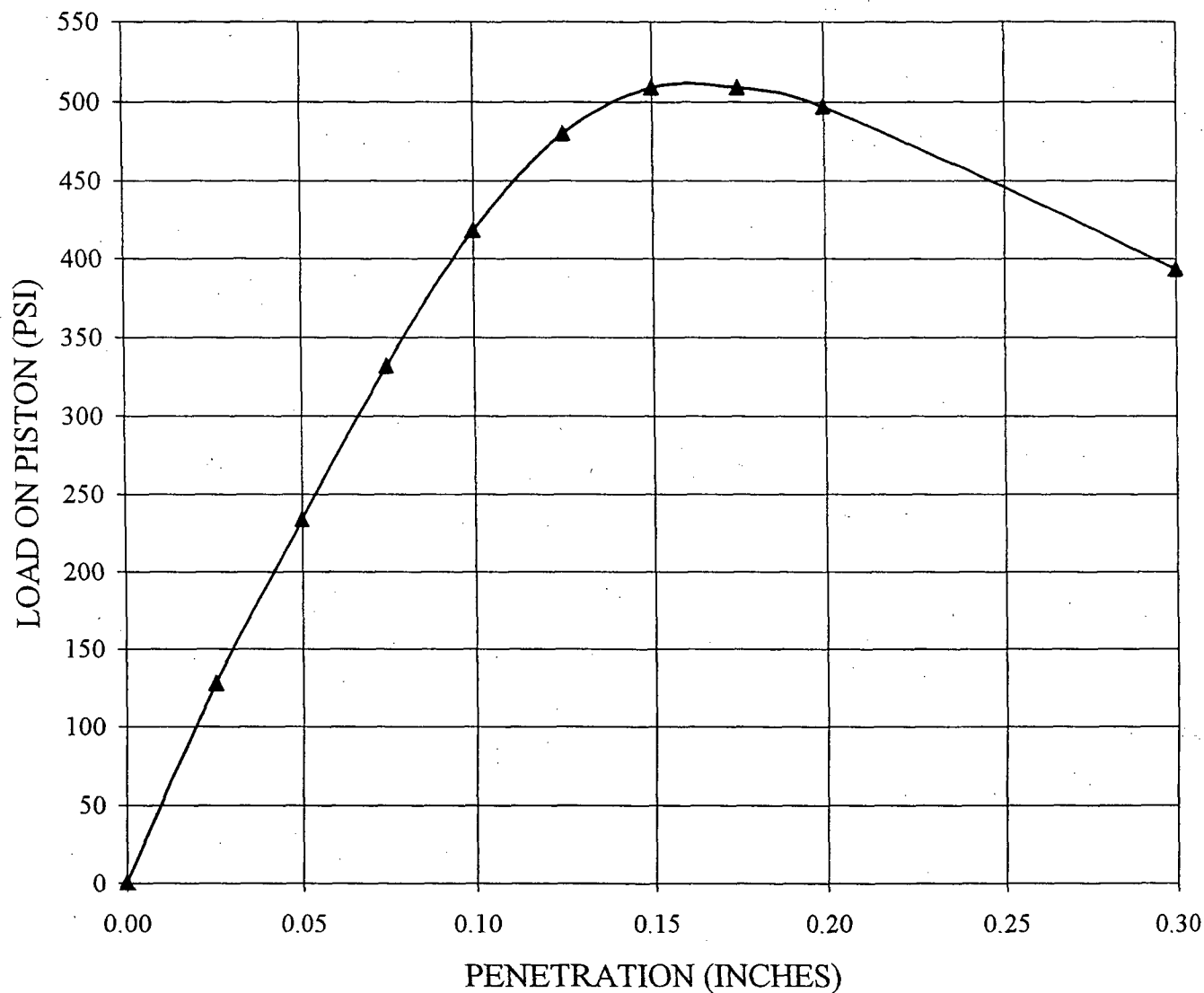
CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland			Contract No.:	06120048.00	Date:	9/26/2006
Boring No.	Depth (ft)	Sample Description					
B-435	9.0-10.0	Clayey SAND, brown					
CBR (Soaked):	34.4	Soaking Time:	N/A				
Surcharge:	50 PSF	Swell:	N/A				
DRY DENSITY, PCF			MOISTURE CONTENT, %				
Before Soaking:	124.4	Before Soaking:	6.9				
After Soaking:	N/A	After Soaking:	N/A				
Max. Dry Density:	130.2	Optimum Moisture:	7.3				


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SOAKED CBR

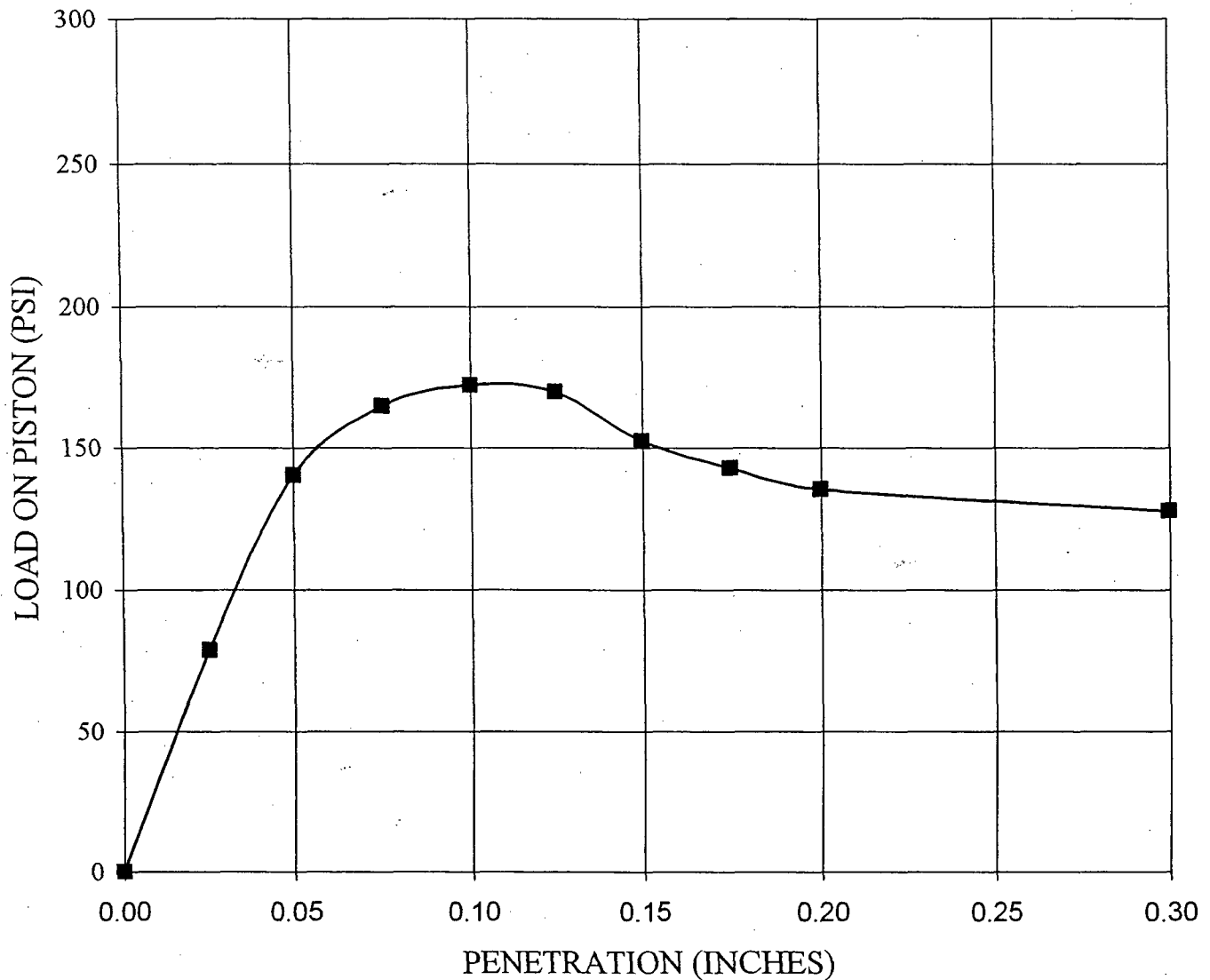


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/26/2006
Boring No.	Depth (ft)	Sample Description				
B-435	9.0-10.0	Clayey SAND, brown				
CBR (Unsoaked):	41.8	Soaking Time:	4 Days			
Surcharge:	50 PSF	Swell:	0.0%			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	124.4	Before Soaking:	6.9			
After Soaking:	124.2	After Soaking:	7.9			
Max. Dry Density:	130.2	Optimum Moisture:	7.3			

UNSOAKED CBR

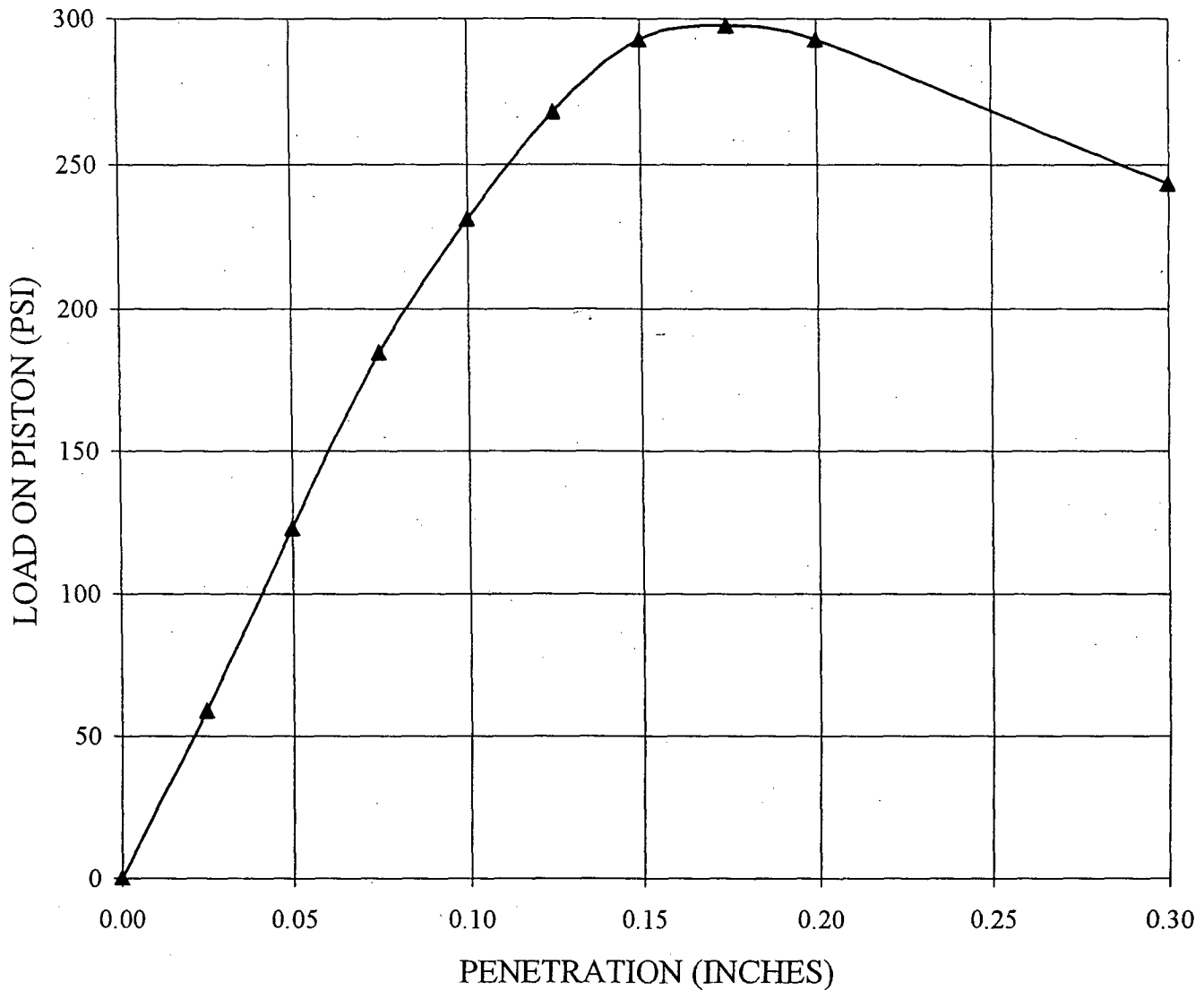


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/26/2006
Boring No.	Depth (ft)	Sample Description				
TP-B-717	7.0-8.0	Poorly Graded SAND, with silt, trace gravel, light brown				
CBR (Unsoaked):	17.2	Soaking Time:	N/A			
Surcharge:	50 PSF	Swell:	N/A			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	117.8	Before Soaking:	10.0			
After Soaking:	N/A	After Soaking:	N/A			
Max. Dry Density:	123.8	Optimum Moisture:	10.2			

SOAKED CBR

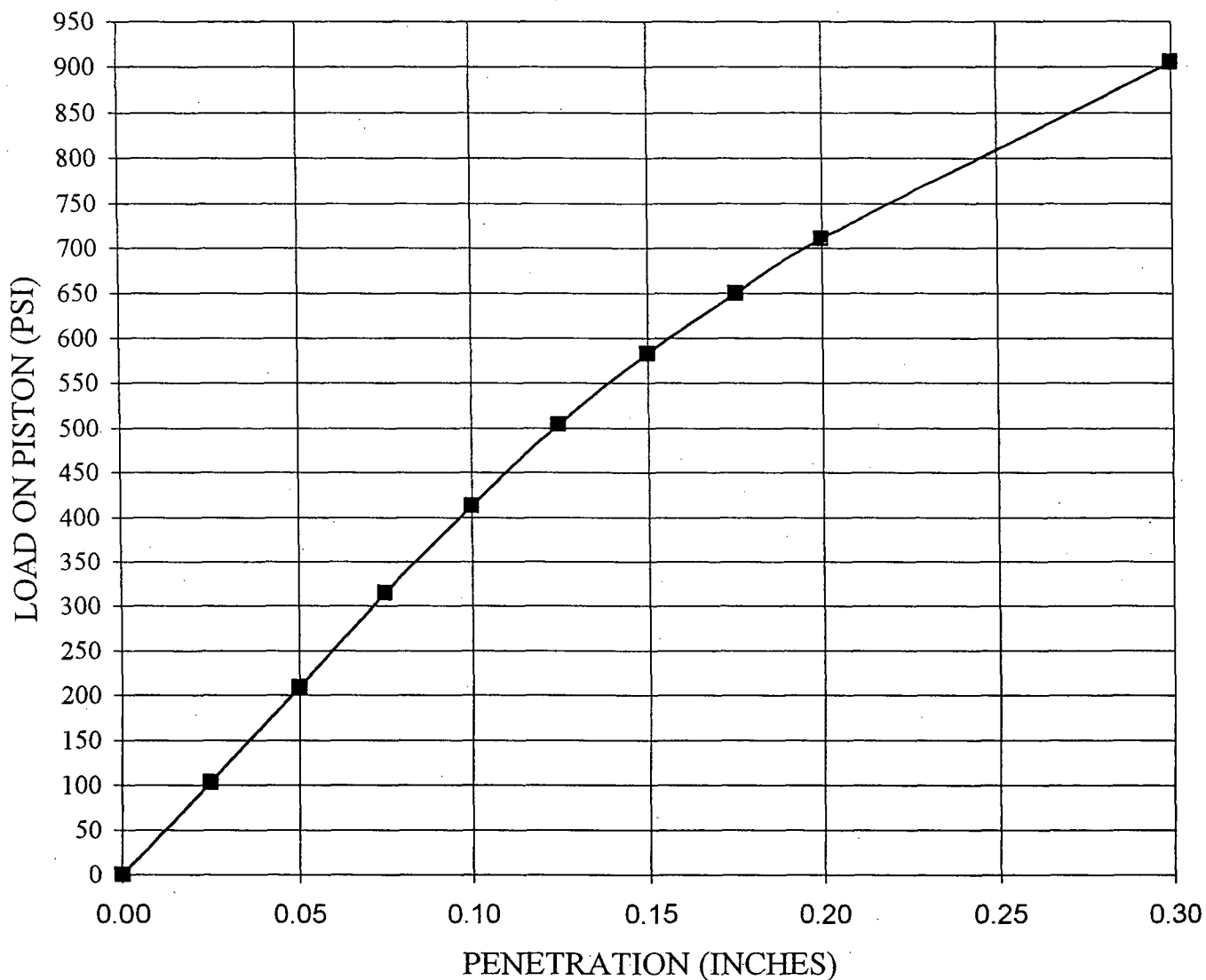


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/26/2006
Boring No.	Depth (ft)	Sample Description				
TP-B-717	7.0-8.0	Poorly Graded SAND, with silt, trace gravel, light brown				
CBR (Soaked):	23.1	Soaking Time:	4 Days			
Surcharge:	50 PSF	Swell:	0.0%			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	117.8	Before Soaking:	10.0			
After Soaking:	117.7	After Soaking:	10.5			
Max. Dry Density:	123.8	Optimum Moisture:	10.2			

UNSOAKED CBR

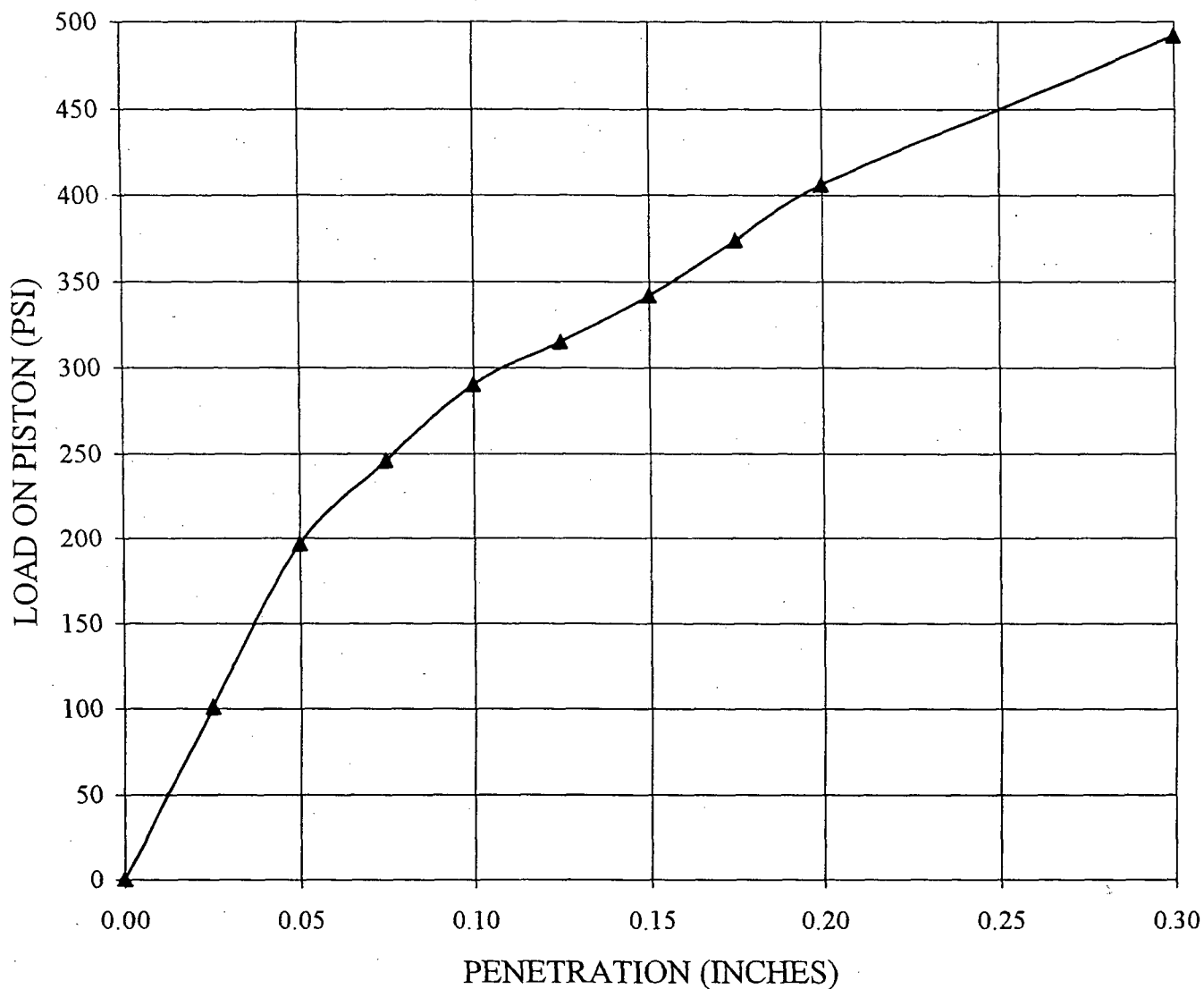


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/26/2006
Boring No.	Depth (ft)	Sample Description				
TP-B-719	7.0-8.0	Silty SAND, gray				
CBR (Unsoaked):	41.3	Soaking Time:	N/A			
Surcharge:	50 PSF	Swell:	N/A			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	113.5	Before Soaking:	10.1			
After Soaking:	N/A	After Soaking:	N/A			
Max. Dry Density:	119.6	Optimum Moisture:	10.0			

SOAKED CBR

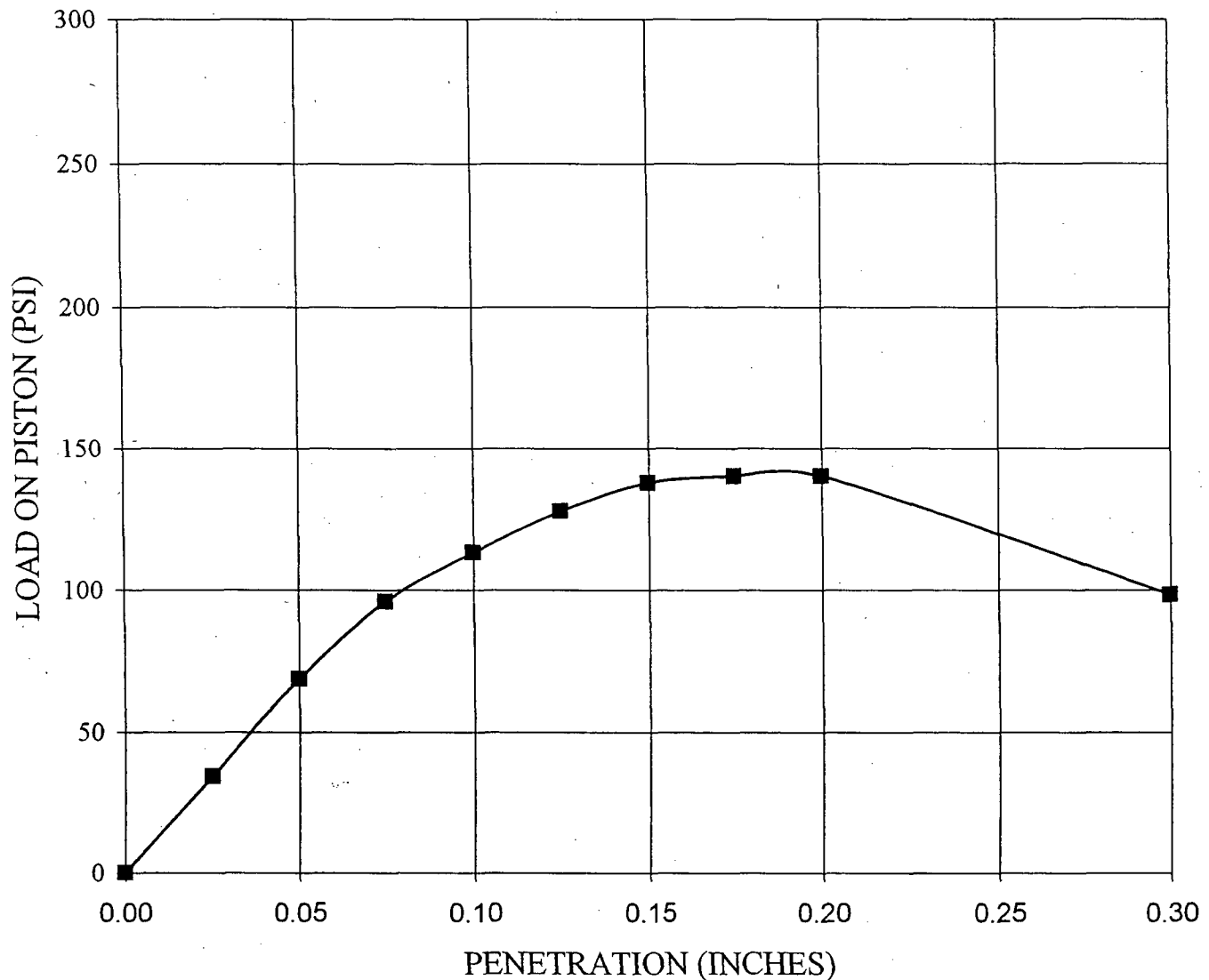


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/26/2006
Boring No.	Depth (ft)	Sample Description				
TP-B-719	7.0-8.0	Silty SAND, gray				
CBR (Soaked):	29.0	Soaking Time:	4 Days			
Surcharge:	50 PSF	Swell:	0.1%			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	113.5	Before Soaking:	10.1			
After Soaking:	113.2	After Soaking:	10.8			
Max. Dry Density:	119.6	Optimum Moisture:	10.0			

UNSOAKED CBR

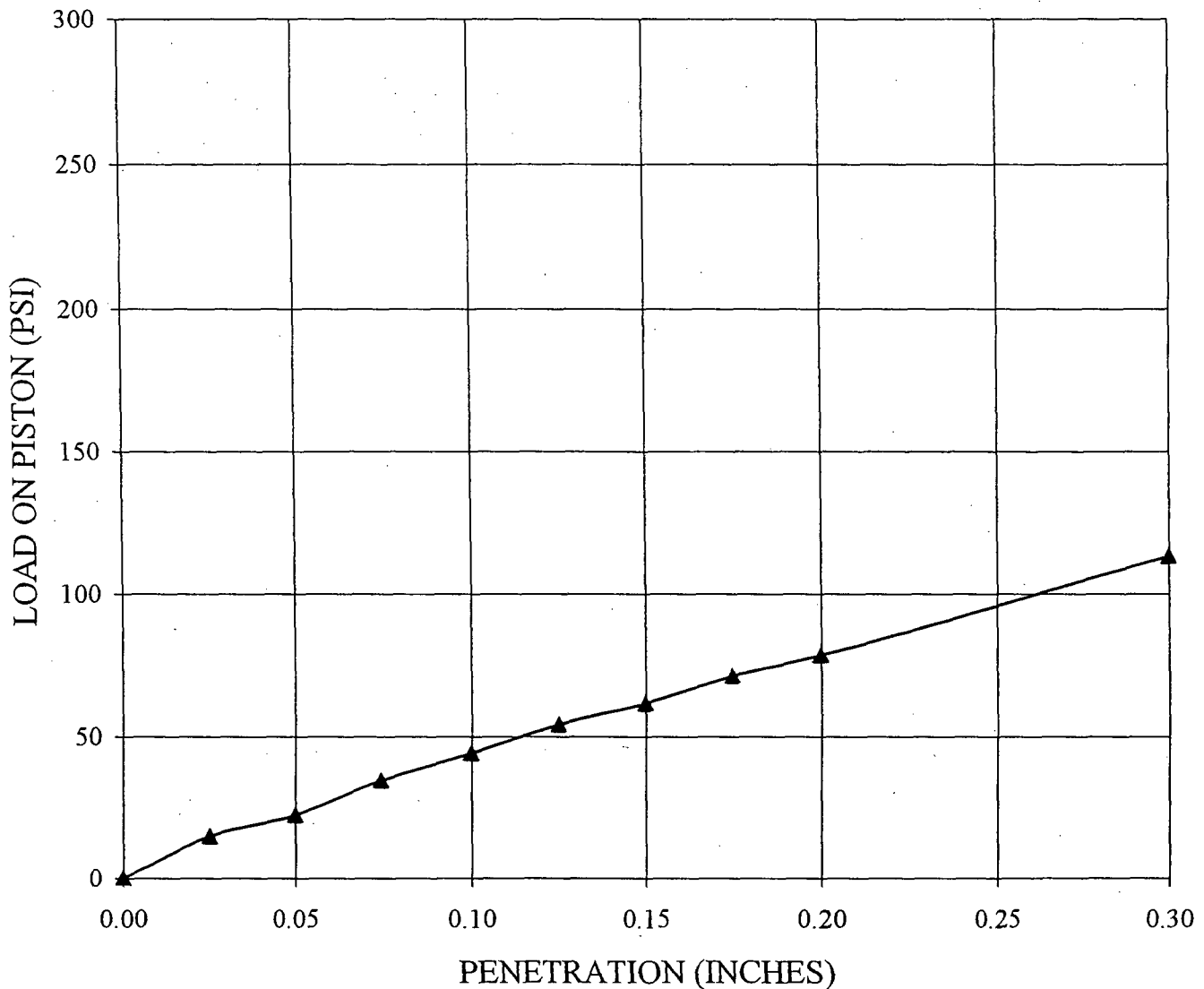


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs Nuclear Power Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/27/2006
Boring No.	Depth (ft)	Sample Description				
TP-B-758	7.5-8.5	Silty SAND, trace gravel, light brown				
CBR (Unsoaked):	11.3	Soaking Time:	N/A			
Surcharge:	50 PSF	Swell:	N/A			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	121.2	Before Soaking:	8.9			
After Soaking:	N/A	After Soaking:	N/A			
Max. Dry Density:	127.3	Optimum Moisture:	8.9			

SOAKED CBR

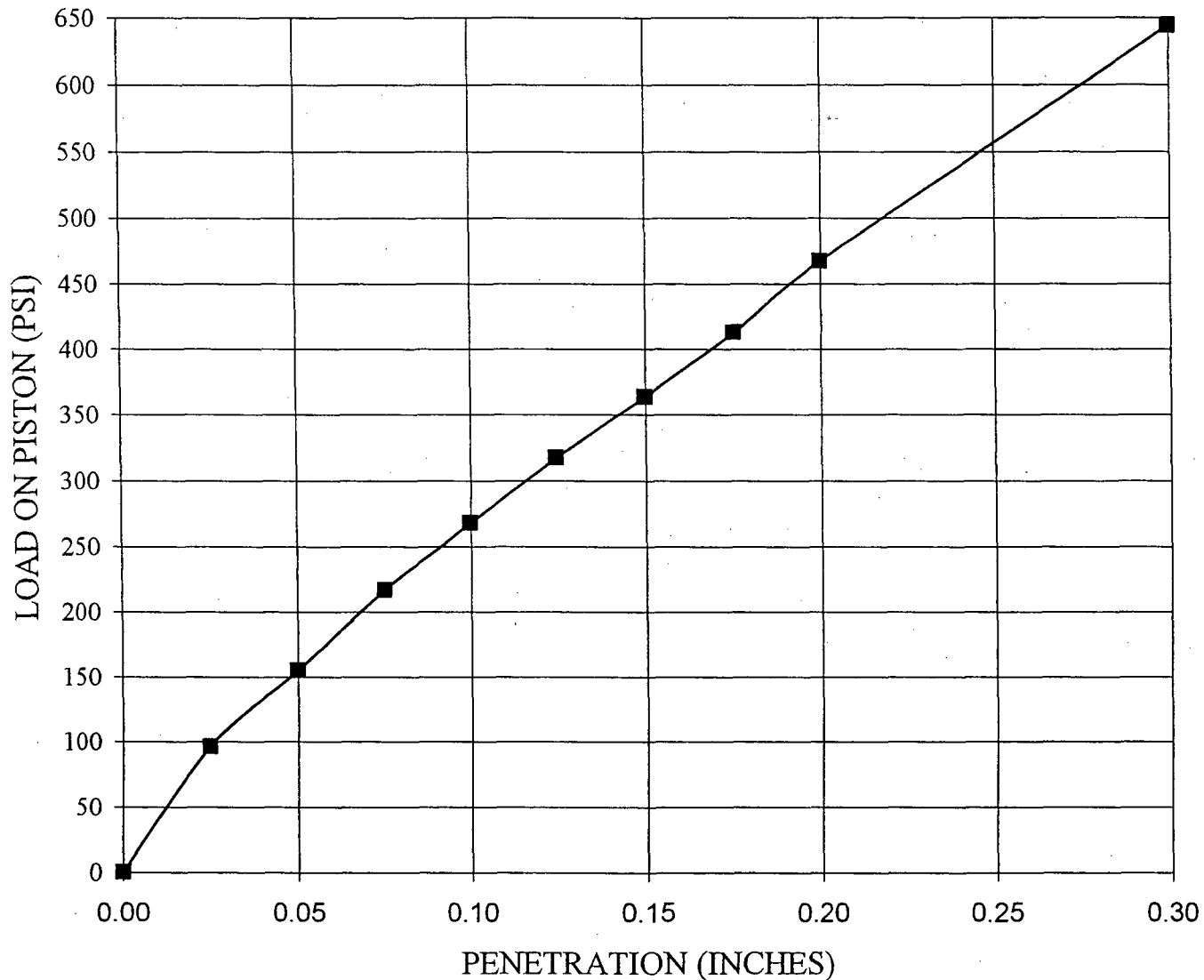


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/27/2006
Boring No.	Depth (ft)	Sample Description				
TP-B-758	7.5-8.5	Silty SAND, trace gravel, light brown				
CBR (Soaked):	4.4	Soaking Time:	4 Days			
Surcharge:	50 PSF	Swell:	0.2%			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	121.2	Before Soaking:	8.9			
After Soaking:	120.9	After Soaking:	11.1			
Max. Dry Density:	127.3	Optimum Moisture:	8.9			

UNSOAKED CBR



CALIFORNIA BEARING RATIO

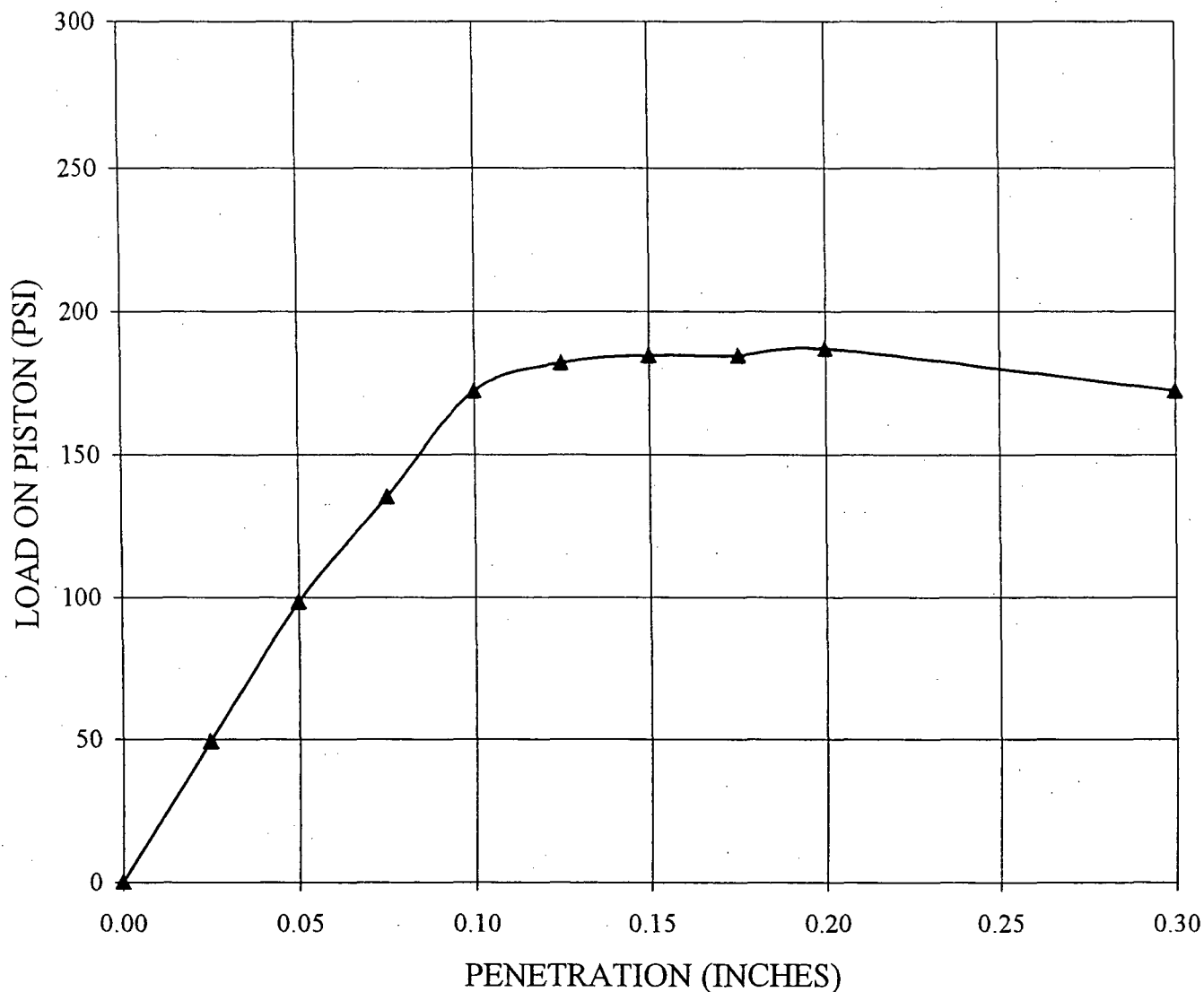
ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland			Contract No.:	06120048.00	Date:	9/29/2006
Boring No.	Depth (ft)	Sample Description					
TP-C-723	2.5-3.5	Clayey SAND, dark brown					
CBR (Unsoaked):	26.8	Soaking Time:		N/A			
Surcharge:	50	PSF	Swell:		N/A		
DRY DENSITY, PCF			MOISTURE CONTENT, %				
Before Soaking:	126.3	Before Soaking:		7.2			
After Soaking:	N/A	After Soaking:		N/A			
Max. Dry Density:	132.8	Optimum Moisture:		7.3			



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SOAKED CBR

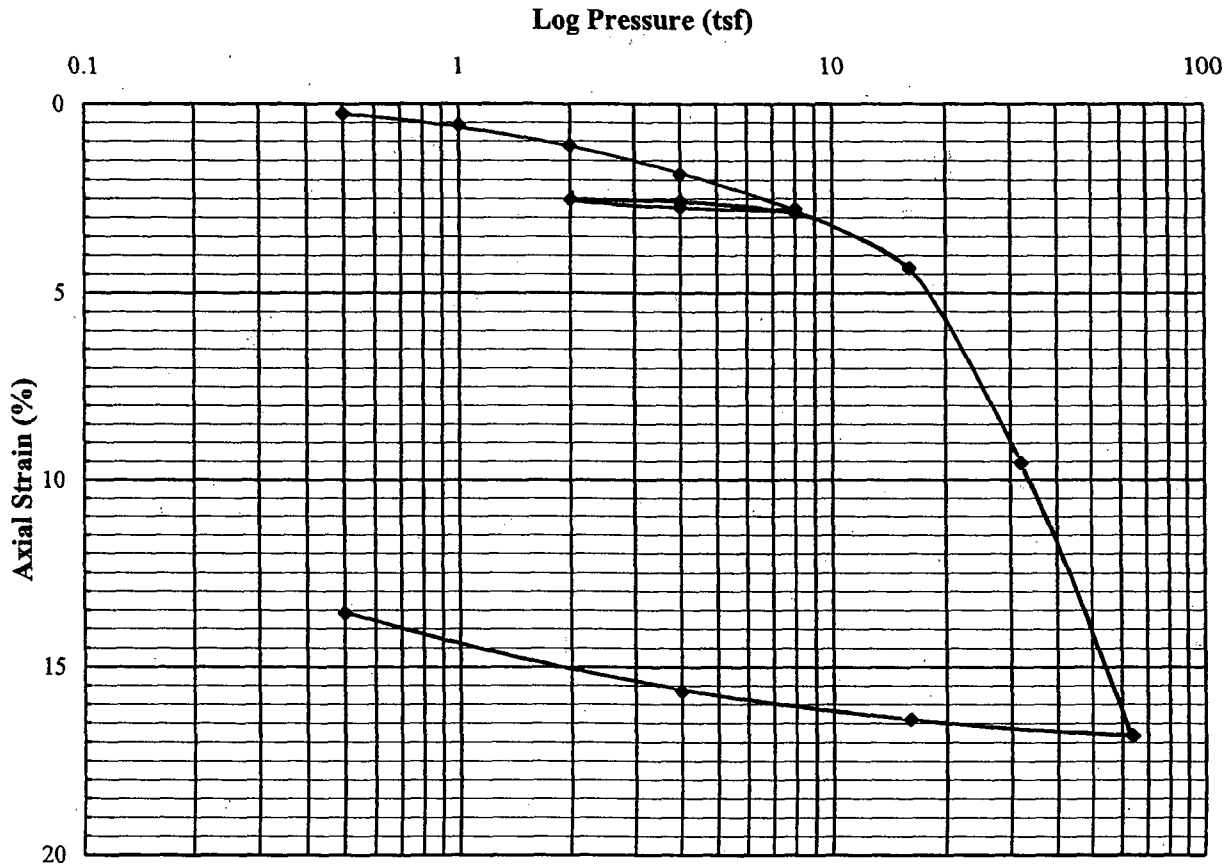


CALIFORNIA BEARING RATIO

ASTM D-1883

Project:	Constellation Energy Group COLA Project, Calvert Cliffs NuclearPower Plant (CCNPP), Calvert County, Maryland		Contract No.:	06120048.00	Date:	9/29/2006
Boring No.	Depth (ft)	Sample Description				
TP-C-723	2.5-3.5	Clayey SAND, dark brown				
CBR (Soaked):	17.2	Soaking Time:	4 Days			
Surcharge:	50 PSF	Swell:	0.5%			
DRY DENSITY, PCF		MOISTURE CONTENT, %				
Before Soaking:	126.3	Before Soaking:	7.2			
After Soaking:	125.5	After Soaking:	9.2			
Max. Dry Density:	132.8	Optimum Moisture:	7.3			

CONSOLIDATION RESULTS



REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/07

Probable Preconsolidation Pressure (Pp), tsf: 20				Recompression Ratio (C_{er}): 0.005	
Type of Specimen: Tube Sample				Compression Ratio (C_{ec}): 0.243	
Description: FAT CLAY (CH), contains mica - gray					
				Initial	Final
LL: 76 PI: 46 Gs: 2.68 P_o' (tsf): 5.15				Water Content, %	36.4 28.6
% < No. 200: 99.5 Test Method: ASTM D2435 Method A				Void Ratio	1.01 0.73
Test Condition: Inundated @ 1 tsf				Saturation, %	97 100
				Dry Unit Weight, pcf	83.3 96.4
Remarks: Coefficient of Consolidation, C _v , equals 2448, 591, and 1764 ft ² /yr at average pressures of 6, 12, and 24 tsf (square root of time method).				Project: Calvert Cliffs Nuclear Power Plant	
Average Water Content of Trimmings, %: 35.3				Location: Calvert County, MD	
				Boring: B-301	Schnabel No.: 06120048
				Depth: 158.5-159.6 ft	Elevation: -61.7 to -62.8
				Date: 10/13/2006	Reviewed by: CJS
				Consolidation Test Report	

Consolidation Test Data Sheet

Consolidometer ID: 5

10/13/06

REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/2007

Schnabel Contract: 06120048

Project: Calvert Cliffs Nuclear Power Plant

Test Method: ASTM D2435 Method A

Test Condition: Inundated @ 1 tsf

Initial Height of Specimen (H_o), in.: 0.7499

Boring No.: B-301

Height of Solids (H_s), in.: 0.3737

Depth: 158.5-159.6 ft

Seating Press. (tsf): 0.05

Initial Dial Gauge Reading (D_o), in.: 0.0000

Reviewed by: CJS

Pressure, P (tsf)	Time Readings Required	Date Load Applied	Time Load Applied	Load Applied By	A	B	C	D	Vertical Strain ⁵ , ϵ_i (%)	Void Ratio ⁶ , e_i
					Final ¹ Dial Reading, D_f $\times 10^{-4}$ in.	Apparatus Correction ² , D_{ci} $\times 10^{-4}$ in.	Cumulative Change in Height ³ , ΔH_i in.	Height of Voids ⁴ , H_{vi} in.		
0.5		9/13/2006	9:00	DWC	31	12	0.0019	0.3743	0.25	1.002
1		9/14/2006	9:00	DWC	63	21	0.0042	0.3720	0.56	0.996
2		9/15/2006	9:00	DWC	117	33	0.0084	0.3678	1.12	0.984
4		9/16/2006	9:00	CJS	179	40	0.0139	0.3623	1.85	0.970
8		9/18/2006	9:15	CJS	258	50	0.0208	0.3554	2.77	0.951
4		9/19/2006	9:25	CJS	244	40	0.0204	0.3558	2.72	0.952
2		9/20/2006	9:25	CJS	222	33	0.0189	0.3573	2.52	0.956
4		9/21/2006	9:25	CJS	233	40	0.0193	0.3569	2.57	0.955
8		9/22/2006	9:25	CJS	265	50	0.0215	0.3547	2.87	0.949
16		9/25/2006	9:30	DWC	389	63	0.0326	0.3436	4.35	0.920
32		9/26/2006	9:25	DWC	791	76	0.0715	0.3047	9.53	0.815
64		9/27/2006	9:25	DWC	1349	87	0.1262	0.2500	16.83	0.669
16		9/28/2006	9:25	DWC	1293	63	0.1230	0.2532	16.40	0.678
4		9/29/2006	9:25	DWC	1214	40	0.1174	0.2588	15.66	0.693
0.5		10/2/2006	9:25	DWC	1031	12	0.1019	0.2743	13.59	0.734

- Notes:
- 1 "Final" based on test method; 24 hrs for Method A, end of primary for Method B.
 - 2 Correction value, for the current pressure, from the consolidometer's calibration curve.
 - 3 $\Delta H = D_f - D_o - D_{ci} = \text{Col. A} - D_o - \text{Col. B}$
 - 4 $H_{vi} = (H_o - H_s) - \Delta H$
 - 5 $\epsilon_i = (\Delta H / H_o) \times 100 = (\text{Col. C} / H_o) \times 100$
 - 6 $e_i = H_{vi} / H_s = \text{Col. D} / H_s$



Load Time Readings

10/13/06

Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

Boring No.: B-301

Depth: 158.5-159.6 ft

Consol. ID: 5

Reviewed by: CJS

Elapsed Time (min.)	Dial Guage Readings (inches)					
	8 tsf	16 tsf	32 tsf	X tsf	X tsf	X tsf
	Initial Load 9/18/2006	Initial Load 9/25/2006	Load 9/26/2006	Load Date	Load Date	Load Date
0.1	0.0229	0.0329	0.0521			
0.25	0.0232	0.0335	0.0550			
0.5	0.0234	0.0339	0.0568			
1	0.0237	0.0343	0.0586			
2	0.0238	0.0346	0.0603			
4	0.0240	0.0350	0.0621			
8	0.0242	0.0353	0.0638			
15	0.0244	0.0357	0.0655			
30	0.0246	0.0361	0.0675			
60	0.0247	0.0365	0.0694			
120	0.0250	0.0370	0.0715			
240	0.0252	0.0375	0.0737			
480	0.0254	0.0380	0.0761			
720	0.0254	0.0383	0.0770			
960	0.0255	0.0385	0.0778			
1200	0.0256	0.0386	0.0785			
1440	0.0258	0.0389	0.0791			
1680						
1920						
2160						
2400						
2640						
2880						



Consolidation Time Curves

10/13/06

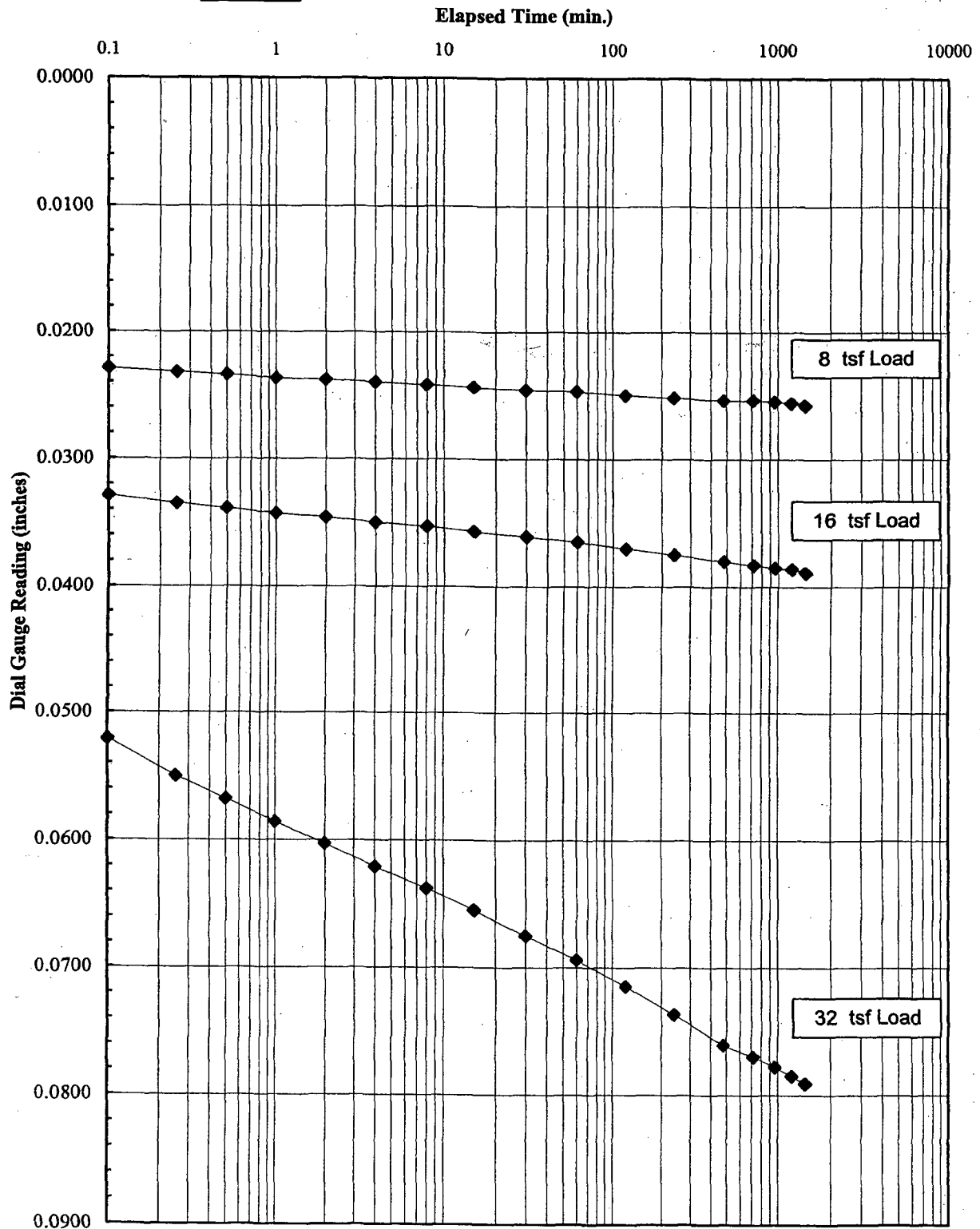
Project: Calvert Cliffs Nuclear Power Plant

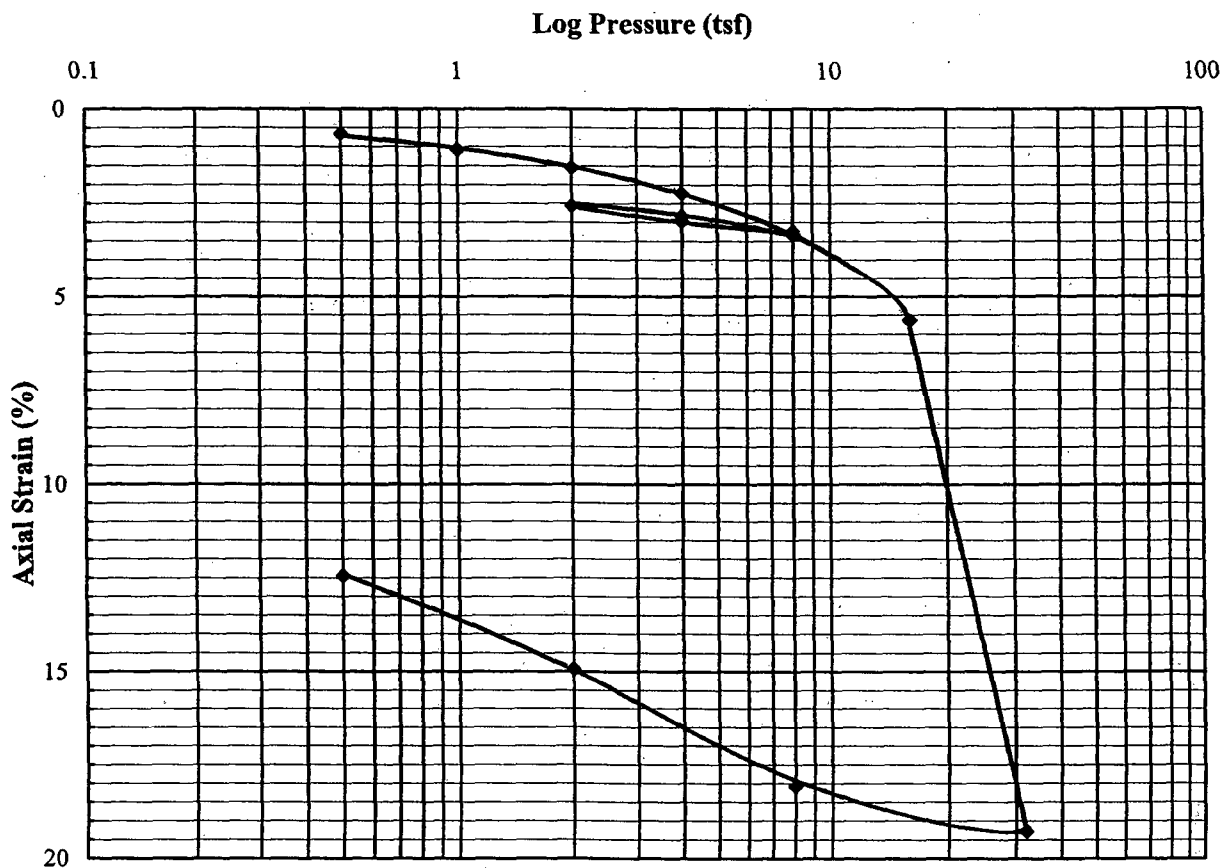
Schnabel Contract: 06120048

Boring No.: B-301

Depth: 158.5-159.6 ft

Reviewed by: CJS





REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/07

Probable Preconsolidation Pressure (Pp), tsf: 16				Recompression Ratio (C_{er}): 0.012		
Type of Specimen: Tube Sample				Compression Ratio (C_{cc}): 0.453		
Description: SANDY FAT CLAY (CH) - gray					Initial	Final
LL: 112	PI: 73	Gs: 2.62	P_u' (tsf): 5.45	Water Content, %	66.4	56.8
% < No. 200: 66.2	Test Method: ASTM D2435 Method A			Void Ratio	1.82	1.46
Test Condition: Inundated @ 1 tsf				Saturation, %	96	100
				Dry Unit Weight, pcf	58.0	66.3
Remarks: Coefficient of Consolidation, C _v , equals 3037, 754, and 110 ft ² /yr at average pressures of 3, 12, and 24 tsf (square root of time method).				Project: Calvert Cliffs Nuclear Power Plant		
Average Water Content of Trimmings, %: 64.9				Location: Calvert County, MD		
				Boring: B-301	Schnabel No.: 06120048	
				Depth: 168.5-170.4 ft	Elevation: -71.7 to -73.6	
				Date: 10/14/2006	Reviewed by: CJS	
				Consolidation Test Report		

Consolidation Test Data Sheet

Consolidometer ID: 2

10/14/06

REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/2007

Schnabel Contract: 06120048

Project: Calvert Cliffs Nuclear Power Plant

Test Method: ASTM D2435 Method A

Test Condition: Inundated @ 1 tsf

Initial Height of Specimen (H_o), in.: 0.7611

Boring No.: B-301

Height of Solids (H_s), in.: 0.2703

Depth: 168.5-170.4 ft

Seating Press. (tsf): 0.05

Initial Dial Gauge Reading (D_o), in.: 0.0000

Reviewed by: CJS

Pressure, P (tsf)	Time Readings Required	Date Load Applied	Time Load Applied	Load Applied By	A	B	C	D	Vertical Strain ⁵ , ϵ_i (%)	Void Ratio ⁶ , e_i
					Final ¹ Dial Reading, D_{fi} $\times 10^{-4}$ in.	Apparatus Correction ² , D_{ci} $\times 10^{-4}$ in.	Cumulative Change in Height ³ , ΔH_i in.	Height of Voids ⁴ , H_{vi} in.		
0.5		9/12/2006	9:15	DWC	61	11	0.0050	0.4858	0.66	1.797
1		9/13/2006	9:15	DWC	97	15	0.0082	0.4826	1.08	1.785
2		9/14/2006	9:15	DWC	139	21	0.0118	0.4790	1.55	1.772
4		9/15/2006	9:15	DWC	198	28	0.0170	0.4738	2.23	1.753
8		9/16/2006	9:15	CJS	283	36	0.0247	0.4661	3.25	1.724
4		9/18/2006	9:20	CJS	255	28	0.0227	0.4681	2.98	1.732
2		9/19/2006	9:30	CJS	216	21	0.0195	0.4713	2.56	1.744
4		9/20/2006	9:30	CJS	244	28	0.0216	0.4692	2.84	1.736
8		9/21/2006	9:30	CJS	290	36	0.0254	0.4654	3.34	1.722
16		9/22/2006	9:35	CJS	474	45	0.0429	0.4479	5.64	1.657
32		9/25/2006	9:35	DWC	1525	57	0.1468	0.3440	19.29	1.273
8		9/27/2006	9:35	DWC	1412	36	0.1376	0.3532	18.08	1.307
2		9/28/2006	9:30	DWC	1158	21	0.1137	0.3771	14.94	1.395
0.5		9/29/2006	9:30	DWC	959	11	0.0948	0.3960	12.46	1.465

- Notes:
- 1 "Final" based on test method; 24 hrs for Method A, end of primary for Method B.
 - 2 Correction value, for the current pressure, from the consolidometer's calibration curve.
 - 3 $\Delta H = D_{fi} - D_o - D_{ci} = \text{Col. A} - D_o - \text{Col. B}$
 - 4 $H_{vi} = (H_o - H_s) - \Delta H$
 - 5 $\epsilon_i = (\Delta H / H_o) \times 100 = (\text{Col. C} / H_o) \times 100$
 - 6 $e_i = H_{vi} / H_s = \text{Col. D} / H_s$

Consol 8/2006 Rev. 1



Load Time Readings

10/14/06

Project: Calvert Cliffs Nuclear Power Plant
 Schnabel Contract: 06120048
 Boring No.: B-301 Depth: 168.5-170.4 ft
 Reviewed by: CJS

Consol. ID: 2

Elapsed Time (min.)	Dial Guage Readings (inches)					
	4 tsf Reload	16 tsf Load	32 tsf Load	X tsf Load	X tsf Load	X tsf Load
	9/20/2006	9/22/2006	9/23/2006	Date	Date	Date
0.1	0.0235	0.0352	0.0591			
0.25	0.0239	0.0368	0.0638			
0.5	0.0239	0.0380	0.0686			
1	0.0239	0.0388	0.0745			
2	0.0240	0.0394	0.0816			
4	0.0240	0.0400	0.0895			
8	0.0240	0.0407	0.0977			
15	0.0240	0.0413	0.1055			
30	0.0241	0.0419	0.1137			
60	0.0241	0.0427	0.1216			
120	0.0242	0.0435	0.1293			
240	0.0242	0.0444	0.1365			
480	0.0245	0.0456	0.1434			
720	0.0245	0.0463	0.1467			
960	0.0244	0.0467	0.1490			
1200	0.0244	0.0471	0.1509			
1440	0.0244	0.0474	0.1525			
1680		0.0478	0.1539			
1920		0.0480	0.1551			
2160		0.0481	0.1559			
2400		0.0484	0.1567			
2640		0.0487	0.1574			
2880		0.0488	0.1580			



Consolidation Time Curves

10/14/06

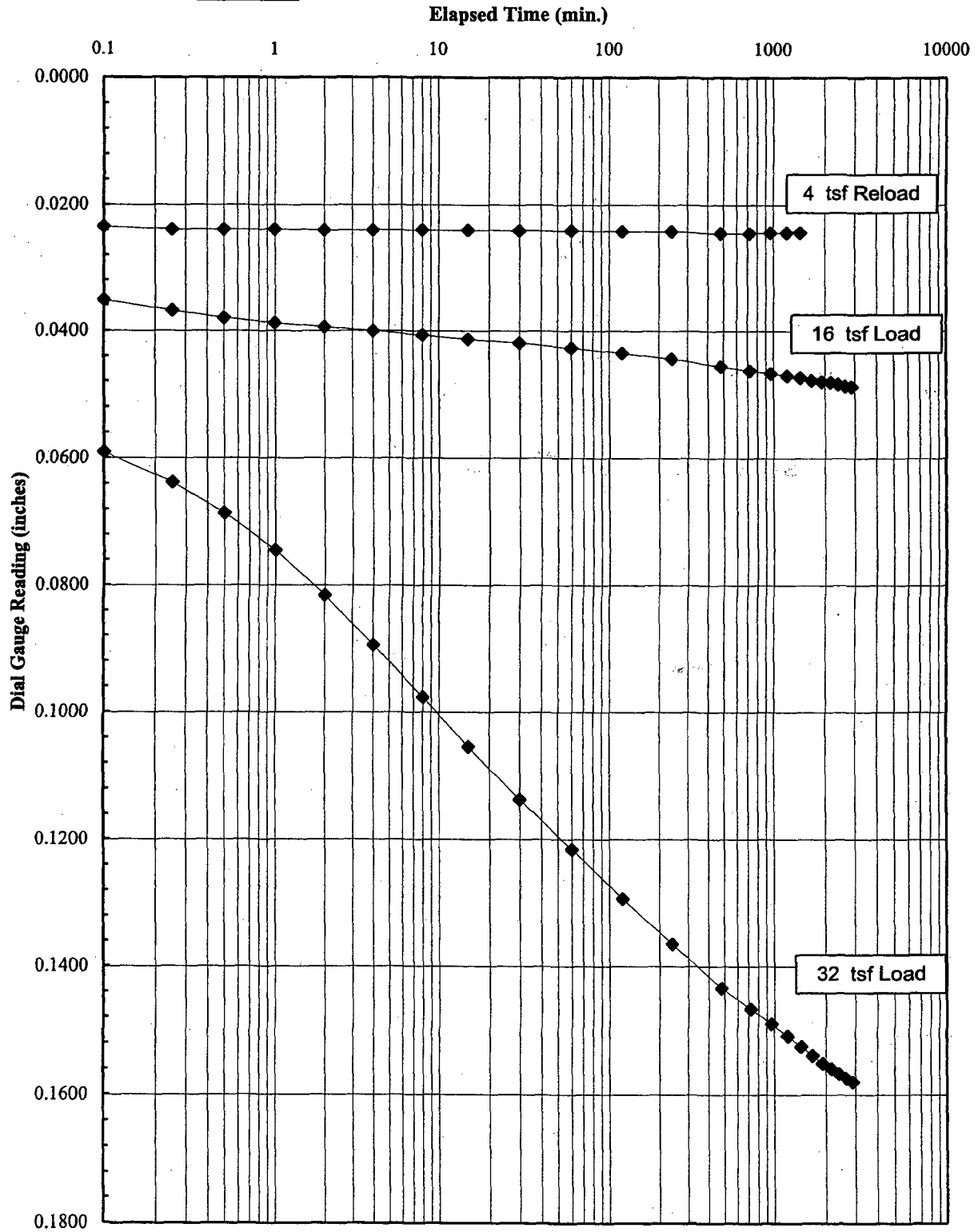
Project: Calvert Cliffs Nuclear Power Plant

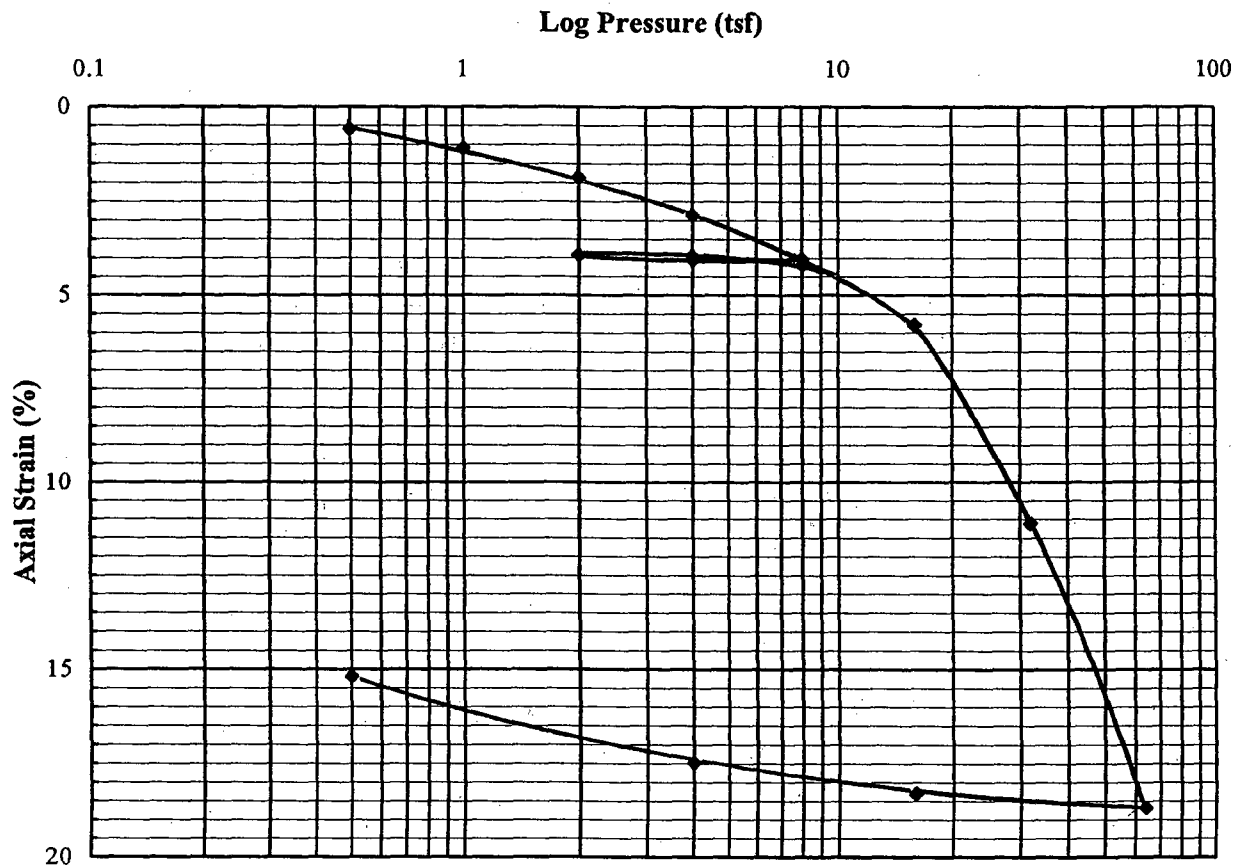
Schnabel Contract: 06120048

Boring No.: B-301

Depth: 168.5-170.4 ft

Reviewed by: CJS





REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/07

Probable Preconsolidation Pressure (Pp), tsf: 20				Recompression Ratio (C_{er}): 0.003	
Type of Specimen: Tube Sample				Compression Ratio (C_{cc}): 0.251	
Description: Fine CLAYEY SAND (SC), contains shell fragments - light gray				Initial	Final
LL: 79	PI: 51	Gs: 2.65	P_o' (tsf): 3.25	Water Content, %	
				Void Ratio	
				Saturation, %	
				Dry Unit Weight, pcf	
% < No. 200: 47.3					
Test Method: ASTM D2435 Method A					
Test Condition: Inundated @ 1 tsf					
Remarks: Coefficient of Consolidation, C _v , equals 2988 and 2703 ft ² /yr at average pressures of 3 and 24 tsf (square root of time method).				Project: Calvert Cliffs Nuclear Power Plant	
Average Water Content of Trimmings, %: 37.2				Location: Calvert County, MD	
				Boring: B-304	Schnabel No.: 06120048
				Depth: 98.5-99.5 ft	Elevation: -30.5 to -31.5
				Date: 10/17/2006	Reviewed by: CJS
				Consolidation Test Report	

Consolidation Test Data Sheet

Consolidometer ID: 4

10/17/06

REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/2007

Schnabel Contract: 06120048

Project: Calvert Cliffs Nuclear Power Plant

Test Method: ASTM D2435 Method A

Test Condition: Inundated @ 1 tsf

Initial Height of Specimen (H_o), in.: 0.7522

Boring No.: B-304

Height of Solids (H_s), in.: 0.3713

Depth: 98.5-99.5 ft

Seating Press. (tsf): 0.05

Initial Dial Gauge Reading (D_o), in.: 0.0001

Reviewed by: CJS

Pressure, P (tsf)	Time Readings Required	Date Load Applied	Time Load Applied	Load Applied By	A	B	C	D	Vertical Strain ⁵ , ϵ_i (%)	Void Ratio ⁶ , e_i
					Final ¹ Dial Reading, D_f $\times 10^{-4}$ in.	Apparatus Correction ² , D_{ci} $\times 10^{-4}$ in.	Cumulative Change in Height ³ , ΔH_i in.	Height of Voids ⁴ , H_{vi} in.		
0.5		9/16/2006	8:55	CJS	82	36	0.0045	0.3764	0.60	1.014
1		9/18/2006	9:05	CJS	128	45	0.0082	0.3727	1.09	1.004
2		9/19/2006	9:10	CJS	199	58	0.0140	0.3669	1.86	0.988
4		9/20/2006	9:10	CJS	285	69	0.0215	0.3594	2.86	0.968
8		9/21/2006	9:10	CJS	388	84	0.0303	0.3506	4.03	0.944
4		9/22/2006	9:15	CJS	375	69	0.0305	0.3504	4.05	0.944
2		9/25/2006	9:45	DWC	354	58	0.0295	0.3514	3.92	0.946
4		9/26/2006	9:45	DWC	367	69	0.0297	0.3512	3.95	0.946
8		9/27/2006	9:40	DWC	400	84	0.0315	0.3494	4.19	0.941
16		9/28/2006	9:40	DWC	540	104	0.0435	0.3374	5.78	0.909
32		9/29/2006	9:40	DWC	960	123	0.0836	0.2973	11.11	0.801
64		10/2/2006	9:15	DWC	1549	143	0.1405	0.2404	18.68	0.647
16		10/3/063	9:15	DWC	1481	104	0.1376	0.2433	18.29	0.655
4		10/4/2006	9:15	DWC	1385	69	0.1315	0.2494	17.48	0.672
0.5		10/5/2006	9:15	DWC	1180	36	0.1143	0.2666	15.20	0.718

- Notes: 1 "Final" based on test method; 24 hrs for Method A, end of primary for Method B.
2 Correction value, for the current pressure, from the consolidometer's calibration curve.
3 $\Delta H = D_f - D_o - D_{ci} = \text{Col. A} - D_o - \text{Col. B}$
4 $H_{vi} = (H_o - H_s) - \Delta H$
5 $\epsilon_i = (\Delta H / H_o) \times 100 = (\text{Col. C} / H_o) \times 100$
6 $e_i = H_{vi} / H_s = \text{Col. D} / H_s$

Consol 8/2006 Rev. 1



Load Time Readings

10/17/06

Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

Boring No.: B-304

Depth: 98.5-99.5 ft

Consol. ID: 4

Reviewed by: CJS

Elapsed Time (min.)	Dial Guage Readings (inches)					
	4 tsf	32 tsf	X tsf	X tsf	X tsf	X tsf
	Initial Load 9/20/2006	Load 9/29/2006	Load Date	Load Date	Load Date	Load Date
0.1	0.0256	0.0687				
0.25	0.0259	0.0711				
0.5	0.0261	0.0728				
1	0.0263	0.0744				
2	0.0264	0.0759				
4	0.0266	0.0776				
8	0.0268	0.0793				
15	0.0270	0.0811				
30	0.0272	0.0832				
60	0.0273	0.0853				
120	0.0276	0.0877				
240	0.0279	0.0902				
480	0.0281	0.0926				
720	0.0281	0.0939				
960	0.0282	0.0948				
1200	0.0283	0.0955				
1440	0.0285	0.0960				
1680		0.0965				
1920		0.0969				
2160		0.0973				
2400		0.0976				
2640		0.0979				
2880		0.0983				

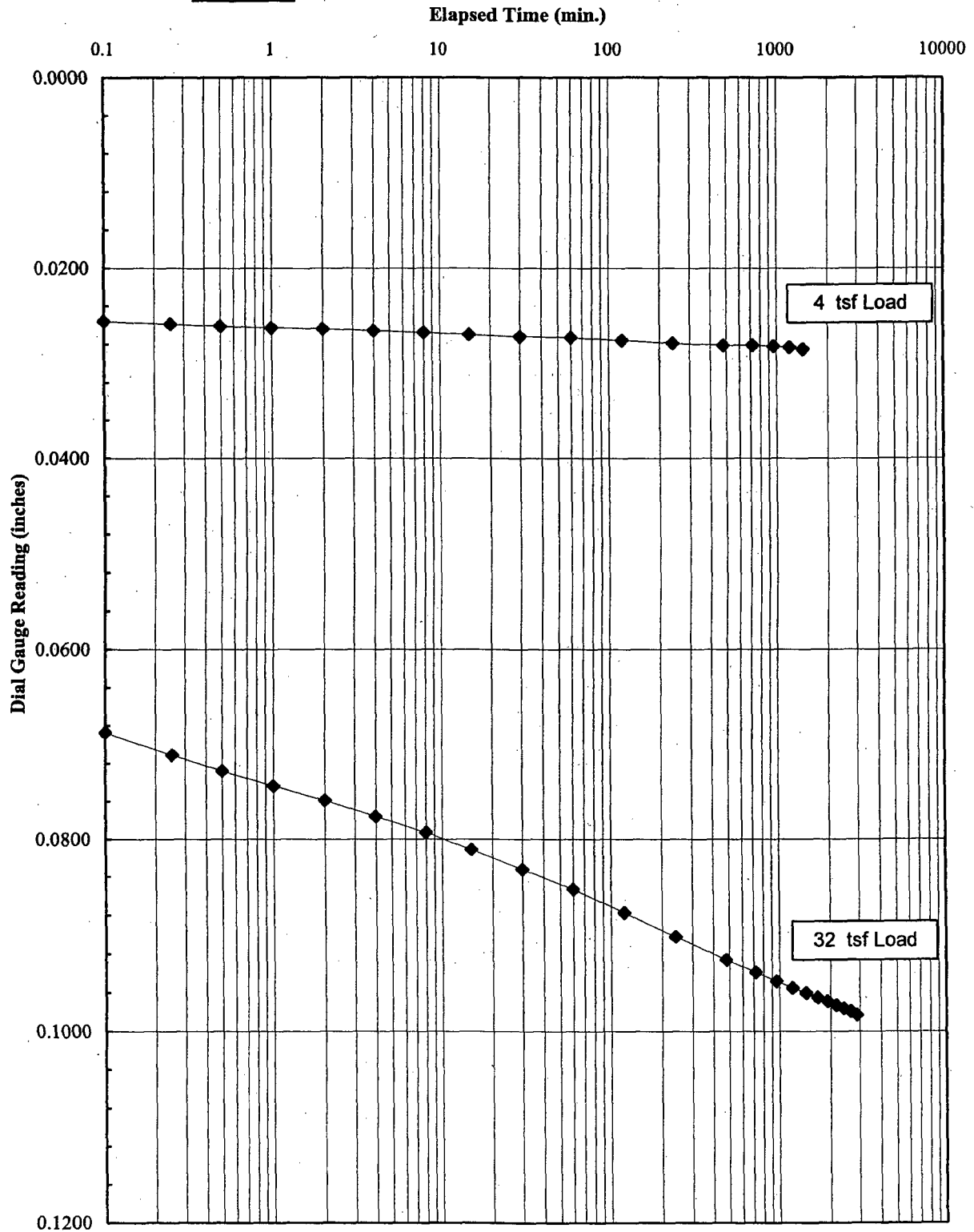


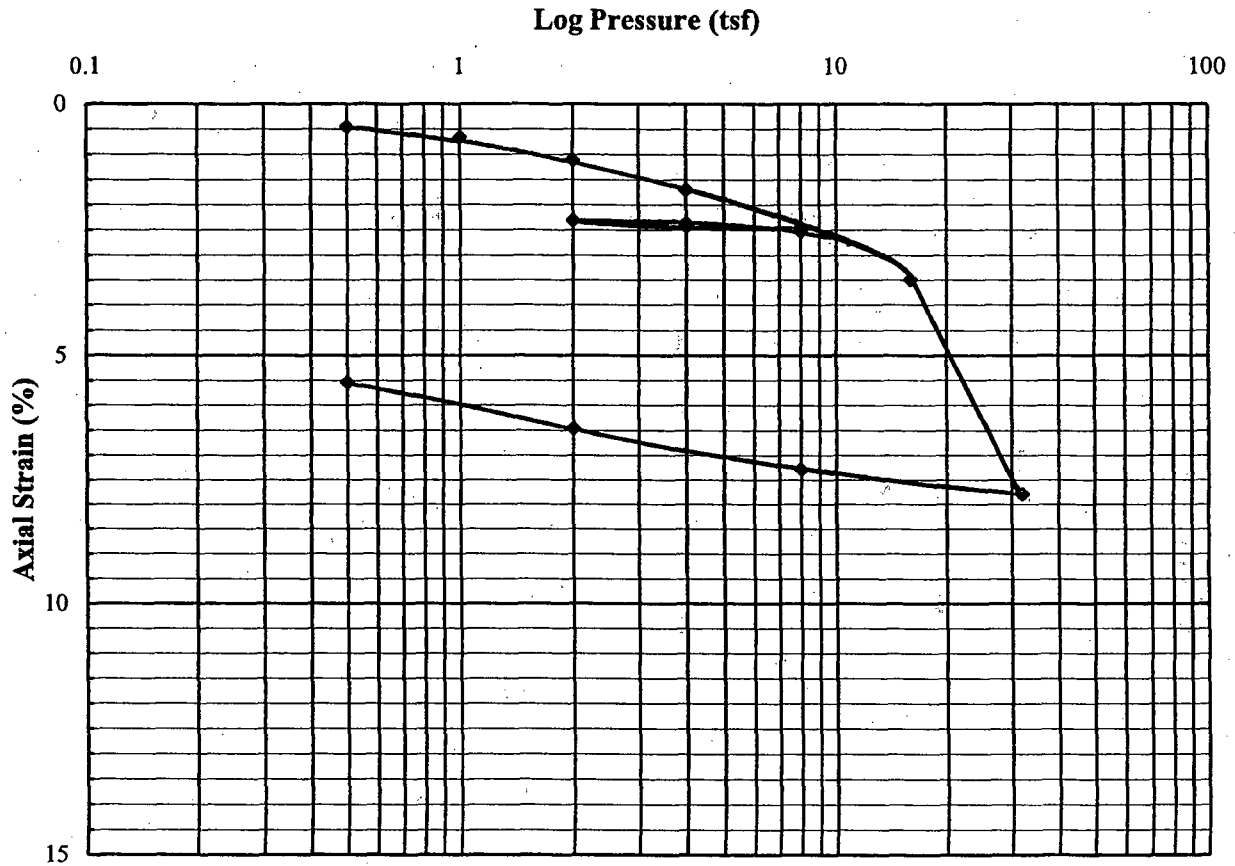
Consolidation Time Curves

10/17/06

Project: Calvert Cliffs Nuclear Power Plant
Schnabel Contract: 06120048
Boring No.: B-304 Depth: 98.5-99.5 ft

Reviewed by: CJS





REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/07

Probable Preconsolidation Pressure (Pp), tsf: 16				Recompression Ratio (C_{er}): 0.003		
Type of Specimen: Tube Sample				Compression Ratio (C_{cc}): 0.143		
Description: Fine CLAYEY SAND (SC) - dark gray					Initial	Final
				Water Content, %	35.2	33.1
LL: 43	PI: 17	Gs: 2.65	P_o' (tsf): 4.35	Void Ratio	0.95	0.84
% < No. 200: 45.7		Test Method: ASTM D2435 Method A		Saturation, %	98	100
Test Condition: Inundated @ 1 tsf				Dry Unit Weight, pcf	84.8	89.8
Remarks: Coefficient of Consolidation, C _v , equals 2943 and 5076 ft ² /yr at average pressures of 3 and 12 tsf (square root of time method).				Project: Calvert Cliffs Nuclear Power Plant		
Average Water Content of Trimmings, %: 33.7				Location: Calvert County, MD		
 Schnabel Engineering				Boring: B-304 Schnabel No.: 06120048		
				Depth: 138.5-139.3 ft Elevation: -70.5 to -71.3		
				Date: 10/17/2006 Reviewed by: CJS		
				Consolidation Test Report		

Consolidation Test Data Sheet

Consolidometer ID: 3

10/17/06

REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/2007

Schnabel Contract: 06120048

Project: Calvert Cliffs Nuclear Power Plant

Test Method: ASTM D2435 Method A

Test Condition: Inundated @ 1 tsf

Initial Height of Specimen (H_o), in.: 0.7468

Boring No.: B-304

Height of Solids (H_s), in.: 0.3832

Depth: 138.5-139.3 ft

Seating Press. (tsf): 0.05

Initial Dial Gauge Reading (D_o), in.: 0.0000

Reviewed by: CJS

Pressure, P (tsf)	Time Readings Required	Date Load Applied	Time Load Applied	Load Applied By	A	B	C	D	Vertical Strain ⁵ , ϵ_i (%)	Void Ratio ⁶ , e_i
					Final ¹ Dial Reading, D_f $\times 10^{-4}$ in.	Apparatus Correction ² , D_{ci} $\times 10^{-4}$ in.	Cumulative Change in Height ³ , ΔH_i in.	Height of Voids ⁴ , H_{vi} in.		
0.5		9/18/2006	9:25	CJS	40	6	0.0034	0.3602	0.46	0.940
1		9/19/2006	9:35	CJS	63	13	0.0050	0.3586	0.67	0.936
2		9/20/2006	9:35	CJS	103	20	0.0083	0.3553	1.11	0.927
4		9/21/2006	9:35	CJS	154	27	0.0127	0.3509	1.70	0.916
8		9/22/2006	9:40	CJS	219	36	0.0183	0.3453	2.45	0.901
4		9/25/2006	9:40	DWC	208	27	0.0181	0.3455	2.42	0.902
2		9/26/2006	9:40	DWC	193	20	0.0173	0.3463	2.32	0.904
4		9/27/2006	9:35	DWC	204	27	0.0177	0.3459	2.37	0.903
8		9/28/2006	9:35	DWC	225	36	0.0189	0.3447	2.53	0.899
16		9/29/2006	9:35	DWC	305	44	0.0261	0.3375	3.50	0.881
32		10/2/2006	9:10	DWC	635	53	0.0582	0.3054	7.79	0.797
8		10/3/2006	9:10	DWC	580	36	0.0544	0.3092	7.28	0.807
2		10/4/2006	9:10	DWC	503	20	0.0483	0.3153	6.47	0.823
0.5		10/5/2006	9:10	DWC	420	6	0.0414	0.3222	5.54	0.841

- Notes:
- 1 "Final" based on test method; 24 hrs for Method A, end of primary for Method B.
 - 2 Correction value, for the current pressure, from the consolidometer's calibration curve.
 - 3 $\Delta H = D_f - D_o - D_{ci} = \text{Col. A} - D_o - \text{Col. B}$
 - 4 $H_{vi} = (H_o - H_s) - \Delta H$
 - 5 $\epsilon_i = (\Delta H / H_o) \times 100 = (\text{Col. C} / H_o) \times 100$
 - 6 $e_i = H_{vi} / H_s = \text{Col. D} / H_s$

Consol 8/2006 Rev. 1



Load Time Readings

10/17/06

Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

Boring No.: B-304

Depth: 138.5-139.3 ft

Consol. ID: 3

Reviewed by: CJS

Elapsed Time (min.)	Dial Guage Readings (inches)					
	4 tsf Reload	16 tsf Load	X tsf Load	X tsf Load	X tsf Load	X tsf Load
	9/27/2006	9/29/2006	Date	Date	Date	Date
0.1	0.0202	0.0275				
0.25	0.0202	0.0278				
0.5	0.0202	0.0280				
1	0.0202	0.0281				
2	0.0202	0.0283				
4	0.0202	0.0285				
8	0.0203	0.0287				
15	0.0203	0.0288				
30	0.0203	0.0291				
60	0.0203	0.0294				
120	0.0203	0.0296				
240	0.0203	0.0299				
480	0.0204	0.0303				
720	0.0204	0.0303				
960	0.0204	0.0304				
1200	0.0204	0.0305				
1440	0.0204	0.0305				
1680		0.0306				
1920		0.0307				
2160		0.0308				
2400		0.0309				
2640		0.0309				
2880		0.0309				



Consolidation Time Curves

10/17/06

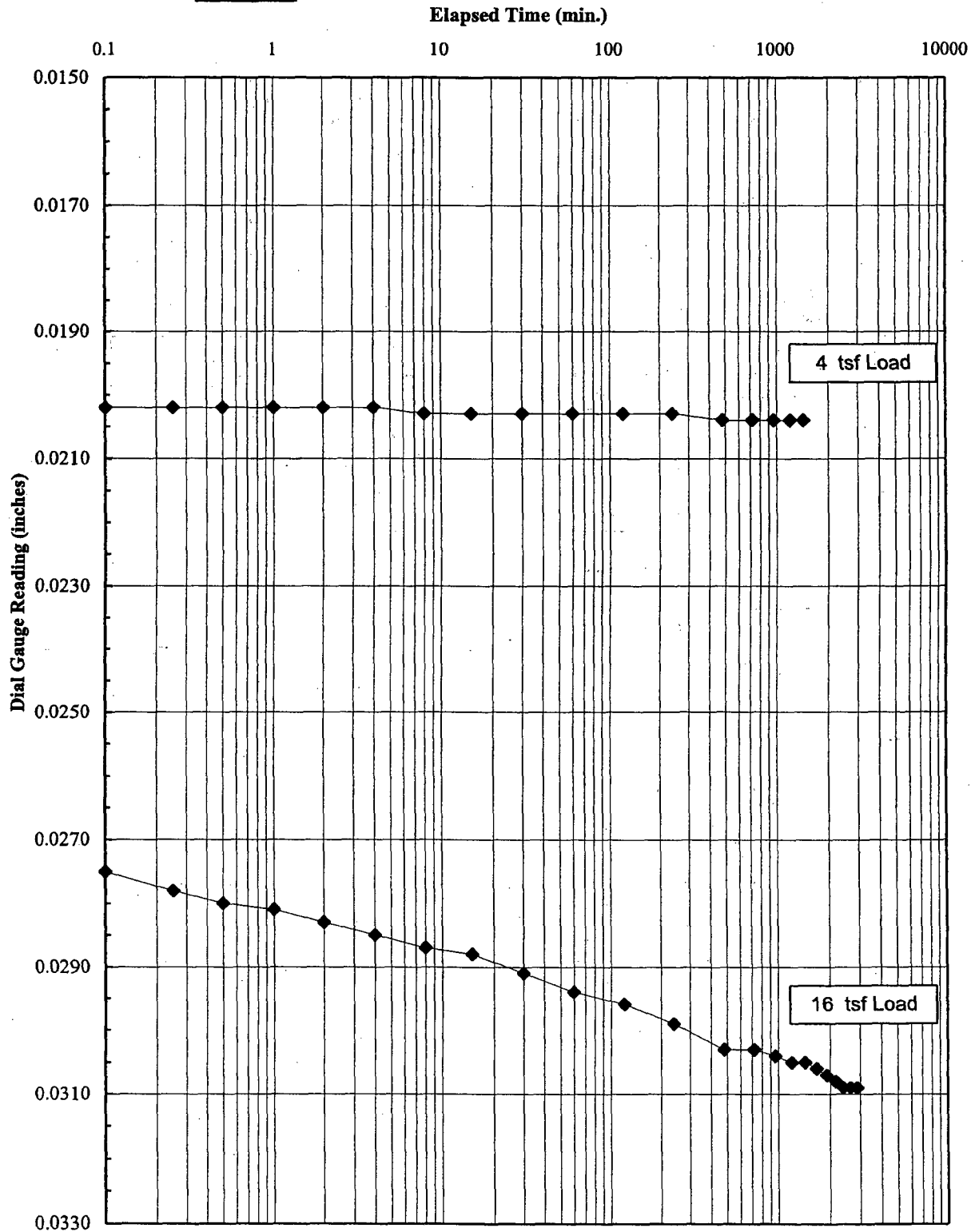
Project: Calvert Cliffs Nuclear Power Plant

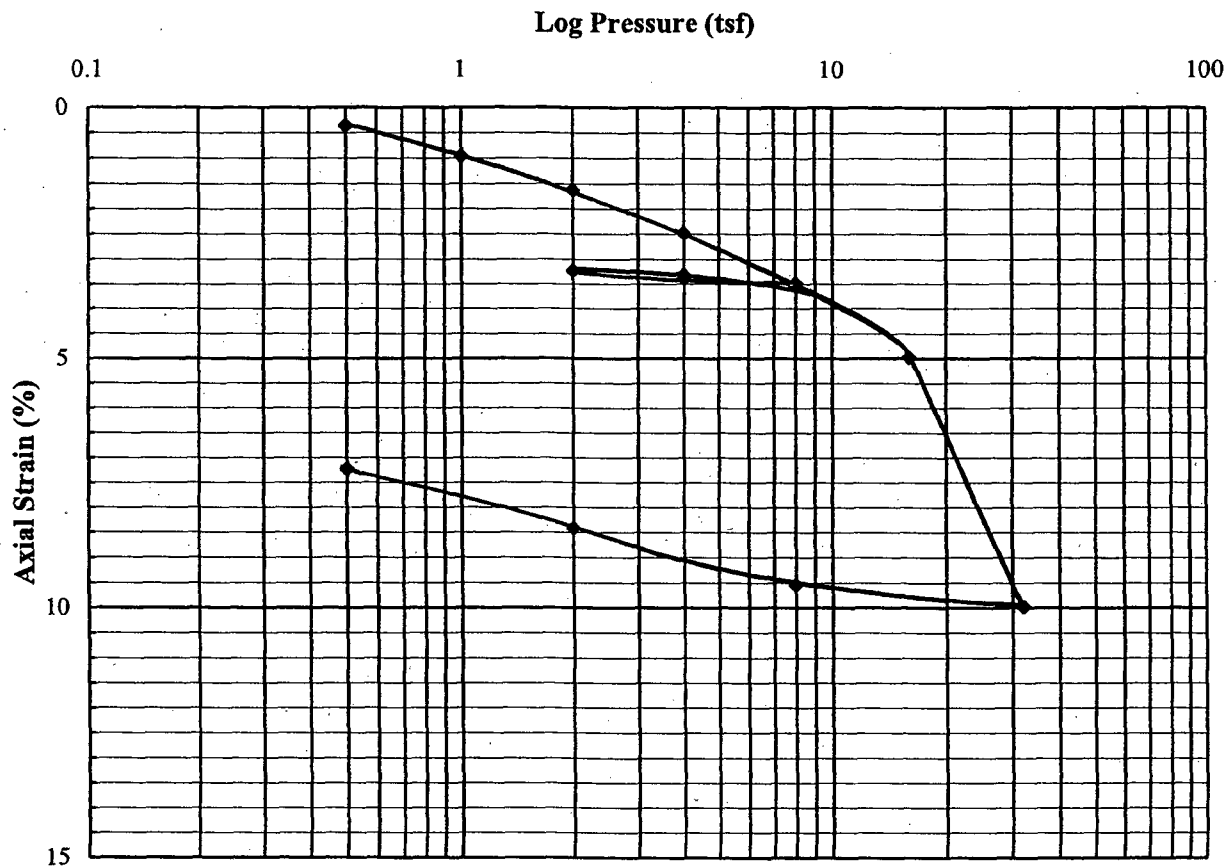
Schnabel Contract: 06120048

Boring No.: B-304

Depth: 138.5-139.3 ft

Reviewed by: CJS





REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/07

Probable Preconsolidation Pressure (Pp), tsf: 16				Recompression Ratio (C_{er}): 0.005		
Type of Specimen: Tube Sample				Compression Ratio (C_c): 0.166		
Description: Sandy LEAN CLAY (CL), contains shells - gray					Initial	Final
				Water Content, %	37.7	34.8
LL: 49	PI: 24	Gs: 2.69	P_o' (tsf): 3.00	Void Ratio	1.07	0.92
% < No. 200: NA		Test Method: ASTM D2435 Method A		Saturation, %	95	100
Test Condition: Inundated @ 0.5 tsf				Dry Unit Weight, pcf	81.2	87.5
Remarks: Coefficient of Consolidation, C _v , equals 2010 ft ² /yr at an average pressure of 24 tsf (square root of time method). Average Water Content of Trimmings, %: 35.7				Project: Calvert Cliffs Nuclear Power Plant		
				Location: Calvert County, MD		
				Boring: B-313	Schnabel No.: 06120048	
				Depth: 93.5-94.7 ft	Elevation: -42.8 to -44.0	
				Date: 11/21/2006	Reviewed by: CJS	
Schnabel Engineering				Consolidation Test Report		

Consolidation Test Data Sheet

Consolidometer ID: 2

11/21/06

REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/2007

Schnabel Contract: 06120048

Project: Calvert Cliffs Nuclear Power Plant

Test Method: ASTM D2435 Method A

Test Condition: Inundated @ 0.5 tsf

Initial Height of Specimen (H_o), in.: 0.7496

Height of Solids (H_s), in.: 0.3626

Boring No.: B-313

Depth: 93.5-94.7 ft

Seating Press. (tsf): 0.05

Initial Dial Gauge Reading (D_o), in.: -0.0002

Reviewed by: CJS

Pressure, P (tsf)	Time Readings Required	Date Load Applied	Time Load Applied	Load Applied By	A	B	C	D	Vertical Strain ⁵ , ϵ_i (%)	Void Ratio ⁶ , e_i
					Final ¹ Dial Reading, D_{fi} $\times 10^{-4}$ in.	Apparatus Correction ² , D_{ci} $\times 10^{-4}$ in.	Cumulative Change in Height ³ , ΔH_i in.	Height of Voids ⁴ , H_{vi} in.		
0.5		10/20/2006	9:05	DWC	36	11	0.0027	0.3843	0.36	1.060
1		10/21/2006	9:05	DWC	85	15	0.0072	0.3798	0.96	1.048
2		10/23/2006	9:05	DWC	141	21	0.0122	0.3748	1.63	1.034
4		10/24/2006	9:05	DWC	212	28	0.0186	0.3684	2.48	1.016
8		10/25/2006	9:05	DWC	295	36	0.0261	0.3609	3.48	0.995
4		10/26/2006	9:05	DWC	281	28	0.0255	0.3615	3.40	0.997
2		10/27/2006	9:05	DWC	261	21	0.0242	0.3628	3.23	1.001
4		10/31/2006	9:05	DWC	274	28	0.0248	0.3622	3.31	0.999
8		11/1/2006	9:05	DWC	300	36	0.0266	0.3604	3.55	0.994
16		11/2/2006	9:05	DWC	416	45	0.0373	0.3497	4.98	0.965
32		11/3/2006	9:05	DWC	803	57	0.0748	0.3122	9.98	0.861
8		11/4/2006	9:05	CJS	741	28	0.0715	0.3155	9.54	0.870
2		11/6/2006	9:05	DWC	650	21	0.0631	0.3239	8.42	0.893
0.5		11/7/2006	9:05	DWC	551	11	0.0542	0.3328	7.23	0.918

- Notes:
- 1 "Final" based on test method; 24 hrs for Method A, end of primary for Method B.
 - 2 Correction value, for the current pressure, from the consolidometer's calibration curve.
 - 3 $\Delta H = D_{fi} - D_o - D_{ci} = \text{Col. A} - D_o - \text{Col. B}$
 - 4 $H_{vi} = (H_o - H_s) - \Delta H$
 - 5 $\epsilon_i = (\Delta H / H_o) \times 100 = (\text{Col. C} / H_o) \times 100$
 - 6 $e_i = H_{vi} / H_s = \text{Col. D} / H_s$

Consol 8/2006 Rev. 1



Load Time Readings

11/21/06

Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

Boring No.: B-313

Depth: 93.5-94.7 ft

Consol. ID: 2

Reviewed by: CJS

Elapsed Time (min.)	Dial Guage Readings (inches)					
	4 tsf Reload	32 tsf Load	X tsf Load	X tsf Load	X tsf Load	X tsf Load
	10/31/2006	11/3/2006	Date	Date	Date	Date
0.1	0.0271	0.0556				
0.25	0.0272	0.0577				
0.5	0.0272	0.0590				
1	0.0272	0.0603				
2	0.0272	0.0616				
4	0.0272	0.0629				
8	0.0272	0.0644				
15	0.0272	0.0660				
30	0.0272	0.0678				
60	0.0273	0.0699				
120	0.0273	0.0722				
240	0.0274	0.0747				
480	0.0274	0.0771				
720	0.0274	0.0783				
960	0.0274	0.0791				
1200	0.0274	0.0798				
1440	0.0274	0.0803				
1680						
1920						
2160						
2400						
2640						
2880						

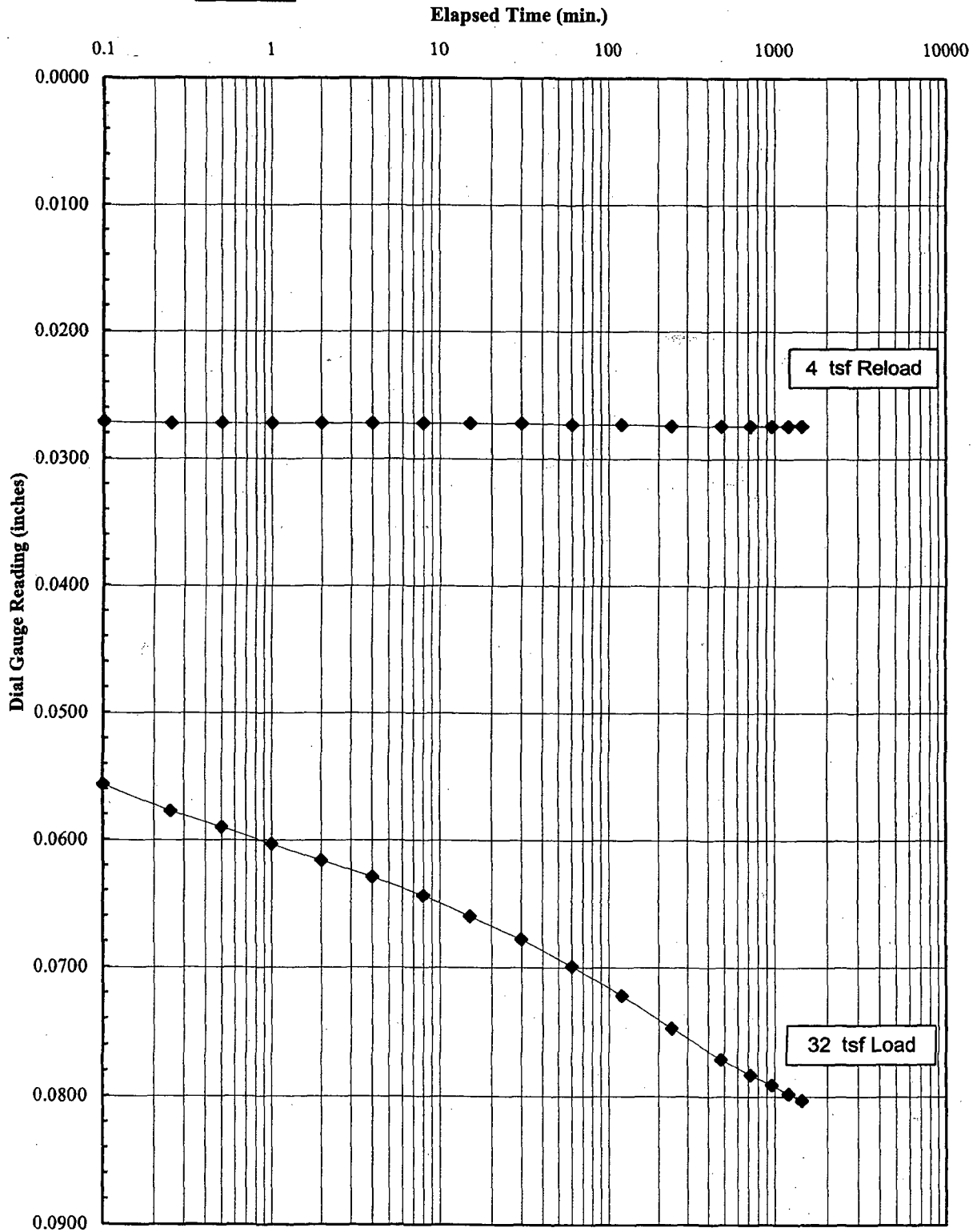


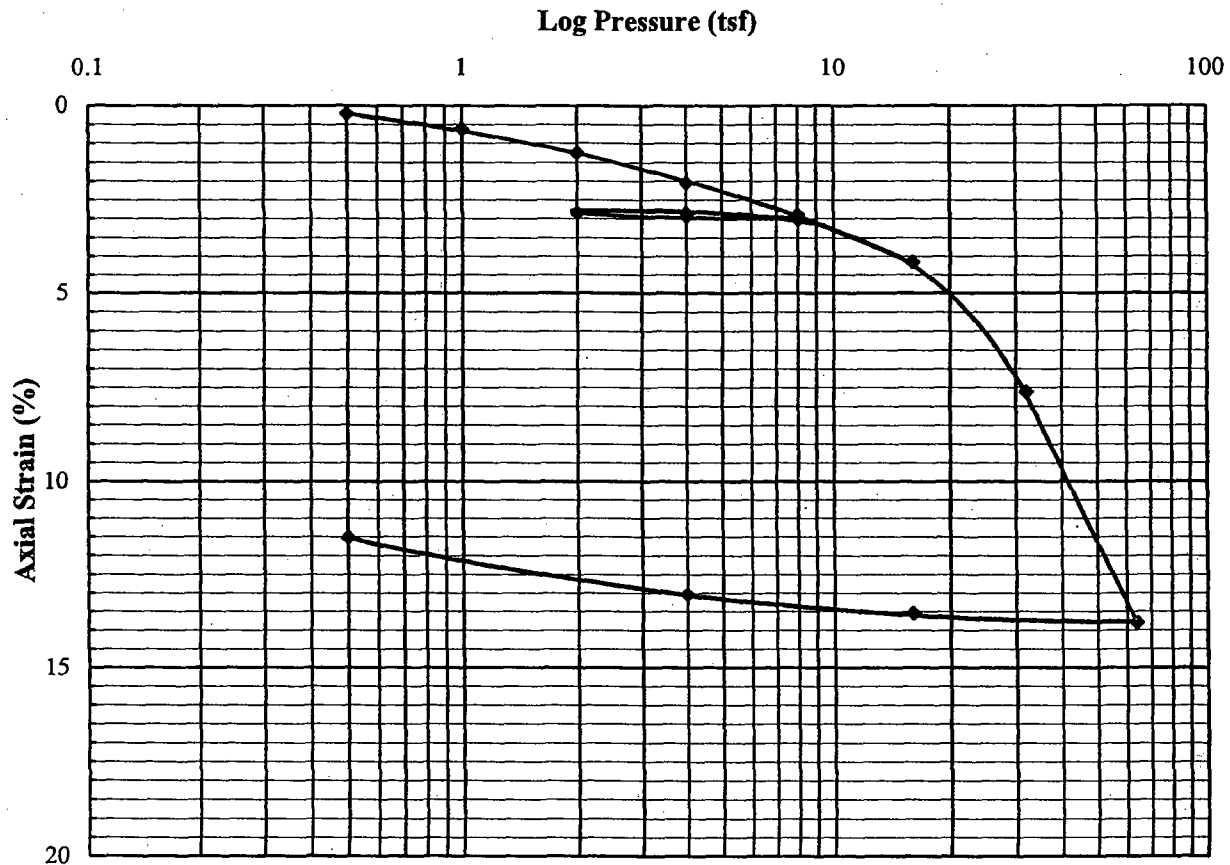
Consolidation Time Curves

11/21/06

Project: Calvert Cliffs Nuclear Power Plant
Schnabel Contract: 06120048
Boring No.: B-313 Depth: 93.5-94.7 ft

Reviewed by: CJS





REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/07

Probable Preconsolidation Pressure (Pp), tsf: 23				Recompression Ratio (C_{er}): 0.002		
Type of Specimen: Tube Sample				Compression Ratio (C_{ec}): 0.205		
Description: Fine CLAYEY SAND (SC) - dark green gray					Initial	Final
LL: 44	PI: 18	Gs: 2.67	P_o' (tsf): 3.85	Water Content, %	35.5	29.0
% < No. 200: NA		Test Method: ASTM D2435 Method A		Void Ratio	0.98	0.75
Test Condition: Inundated @ 1 tsf				Saturation, %	97	100
				Dry Unit Weight, pcf	84.3	95.3
Remarks: Coefficient of Consolidation, C _v , equals 1265 ft ² /yr at an average pressure of 24 tsf (square root of time method).				Project: Calvert Cliffs Nuclear Power Plant		
Average Water Content of Trimmings, %: 35.5				Location: Calvert County, MD		
				Boring: B-313	Schnabel No.: 06120048	
				Depth: 123.5-124.3 ft	Elevation: -72.8 to -73.6	
				Date: 11/21/2006	Reviewed by: CJS	
				Consolidation Test Report		

Consolidation Test Data Sheet

Consolidometer ID: 4

11/21/06

REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/2007

Schnabel Contract: 06120048

Project: Calvert Cliffs Nuclear Power Plant

Test Method: ASTM D2435 Method A

Test Condition: Inundated @ 1 tsf

Initial Height of Specimen (H_o), in.: 0.7506

Height of Solids (H_s), in.: 0.3800

Boring No.: B-313

Depth: 123.5-124.3 ft

Seating Press. (tsf): 0.05

Initial Dial Gauge Reading (D_o), in.: 0.0000

Reviewed by: CJS

Pressure, P (tsf)	Time Readings Required	Date Load Applied	Time Load Applied	Load Applied By	A	B	C	D	Vertical Strain ⁵ , ϵ_i (%)	Void Ratio ⁶ , e_i
					Final ¹ Dial Reading, D_{fi} $\times 10^{-4}$ in.	Apparatus Correction ² , D_{ci} $\times 10^{-4}$ in.	Cumulative Change in Height ³ , ΔH_i in.	Height of Voids ⁴ , H_{vi} in.		
0.5		10/26/2006	9:15	DWC	52	36	0.0016	0.3690	0.21	0.971
1		10/27/2006	9:15	DWC	92	45	0.0047	0.3659	0.63	0.963
2		10/28/2006	9:15	CJS	152	58	0.0094	0.3612	1.25	0.951
4		10/30/2006	9:15	DWC	222	69	0.0153	0.3553	2.04	0.935
8		10/31/2006	9:15	DWC	302	84	0.0218	0.3488	2.90	0.918
4		11/1/2006	9:15	DWC	289	69	0.0220	0.3486	2.93	0.918
2		11/2/2006	9:15	DWC	272	58	0.0214	0.3492	2.85	0.919
4		11/3/2006	9:15	DWC	283	69	0.0214	0.3492	2.85	0.919
8		11/4/2006	9:15	CJS	310	84	0.0226	0.3480	3.01	0.916
16		11/6/2006	9:15	DWC	416	104	0.0312	0.3394	4.16	0.893
32		11/7/2006	9:15	DWC	704	132	0.0572	0.3134	7.62	0.825
64		11/8/2006	9:15	DWC	1179	143	0.1036	0.2670	13.80	0.703
16		11/9/2006	9:15	DWC	1121	104	0.1017	0.2689	13.55	0.708
4		11/10/2006	9:15	DWC	1048	69	0.0979	0.2727	13.04	0.718
0.5		11/11/2006	9:15	DWC	901	36	0.0865	0.2841	11.52	0.748

- Notes:
- 1 "Final" based on test method; 24 hrs for Method A, end of primary for Method B.
 - 2 Correction value, for the current pressure, from the consolidometer's calibration curve.
 - 3 $\Delta H = D_{fi} - D_o - D_{ci} = \text{Col. A} - D_o - \text{Col. B}$
 - 4 $H_{vi} = (H_o - H_s) - \Delta H$
 - 5 $\epsilon_i = (\Delta H / H_o) \times 100 = (\text{Col. C} / H_o) \times 100$
 - 6 $e_i = H_{vi} / H_s = \text{Col. D} / H_s$

Consol 8/2006 Rev. 1



Load Time Readings

11/21/06

Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

Boring No.: B-313

Depth: 123.5-124.3 ft

Consol. ID: 4

Reviewed by: CJS

Elapsed Time (min.)	Dial Guage Readings (inches)					
	4 tsf Reload	32 tsf Load	X tsf Load	X tsf Load	X tsf Load	X tsf Load
	11/3/2006	11/7/2006	Date	Date	Date	Date
0.1	0.0283	0.0526				
0.25	0.0283	0.0549				
0.5	0.0283	0.0559				
1	0.0283	0.0571				
2	0.0283	0.0578				
4	0.0283	0.0588				
8	0.0283	0.0600				
15	0.0283	0.0610				
30	0.0283	0.0622				
60	0.0283	0.0634				
120	0.0283	0.0652				
240	0.0283	0.0666				
480	0.0283	0.0682				
720	0.0283	0.0690				
960	0.0283	0.0695				
1200	0.0283	0.0701				
1440	0.0283	0.0704				
1680						
1920						
2160						
2400						
2640						
2880						



Consolidation Time Curves

11/21/06

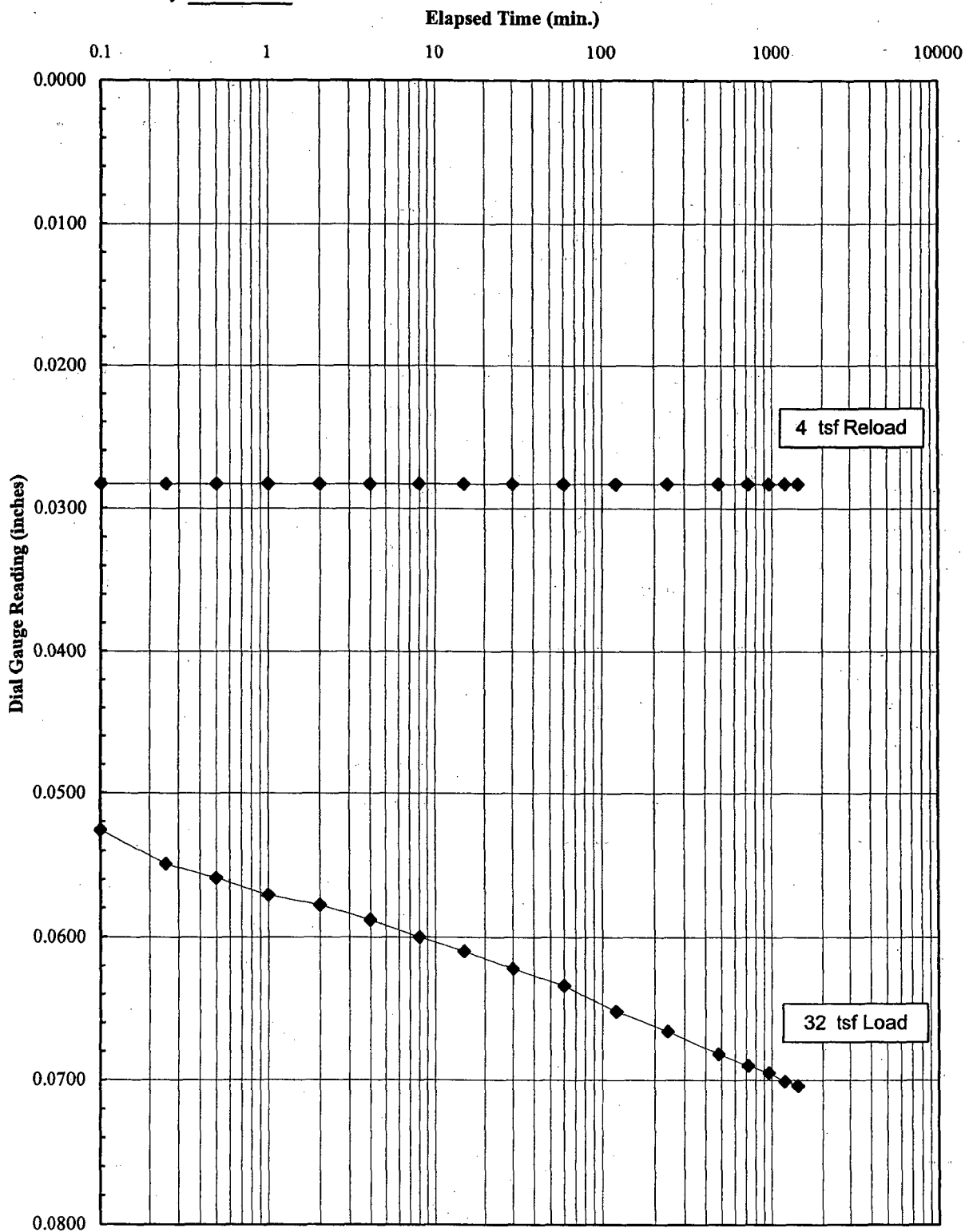
Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

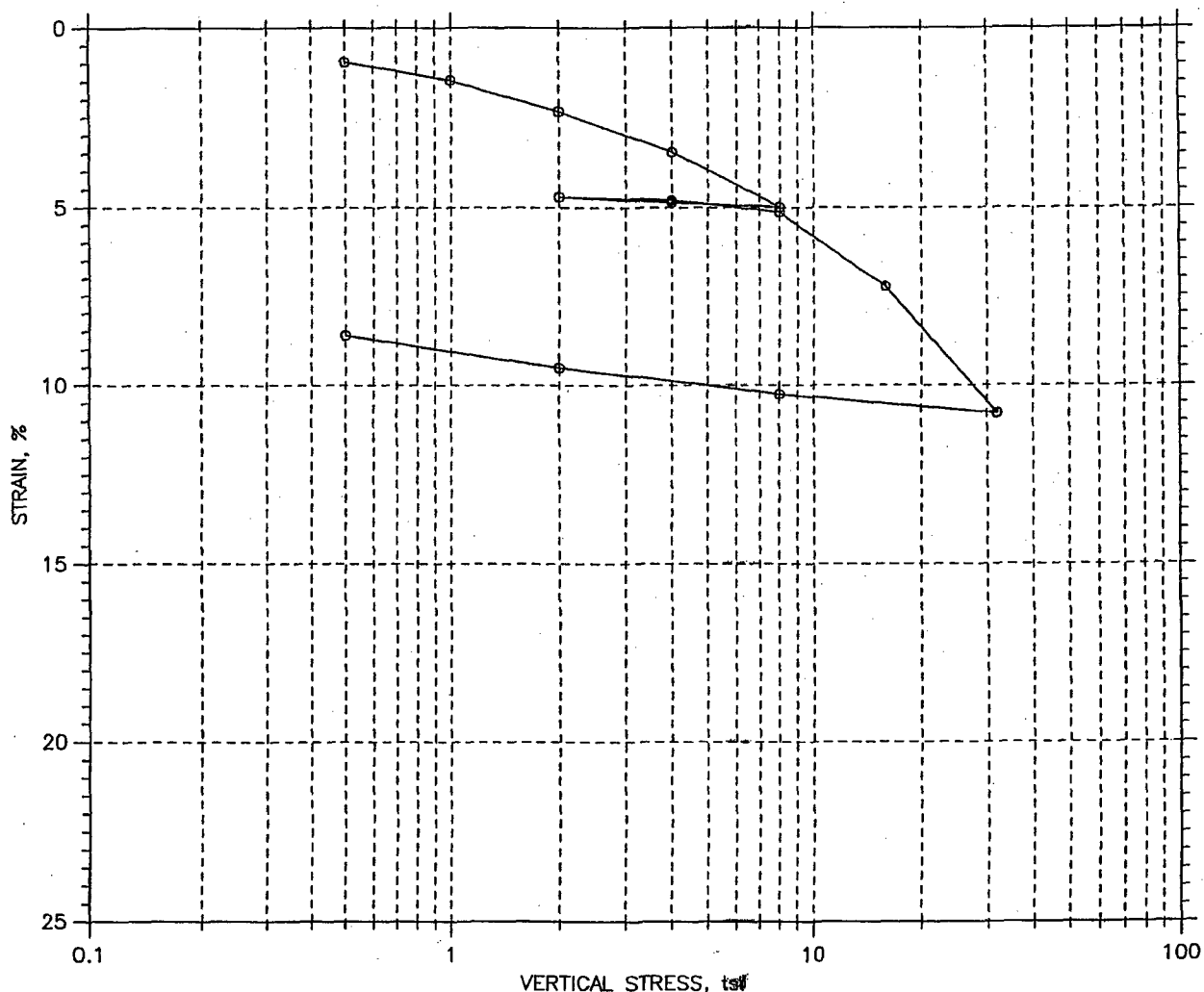
Boring No.: B-313

Depth: 123.5-124.3 ft

Reviewed by: CJS



CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	28.80	25.45
Preconsolidation Pressure: 10.5 tsf				Dry Unit Weight, pcf	92.1	100.8
Compression Index: ---				Saturation, %	92.05	99.99
Diameter: 2.5 in		Height: 1 in		Void Ratio	0.86	0.70
LL: 54	PL: 11	PI: 43	GS: 2.74			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-314	Tested By: jdt	Checked By: njh
	Sample No.: S-6	Test Date: 08/24/06	Depth: 13.5-14.5ft
	Test No.: C1	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray clayey sand (SC), 35% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.11, Recompression Ratio: 0.01		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-314
Sample No.: S-6
Test No.: C1

Location: Calvert County, MD
Tested By: jdt
Test Date: 08/24/06
Sample Type: tube

Project No.: GTX-6880
Checked By: njh
Depth: 13.5-14.5ft
Elevation: ---

Soil Description: Moist, dark olive gray clayey sand (SC), 35% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: 0.11, Recompression Ratio: 0.01

Measured Specific Gravity: 2.74
Initial Void Ratio: 0.86
Final Void Ratio: 0.70

Liquid Limit: 54
Plastic Limit: 11
Plasticity Index: 43

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimming	Specimen+Ring	Specimen+Ring	Trimming
	2047	RING		986
Wt. Container + Wet Soil, gm	101.15	360.51	356.54	158.24
Wt. Container + Dry Soil, gm	81.92	326.33	326.33	127.75
Wt. Container, gm	8.12	207.66	207.66	7.96
Wt. Dry Soil, gm	73.8	118.67	118.67	119.79
Water Content, %	26.06	28.80	25.45	25.45
Void Ratio	---	0.86	0.70	---
Degree of Saturation, %	---	92.05	99.99	---
Dry Unit Weight, pcf	---	92.101	100.77	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-314
Sample No.: S-6
Test No.: C1

Location: Calvert County, MD
Tested By: jdt
Test Date: 08/24/06
Sample Type: tube

Project No.: GTX-6880
Checked By: njh
Depth: 13.5-14.5ft
Elevation: ---

Soil Description: Moist, dark olive gray clayey sand (SC), 35% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: 0.11, Recompression Ratio: 0.01

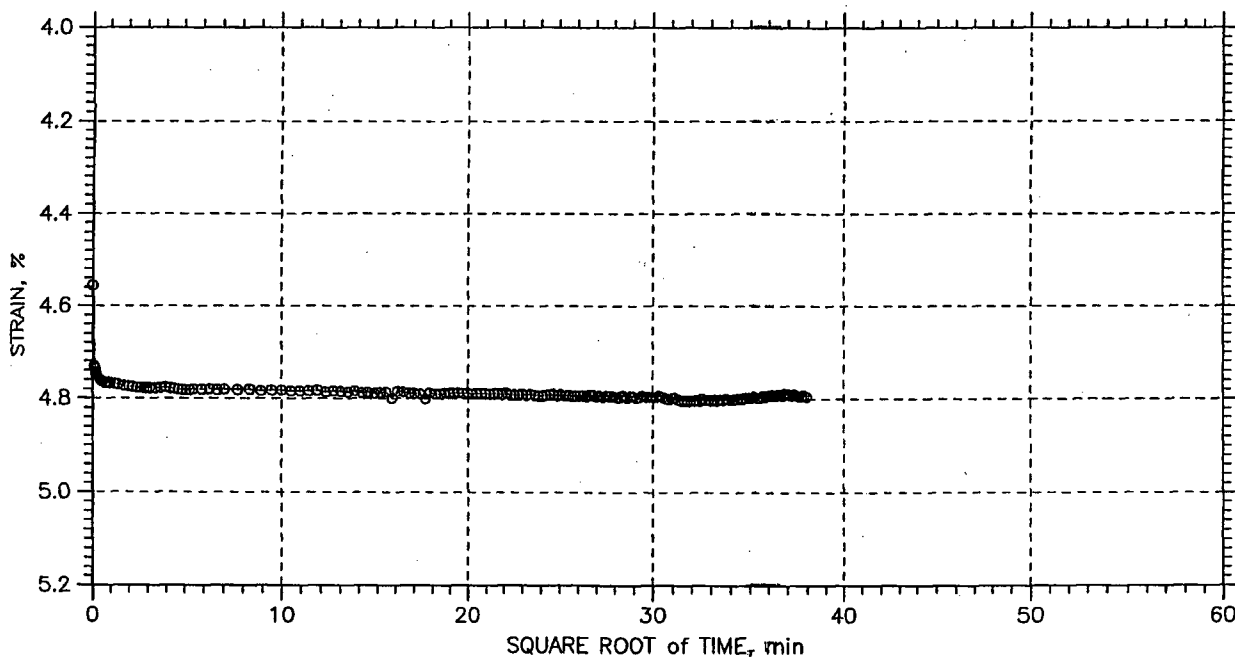
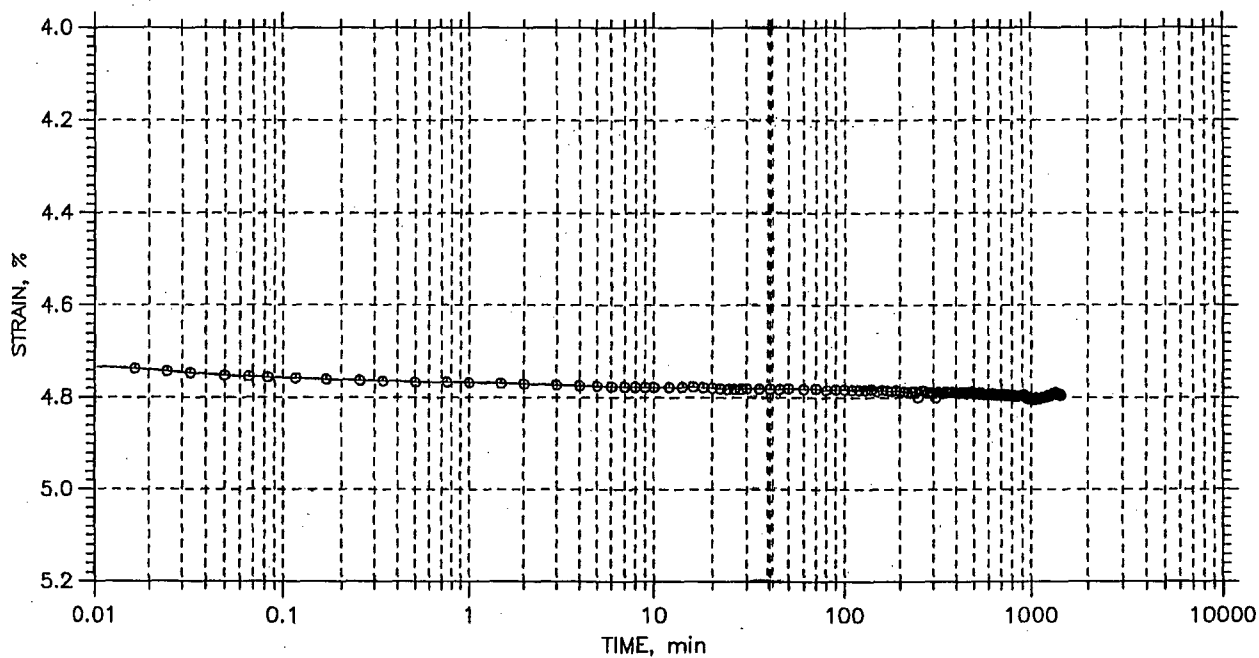
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in^2/sec	Log in^2/sec	Ave. in^2/sec
1	0.5	0.009464	0.840	0.95	0.1	0.0	9.85e-003	0.00e+000	9.85e-003
2	1	0.01458	0.830	1.46	0.3	0.0	2.45e-003	0.00e+000	2.45e-003
3	2	0.02315	0.814	2.32	0.3	0.0	2.47e-003	0.00e+000	2.47e-003
4	4	0.03457	0.793	3.46	0.3	0.0	2.38e-003	0.00e+000	2.38e-003
5	8	0.04982	0.765	4.98	0.4	0.0	1.93e-003	0.00e+000	1.93e-003
6	4	0.04863	0.767	4.86	0.6	0.0	1.34e-003	0.00e+000	1.34e-003
7	2	0.04696	0.770	4.70	0.8	0.0	9.72e-004	0.00e+000	9.72e-004
8	4	0.04795	0.768	4.79	2.7	0.0	2.81e-004	0.00e+000	2.81e-004
9	8	0.05121	0.762	5.12	0.4	0.0	1.86e-003	0.00e+000	1.86e-003
10	16	0.07236	0.723	7.24	0.4	0.0	1.76e-003	0.00e+000	1.76e-003
11	32	0.1079	0.657	10.79	0.5	0.0	1.34e-003	0.00e+000	1.34e-003
12	8	0.1025	0.667	10.25	0.3	0.0	2.16e-003	0.00e+000	2.16e-003
13	2	0.09503	0.681	9.50	0.9	0.0	7.24e-004	0.00e+000	7.24e-004
14	0.5	0.08603	0.697	8.60	1.9	0.0	3.65e-004	0.00e+000	3.65e-004

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



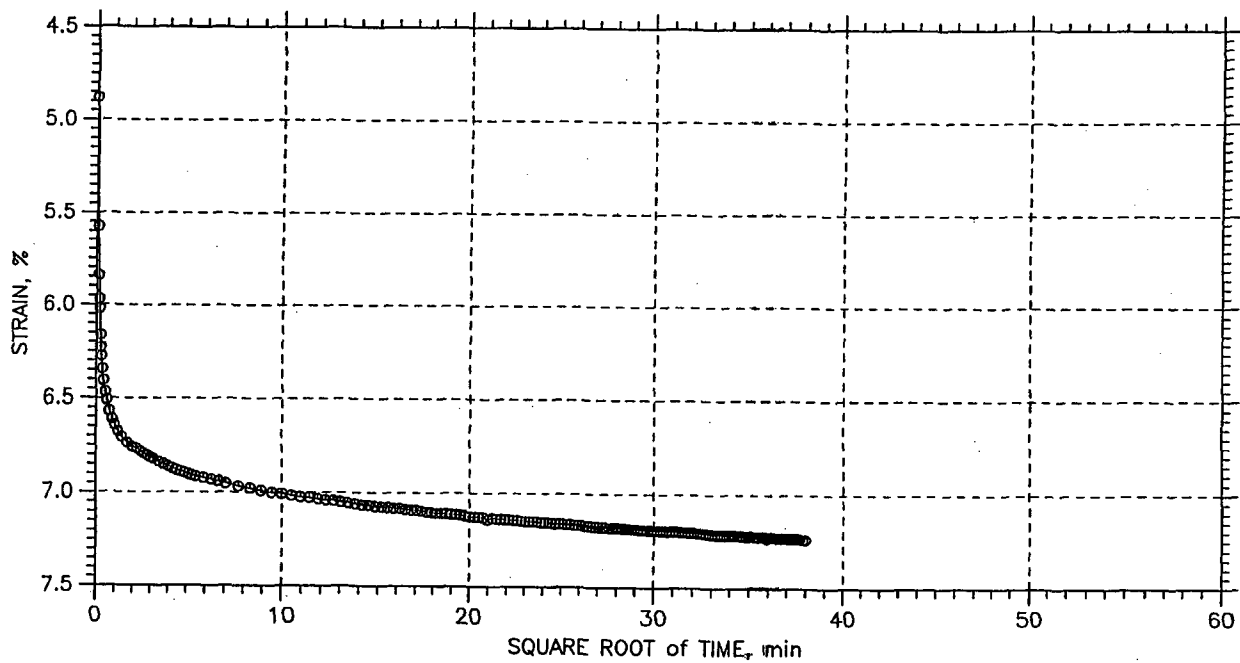
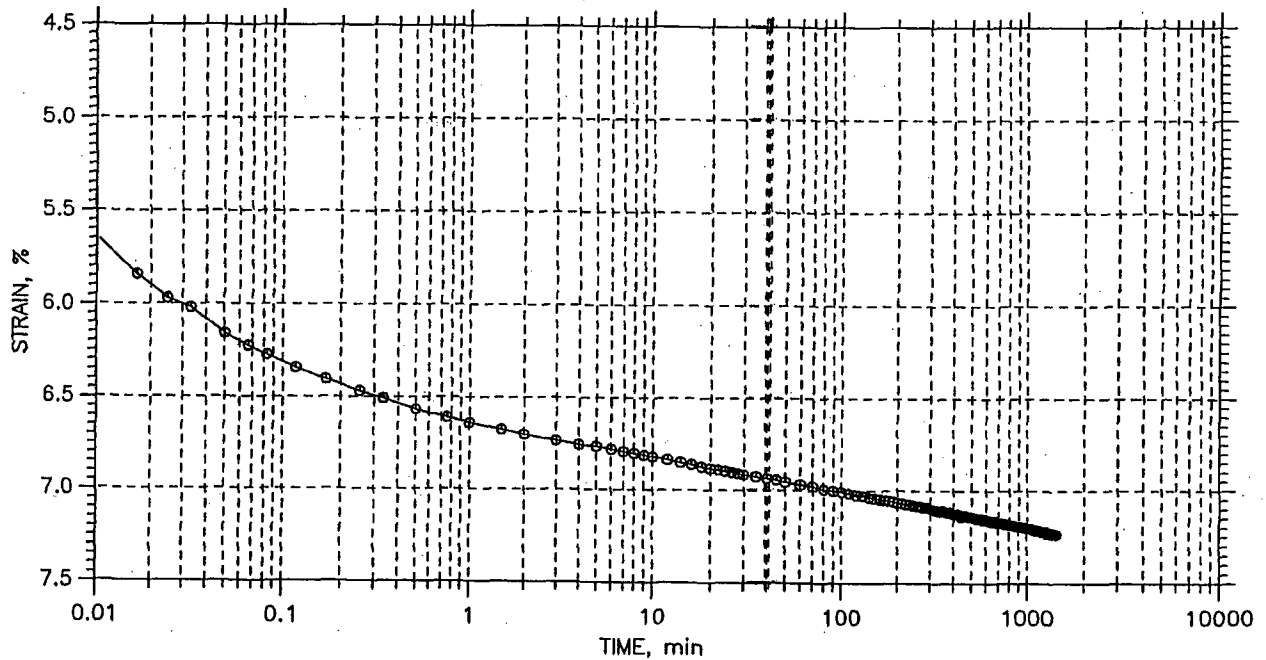
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-314	Tested By: jdt	Checked By: njh
	Sample No.: S-6	Test Date: 08/24/06	Depth: 13.5-14.5ft
	Test No.: C1	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray clayey sand (SC), 35% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.11, Recompression Ratio: 0.01		

CONSOLIDATION TEST DATA

TIME CURVES

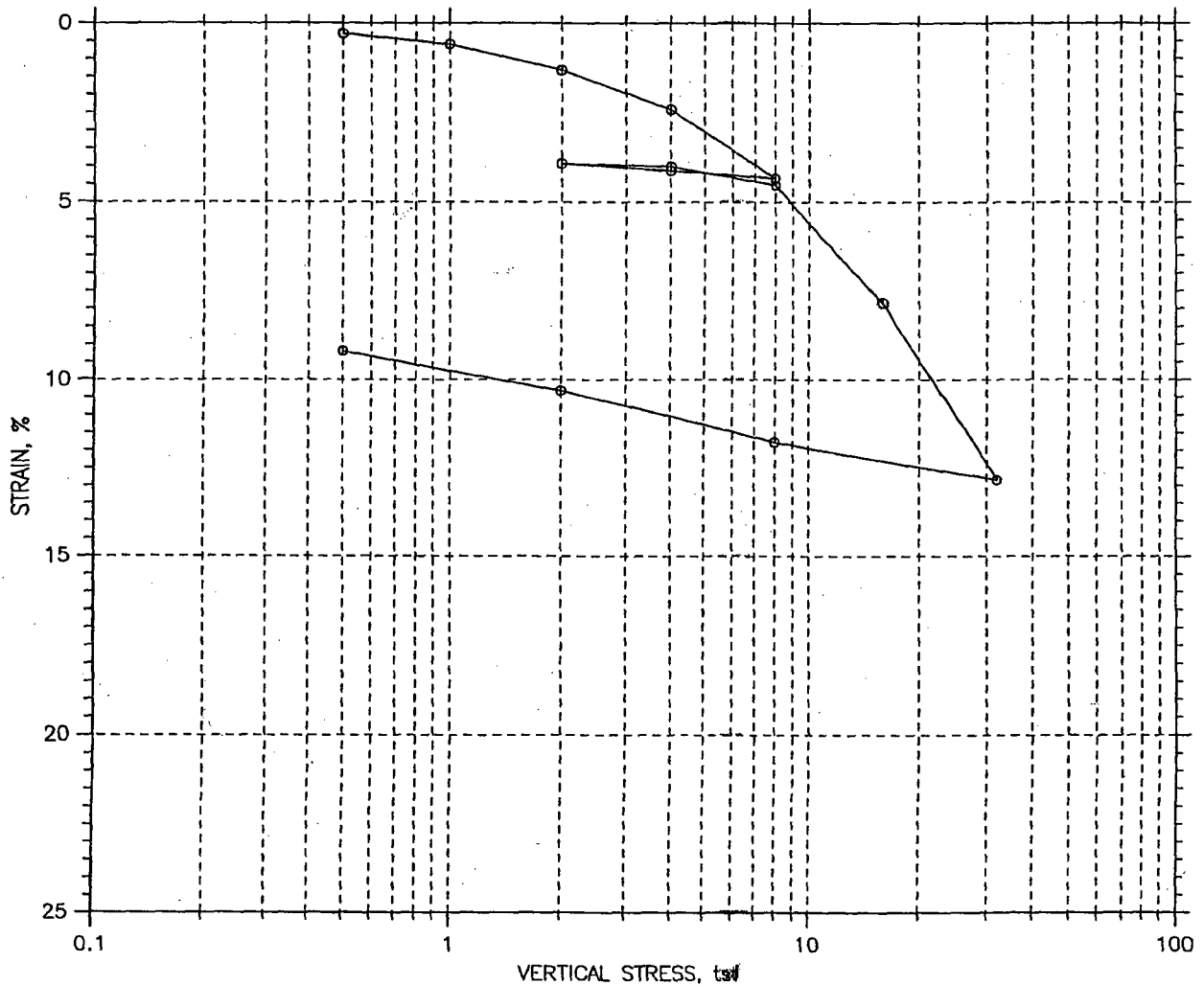
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-314	Tested By: jdt	Checked By: njh
	Sample No.: S-6	Test Date: 08/24/06	Depth: 13.5-14.5ft
	Test No.: C1	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray clayey sand (SC), 35% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.11, Recompression Ratio: 0.01		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test
Overburden Pressure: ---				27.82	27.12
Preconsolidation Pressure: 10.2 tsf				88.93	97.92
Compression Index: ---				82.87	99.99
Diameter: 2.5 in		Height: 1 in		0.92	0.74
LL: 41	PL: 11	PI: 30	GS: 2.73		

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-315	Tested By: jdt	Checked By: njh
	Sample No.: S-8	Test Date: 08/25/06	Depth: 23.5-24.7'
	Test No.: C2	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray clayey sand (SC), 35% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.17, Recompression Ratio: 0.02		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-315
Sample No.: S-8
Test No.: C2

Location: Calvert County, MD
Tested By: jdt
Test Date: 08/25/06
Sample Type: tube

Project No.: GTX-6880
Checked By: njh
Depth: 23.5-24.7'
Elevation: ---

Soil Description: Moist, dark olive gray clayey sand (SC), 35% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System C - Compression Ratio: 0.17, Recompression Ratio: 0.02

Measured Specific Gravity: 2.73
Initial Void Ratio: 0.92
Final Void Ratio: 0.74

Liquid Limit: 41
Plastic Limit: 11
Plasticity Index: 30

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID	2040	RING		1866
Wt. Container + Wet Soil, gm	297.56	362.04	361.24	154.27
Wt. Container + Dry Soil, gm	233.52	330.16	330.16	123.08
Wt. Container, gm	8.13	215.58	215.58	8.08
Wt. Dry Soil, gm	225.39	114.58	114.58	115
Water Content, %	28.41	27.82	27.12	27.12
Void Ratio	---	0.92	0.74	---
Degree of Saturation, %	---	82.87	99.99	---
Dry Unit Weight, pcf	---	88.926	97.92	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-315
Sample No.: S-8
Test No.: C2

Location: Calvert County, MD
Tested By: jdt
Test Date: 08/25/06
Sample Type: tube

Project No.: GTX-6880
Checked By: njh
Depth: 23.5-24.7'
Elevation: ---

Soil Description: Moist, dark olive gray clayey sand (SC), 35% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System C - Compression Ratio: 0.17, Recompression Ratio: 0.02

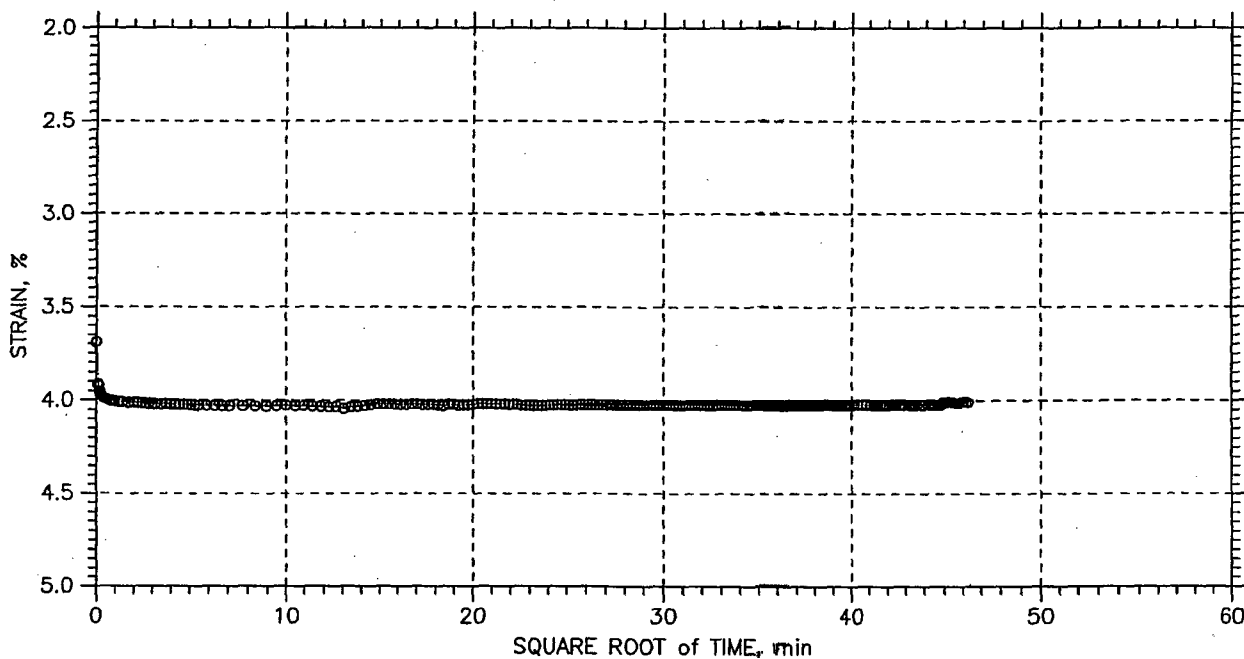
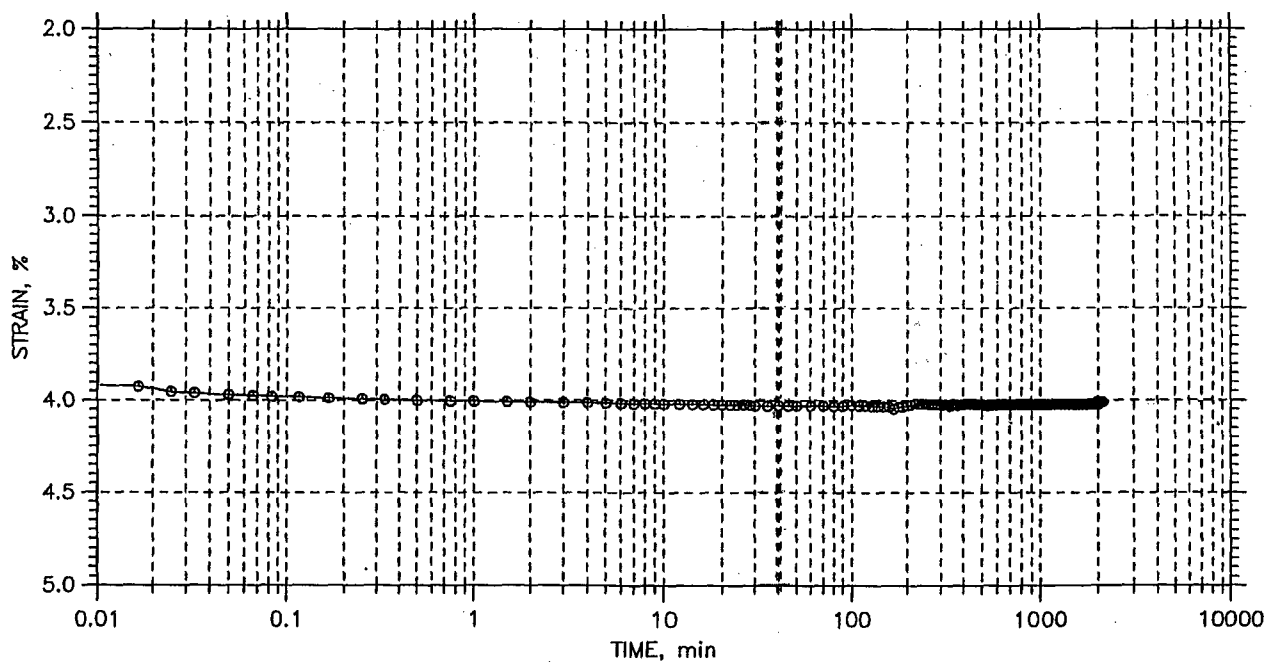
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	TSO Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.002849	0.911	0.28	0.0	0.0	2.75e-002	0.00e+000	2.75e-002
2	1	0.005975	0.905	0.60	0.0	0.0	1.95e-002	0.00e+000	1.95e-002
3	2	0.01319	0.891	1.32	0.3	0.0	2.31e-003	0.00e+000	2.31e-003
4	4	0.02414	0.870	2.41	0.4	0.0	2.21e-003	0.00e+000	2.21e-003
5	8	0.04329	0.834	4.33	0.4	0.0	1.82e-003	0.00e+000	1.82e-003
6	4	0.04126	0.837	4.13	0.2	0.0	3.14e-003	0.00e+000	3.14e-003
7	2	0.03924	0.841	3.92	0.0	0.0	3.08e-002	0.00e+000	3.08e-002
8	4	0.04009	0.840	4.01	0.7	0.0	1.14e-003	0.00e+000	1.14e-003
9	8	0.0452	0.830	4.52	0.3	0.0	2.86e-003	0.00e+000	2.86e-003
10	16	0.07833	0.766	7.83	0.4	0.0	1.61e-003	0.00e+000	1.61e-003
11	32	0.1284	0.670	12.84	0.9	0.0	7.29e-004	0.00e+000	7.29e-004
12	8	0.1176	0.691	11.76	0.9	0.0	7.21e-004	0.00e+000	7.21e-004
13	2	0.1031	0.719	10.31	2.8	0.0	2.31e-004	0.00e+000	2.31e-004
14	0.5	0.09185	0.740	9.18	4.5	5.3	1.49e-004	1.26e-004	1.36e-004

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



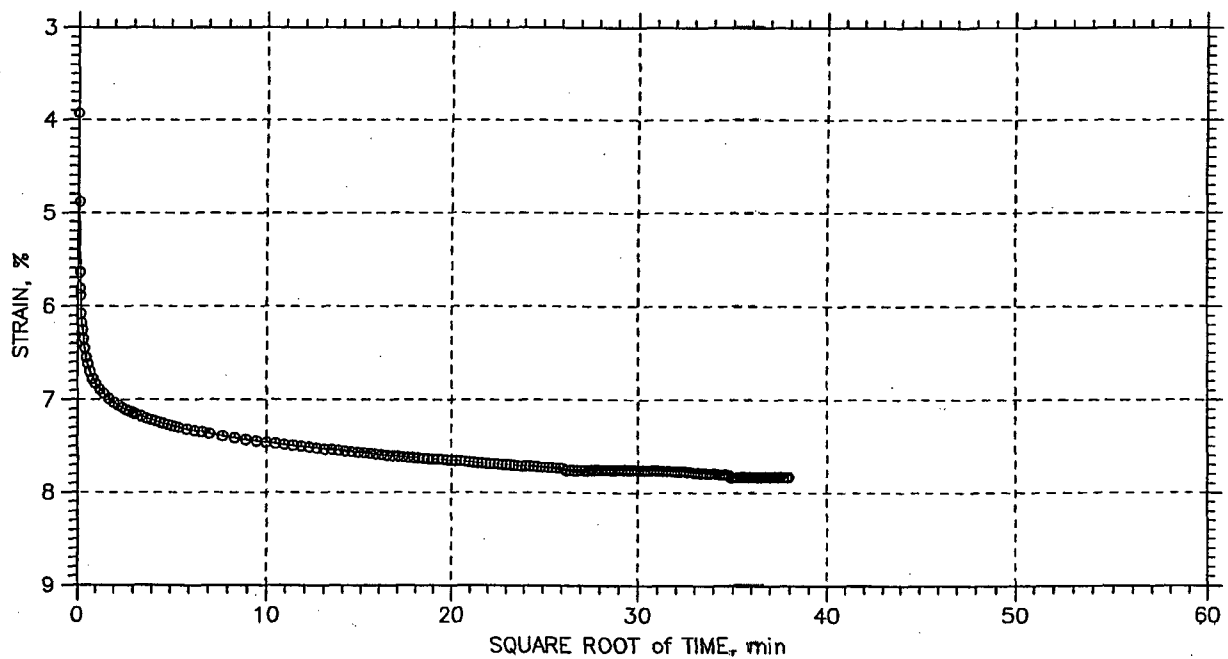
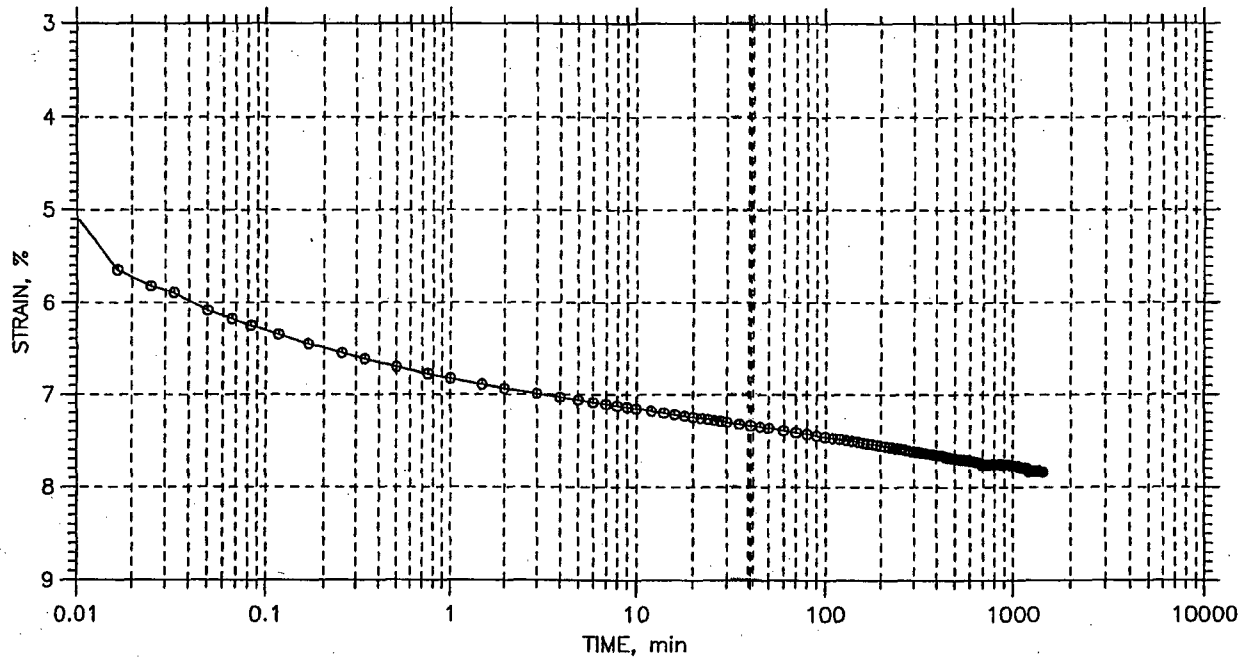
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-315	Tested By: jdt	Checked By: njh
	Sample No.: S-8	Test Date: 08/25/08	Depth: 23.5-24.7'
	Test No.: C2	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray clayey sand (SC), 35% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio:0.17, Recompression Ratio: 0.02		

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 10 of 14

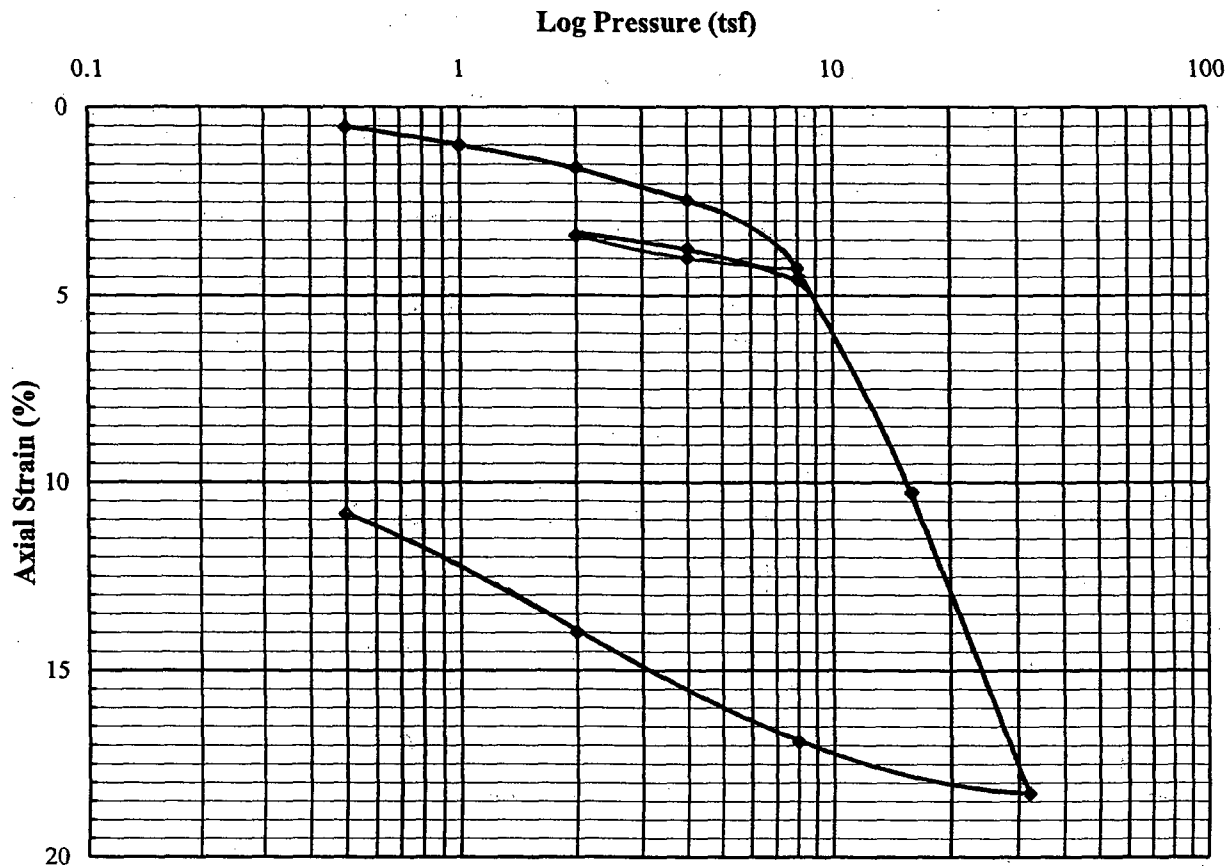
Stress: 16. tsf



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Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
Boring No.: B-315	Tested By: jdt	Checked By: njh
Sample No.: S-8	Test Date: 08/25/06	Depth: 23.5-24.7'
Test No.: C2	Sample Type: tube	Elevation: ---
Description: Moist, dark olive gray clayey sand (SC), 35% passing #200 sieve, inundated @ 0.5 tsf		
Remarks: System C - Compression Ratio: 0.17, Recompression Ratio: 0.02		



REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/07

Probable Preconsolidation Pressure (Pp), tsf: 9.3				Recompression Ratio (C_{er}): 0.017		
Type of Specimen: Tube Sample				Compression Ratio (C_{ec}): 0.266		
Description: LEAN CLAY with sand (CL) - gray					Initial	Final
				Water Content, %	33.0	26.8
LL: 44	PI: 28	Gs: 2.79	P_o' (tsf): 2.00	Void Ratio	0.94	0.73
% < No. 200: 71.0		Test Method: ASTM D2435 Method A		Saturation, %	98	100
Test Condition: Inundated @ 0.5 tsf				Dry Unit Weight, pcf	89.8	100.7
Remarks: Coefficient of Consolidation, C _v , equals 338 and 33 ft ² /yr at average pressures of 3 and 12 tsf (square root of time method).				Project: Calvert Cliffs Nuclear Power Plant		
Average Water Content of Trimings, %: 32.5				Location: Calvert County, MD		
				Boring: B-316	Schnabel No.: 06120048	
				Depth: 43.5-45.5 ft	Elevation: 64.6 to 62.6	
				Date: 10/26/2006	Reviewed by: CJS	
				Consolidation Test Report		

Consolidation Test Data Sheet

Consolidometer ID: 2

10/26/06

REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/2007

Schnabel Contract: 06120048

Project: Calvert Cliffs Nuclear Power Plant

Test Method: ASTM D2435 Method A

Test Condition: Inundated @ 0.5 tsf

Initial Height of Specimen (H_o), in.: 0.7490

Height of Solids (H_s), in.: 0.3863

Boring No.: B-316

Depth: 43.5-45.5 ft

Seating Press. (tsf): 0.05

Initial Dial Gauge Reading (D_o), in.: -0.0001

Reviewed by: CJS

Pressure, P (tsf)	Time Readings Required	Date Load Applied	Time Load Applied	Load Applied By	A	B	C	D	Vertical Strain ⁵ , ϵ_i (%)	Void Ratio ⁶ , e_i
					Final ¹ Dial Reading, D_{fi} $\times 10^{-4}$ in.	Apparatus Correction ² , D_{ci} $\times 10^{-4}$ in.	Cumulative Change in Height ³ , ΔH_i in.	Height of Voids ⁴ , H_{vi} in.		
0.5		10/3/2006	9:05	DWC	50	11	0.0040	0.3587	0.53	0.929
1		10/4/2006	9:05	DWC	89	15	0.0075	0.3552	1.00	0.920
2		10/5/2006	9:05	DWC	139	21	0.0119	0.3508	1.59	0.908
4		10/6/2006	9:05	DWC	210	28	0.0183	0.3444	2.44	0.892
8		10/7/2006	9:05	DWC	355	36	0.0320	0.3307	4.27	0.856
4		10/9/2006	9:05	DWC	326	28	0.0299	0.3328	3.99	0.862
2		10/10/2006	9:05	DWC	274	21	0.0254	0.3373	3.39	0.873
4		10/11/2006	9:05	DWC	307	28	0.0280	0.3347	3.74	0.866
8		10/12/2006	9:05	DWC	377	36	0.0342	0.3285	4.57	0.850
16		10/13/2006	9:05	DWC	813	45	0.0769	0.2858	10.27	0.740
32		10/14/2006	9:05	CJS	1426	57	0.1370	0.2257	18.29	0.584
8		10/16/2006	9:05	DWC	1301	36	0.1266	0.2361	16.90	0.611
2		10/17/2006	9:05	DWC	1068	21	0.1048	0.2579	13.99	0.668
0.5		10/18/2006	9:05	DWC	823	11	0.0813	0.2814	10.86	0.728

- Notes:
- 1 "Final" based on test method; 24 hrs for Method A, end of primary for Method B.
 - 2 Correction value, for the current pressure, from the consolidometer's calibration curve.
 - 3 $\Delta H = D_{fi} - D_o - D_{ci} = \text{Col. A} - D_o - \text{Col. B}$
 - 4 $H_{vi} = (H_o - H_s) - \Delta H$
 - 5 $\epsilon_i = (\Delta H / H_o) \times 100 = (\text{Col. C} / H_o) \times 100$
 - 6 $e_i = H_{vi} / H_s = \text{Col. D} / H_s$

Consol 8/2006 Rev. 1



Load Time Readings

10/26/06

Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

Boring No.: B-316

Depth: 43.5-45.5 ft

Consol. ID: 2

Reviewed by: CJS

Elapsed Time (min.)	Dial Guage Readings (inches)					
	4 tsf	16 tsf	X tsf	X tsf	X tsf	X tsf
	Reload 10/11/2006	Load 10/13/2006	Load Date	Load Date	Load Date	Load Date
0.1	0.0283	0.0415				
0.25	0.0287	0.0432				
0.5	0.0290	0.0450				
1	0.0294	0.0475				
2	0.0298	0.0510				
4	0.0301	0.0554				
8	0.0302	0.0605				
15	0.0303	0.0652				
30	0.0304	0.0695				
60	0.0305	0.0727				
120	0.0306	0.0751				
240	0.0307	0.0772				
480	0.0307	0.0792				
720	0.0307	0.0800				
960	0.0307	0.0805				
1200	0.0307	0.0810				
1440	0.0307	0.0813				
1680						
1920						
2160						
2400						
2640						
2880						

Consolidation Time Curves

10/26/06

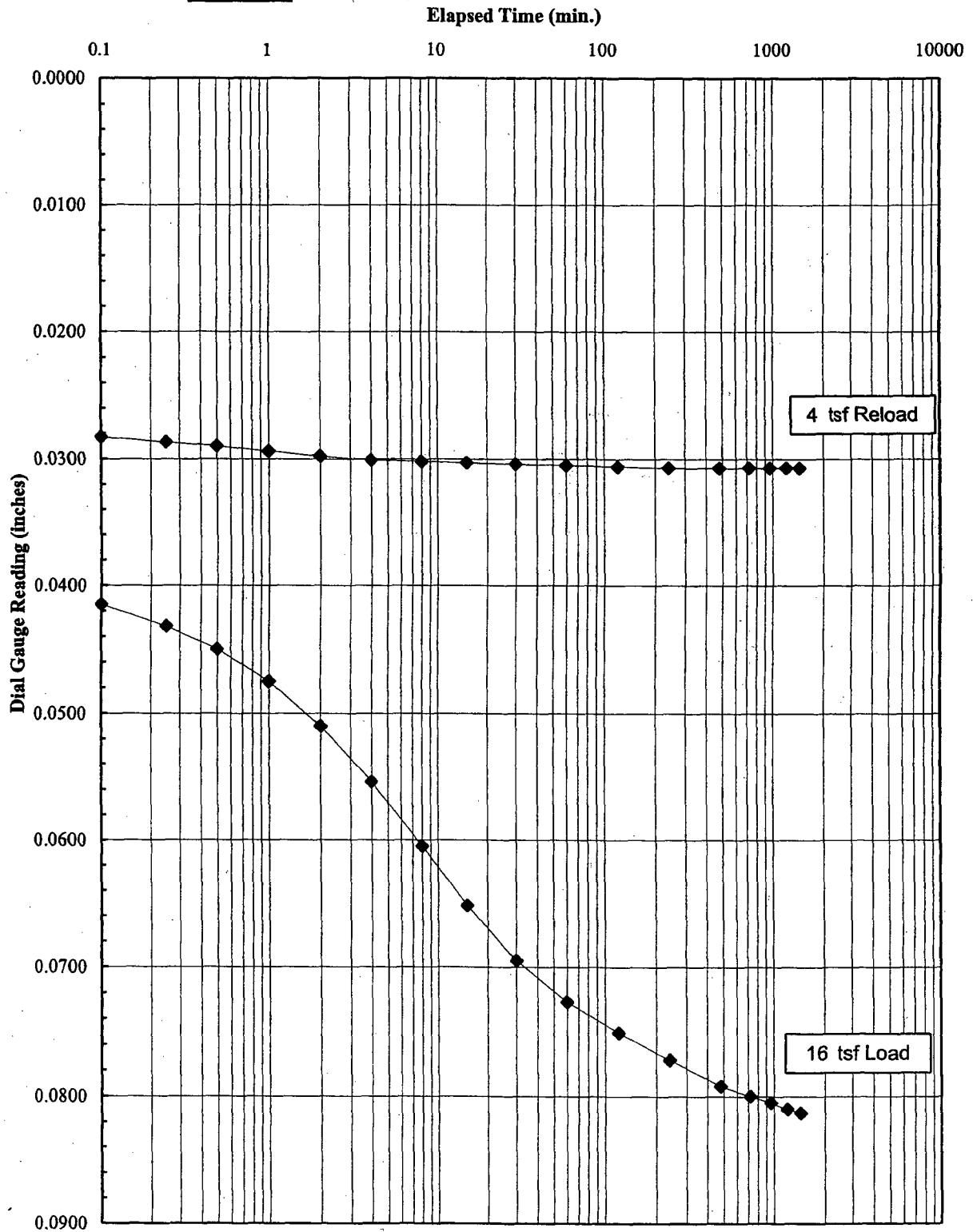
Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

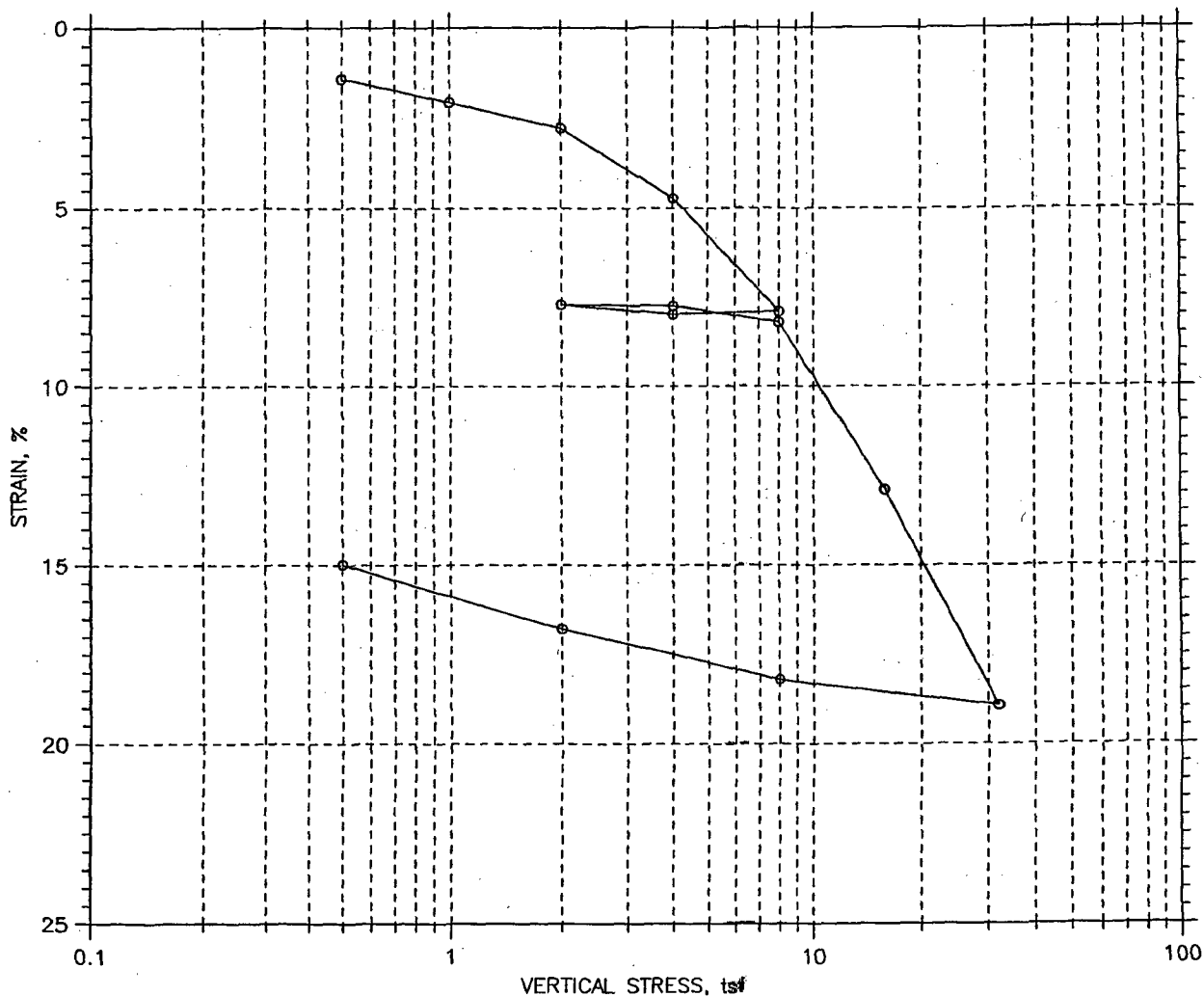
Boring No.: B-316

Depth: 43.5-45.5 ft

Reviewed by: CJS



CONSOLIDATION TEST DATA SUMMARY REPORT



		Before Test	After Test
Overburden Pressure: ---		Water Content, %	28.35
Preconsolidation Pressure: 5.4 tsf		Dry Unit Weight, pcf	106
Compression Index: ---		Saturation, %	100.00
Diameter: 2.5 in	Height: 1 in	Void Ratio	
LL: 49	PL: 12	0.85	0.57
PI: 37	GS: 2.67		

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-319	Tested By: md	Checked By: jdt
	Sample No.: S-10	Test Date: 09/08/06	Depth: 33.5-35.5
	Test No.: C-4	Sample Type: tube	Elevation: ---
	Description: Moist, dark gray clay with sand (CL), 72% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System Q-Compression Ratio: 0.19, Recompression Ratio: 0.01		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear
Boring No.: B-319
Sample No.: S-10
Test No.: C-4

Location: Calvert County, MD
Tested By: md
Test Date: 09/08/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 33.5-35.5
Elevation: ---

Soil Description: Moist, dark gray clay with sand (CL), 72% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System Q-Compression Ratio: 0.19, Recompression Ratio: 0.01

Measured Specific Gravity: 2.67
Initial Void Ratio: 0.85
Final Void Ratio: 0.57

Liquid Limit: 49
Plastic Limit: 12
Plasticity Index: 37

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID	1611	RING		6
Wt. Container + Wet Soil, gm	105.39	356.66	348.66	148.94
Wt. Container + Dry Soil, gm	82.64	323.74	323.74	124.1
Wt. Container, gm	8.42	207.65	207.65	8.37
Wt. Dry Soil, gm	74.22	116.09	116.09	115.73
Water Content, %	30.65	28.35	21.46	21.46
Void Ratio	---	0.85	0.57	---
Degree of Saturation, %	---	89.06	100.00	---
Dry Unit Weight, pcf	---	90.897	105.96	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear
Boring No.: B-319
Sample No.: S-10
Test No.: C-4

Location: Calvert County, MD
Tested By: md
Test Date: 09/08/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 33.5-35.5
Elevation: ---

Soil Description: Moist, dark gray clay with sand (CL), 72% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System Q-Compression Ratio: 0.19, Recompression Ratio: 0.01

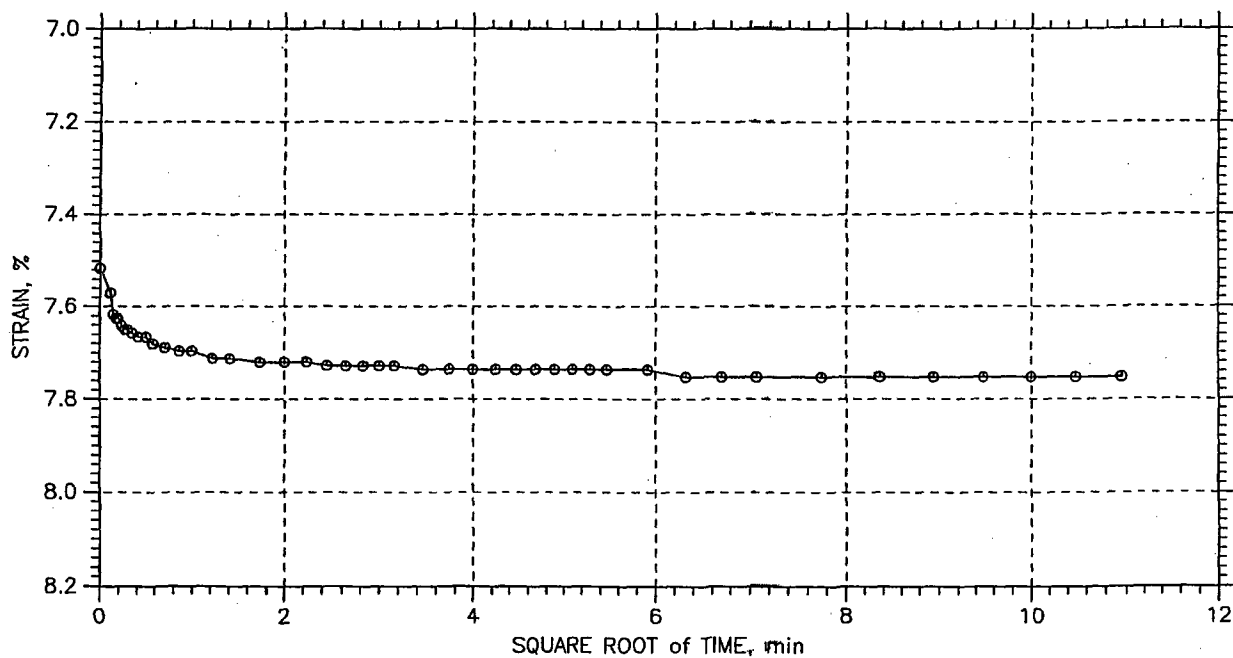
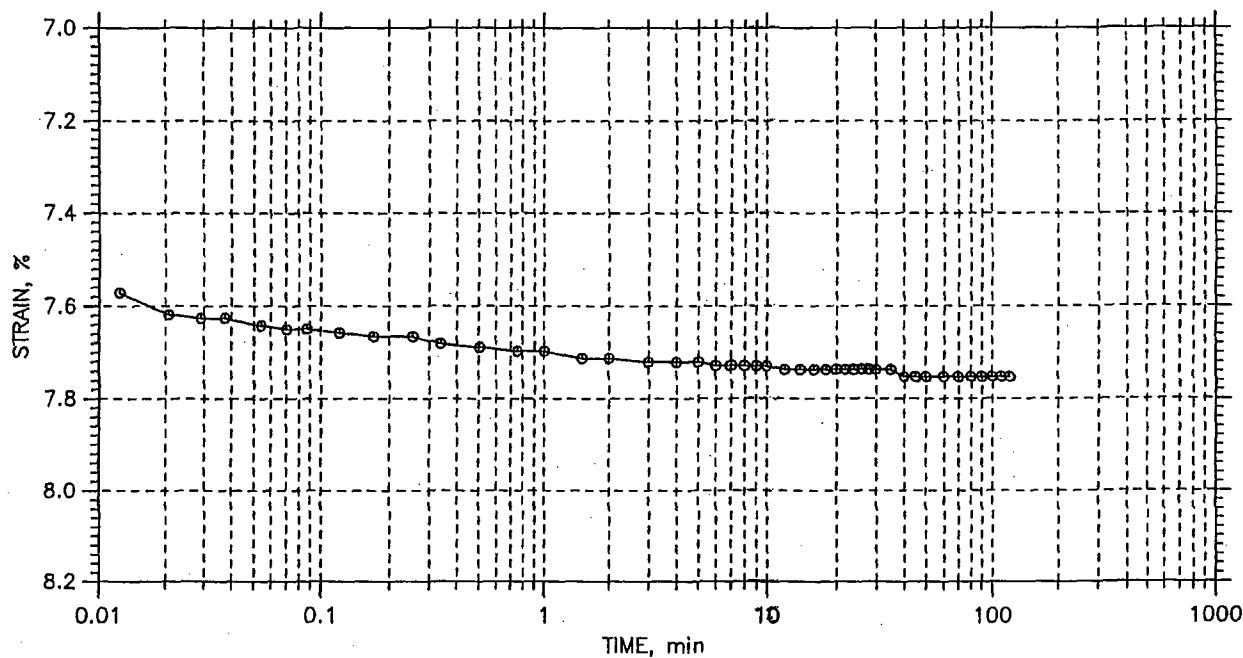
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.01405	0.824	1.40	0.1	0.0	1.01e-002	0.00e+000	1.01e-002
2	1	0.02055	0.812	2.05	1.2	0.0	6.81e-004	0.00e+000	6.81e-004
3	2	0.02771	0.799	2.77	0.1	0.0	1.53e-002	1.73e-002	1.63e-002
4	4	0.0472	0.763	4.72	0.2	0.1	3.54e-003	7.12e-003	4.73e-003
5	8	0.07909	0.704	7.91	0.9	1.0	7.71e-004	7.04e-004	7.36e-004
6	4	0.07988	0.702	7.99	0.2	0.0	3.30e-003	0.00e+000	3.30e-003
7	2	0.07716	0.707	7.72	0.7	0.5	1.06e-003	1.38e-003	1.20e-003
8	4	0.07752	0.707	7.75	0.1	0.0	6.99e-003	0.00e+000	6.99e-003
9	8	0.08201	0.698	8.20	0.7	0.2	9.75e-004	3.77e-003	1.55e-003
10	16	0.1289	0.611	12.89	2.1	2.7	3.16e-004	2.46e-004	2.76e-004
11	32	0.1893	0.500	18.93	2.8	3.8	2.08e-004	1.53e-004	1.76e-004
12	8	0.182	0.513	18.20	0.3	0.0	1.87e-003	0.00e+000	1.87e-003
13	2	0.1678	0.540	16.78	3.5	4.8	1.58e-004	1.17e-004	1.34e-004
14	0.5	0.1497	0.573	14.97	10.9	0.0	5.34e-005	0.00e+000	5.34e-005

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



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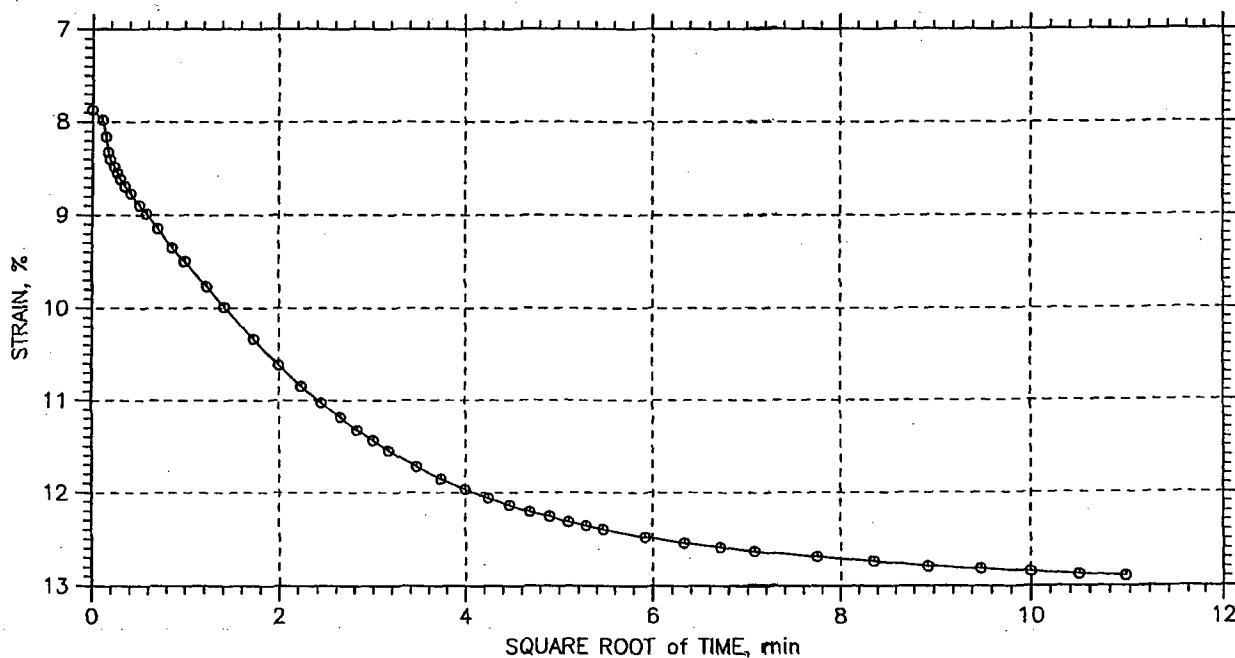
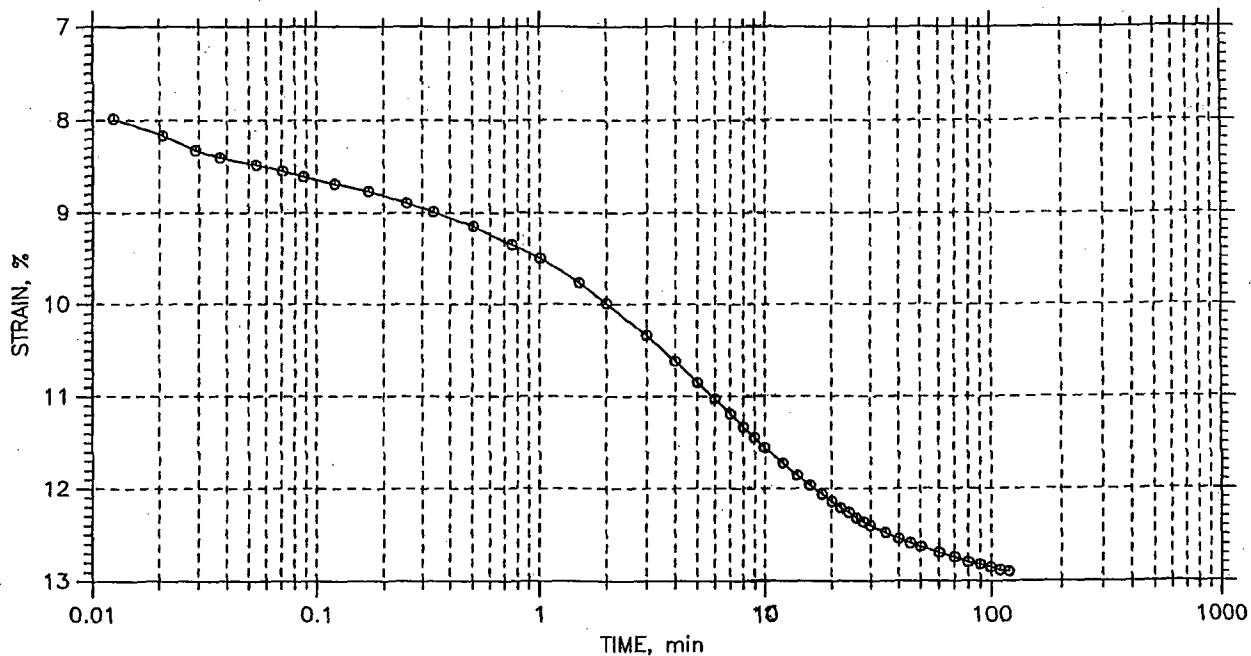
Project: Calvert Cliffs Nuclear	Location: Calvert County, MD	Project No.: GTX-6880
Boring No.: B-319	Tested By: md	Checked By: jdt
Sample No.: S-10	Test Date: 09/08/08	Depth: 33.5-35.5
Test No.: C-4	Sample Type: tube	Elevation: ---
Description: Moist, dark gray clay with sand (CL), 72% passing #200 sieve, inundated @ 0.5 tsf		
Remarks: System Q-Compression Ratio: 0.19, Recompression Ratio: 0.01		

CONSOLIDATION TEST DATA

TIME CURVES

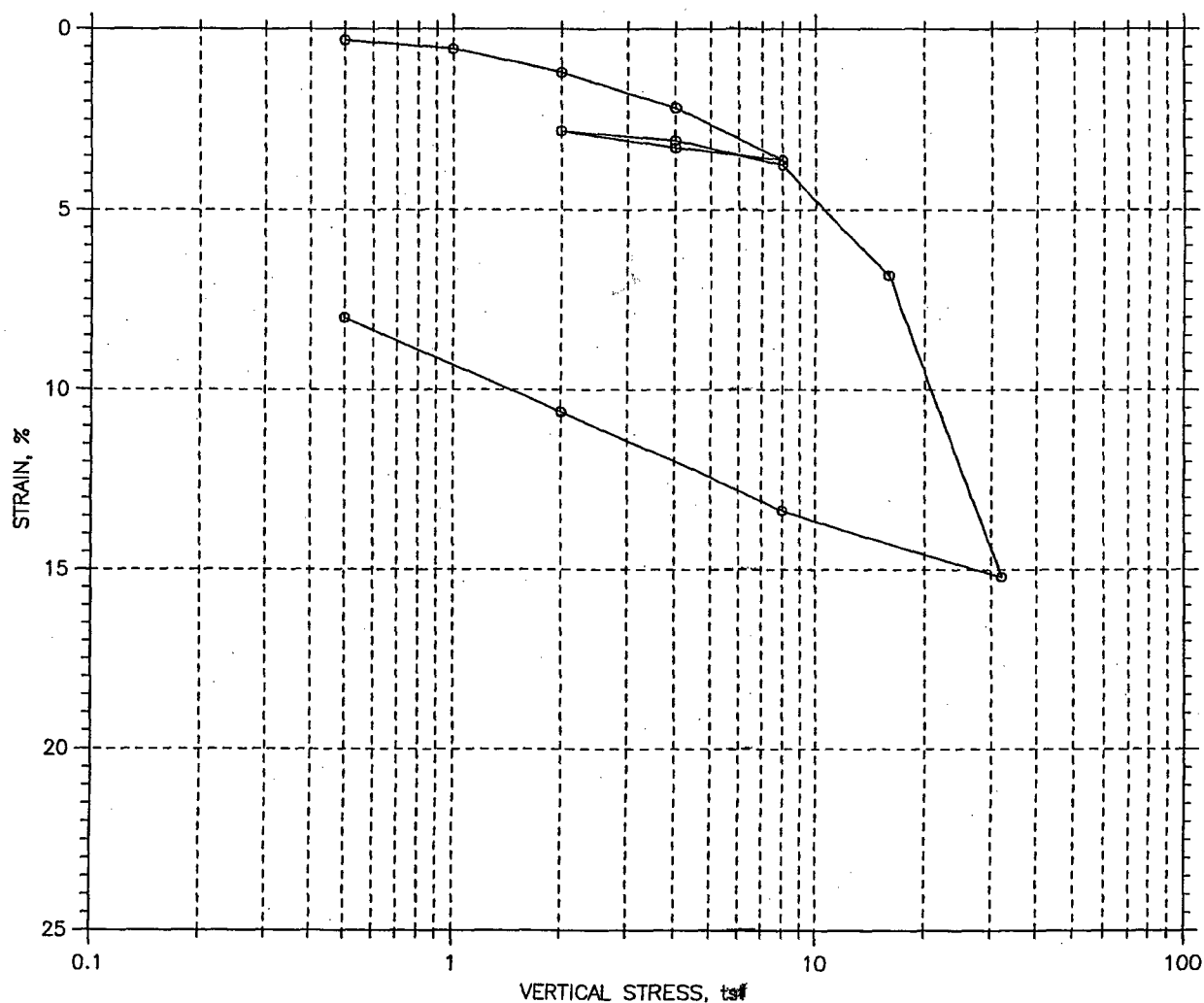
Constant Load Step: **10** of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-319	Tested By: md	Checked By: jdt
	Sample No.: S-10	Test Date: 09/08/06	Depth: 33.5-35.5
	Test No.: C-4	Sample Type: tube	Elevation: ---
	Description: Moist, dark gray clay with sand (CL), 72% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System Q-Compression Ratio: 0.19, Recompression Ratio: 0.01		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	27.51	24.64
Preconsolidation Pressure: 12 tsf				Dry Unit Weight, pcf	93.73	101.9
Compression Index: ---				Saturation, %	91.78	100.00
Diameter: 2.5 in		Height: 1 in		Void Ratio	0.82	0.67
LL: 58	PL: 13	PI: 45	GS: 2.73			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-319	Tested By: md	Checked By: njh
	Sample No.: S-12	Test Date: 09/07/06	Depth: 43.5-45.2
	Test No.: C-3	Sample Type: tube	Elevation: ---
	Description: Moist, dark gray clay (CH), 87% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.28, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear
Boring No.: B-319
Sample No.: S-12
Test No.: C-3

Location: Calvert County, MD
Tested By: md
Test Date: 09/07/06
Sample Type: tube

Project No.: GTX-6880
Checked By: njh
Depth: 43.5-45.2
Elevation: ---

Soil Description: Moist, dark gray clay (CH), 87% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: 0.28, Recompression Ratio: 0.04

Measured Specific Gravity: 2.73
Initial Void Ratio: 0.82
Final Void Ratio: 0.67

Liquid Limit: 58
Plastic Limit: 13
Plasticity Index: 45

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID	Z178C	RING		1223
Wt. Container + Wet Soil, gm	116.43	370.45	366.98	151.31
Wt. Container + Dry Soil, gm	90.31	337.22	337.22	123.06
Wt. Container, gm	8.35	216.45	216.45	8.4
Wt. Dry Soil, gm	81.96	120.77	120.77	114.66
Water Content, %	31.87	27.51	24.64	24.64
Void Ratio	---	0.82	0.67	---
Degree of Saturation, %	---	91.78	100.00	---
Dry Unit Weight, pcf	---	93.73	101.89	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear
Boring No.: B-319
Sample No.: S-12
Test No.: C-3

Location: Calvert County, MD
Tested By: md
Test Date: 09/07/06
Sample Type: tube

Project No.: GTX-6880
Checked By: njh
Depth: 43.5-45.2
Elevation: ---

Soil Description: Moist, dark gray clay (CH), 87% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: 0.28, Recompression Ratio: 0.04

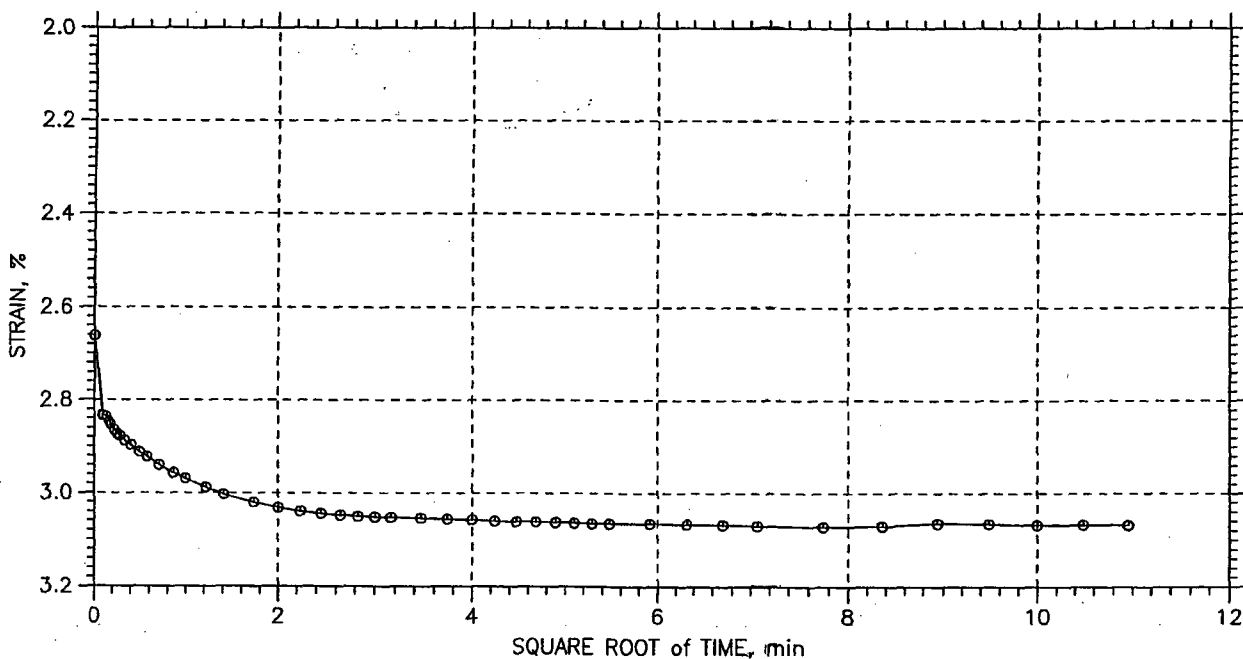
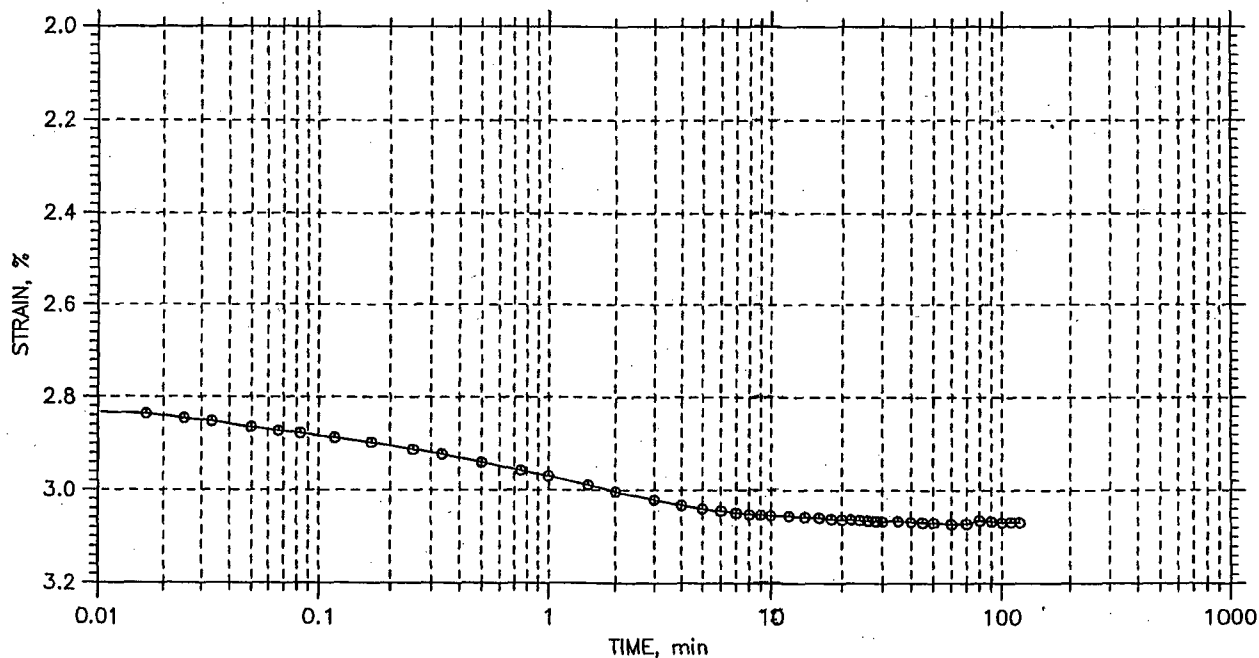
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.003141	0.813	0.31	0.0	0.0	6.14e-002	0.00e+000	6.14e-002
2	1	0.005529	0.808	0.55	0.3	0.0	2.52e-003	0.00e+000	2.52e-003
3	2	0.01195	0.797	1.19	0.5	0.0	1.66e-003	0.00e+000	1.66e-003
4	4	0.02158	0.779	2.16	0.4	0.0	1.80e-003	0.00e+000	1.80e-003
5	8	0.03606	0.753	3.61	0.7	0.0	1.16e-003	0.00e+000	1.16e-003
6	4	0.03264	0.759	3.26	0.2	0.0	3.54e-003	0.00e+000	3.54e-003
7	2	0.02802	0.767	2.80	0.7	0.0	1.16e-003	0.00e+000	1.16e-003
8	4	0.03068	0.762	3.07	0.2	0.0	4.56e-003	0.00e+000	4.56e-003
9	8	0.03751	0.750	3.75	0.4	0.0	1.75e-003	0.00e+000	1.75e-003
10	16	0.0682	0.694	6.82	1.8	2.0	4.21e-004	3.77e-004	3.98e-004
11	32	0.152	0.542	15.20	5.1	9.0	1.28e-004	7.23e-005	9.23e-005
12	8	0.1335	0.575	13.35	1.1	0.0	5.74e-004	0.00e+000	5.74e-004
13	2	0.1061	0.625	10.61	7.3	0.0	8.70e-005	0.00e+000	8.70e-005
14	0.5	0.08009	0.673	8.01	13.0	0.0	5.20e-005	0.00e+000	5.20e-005

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



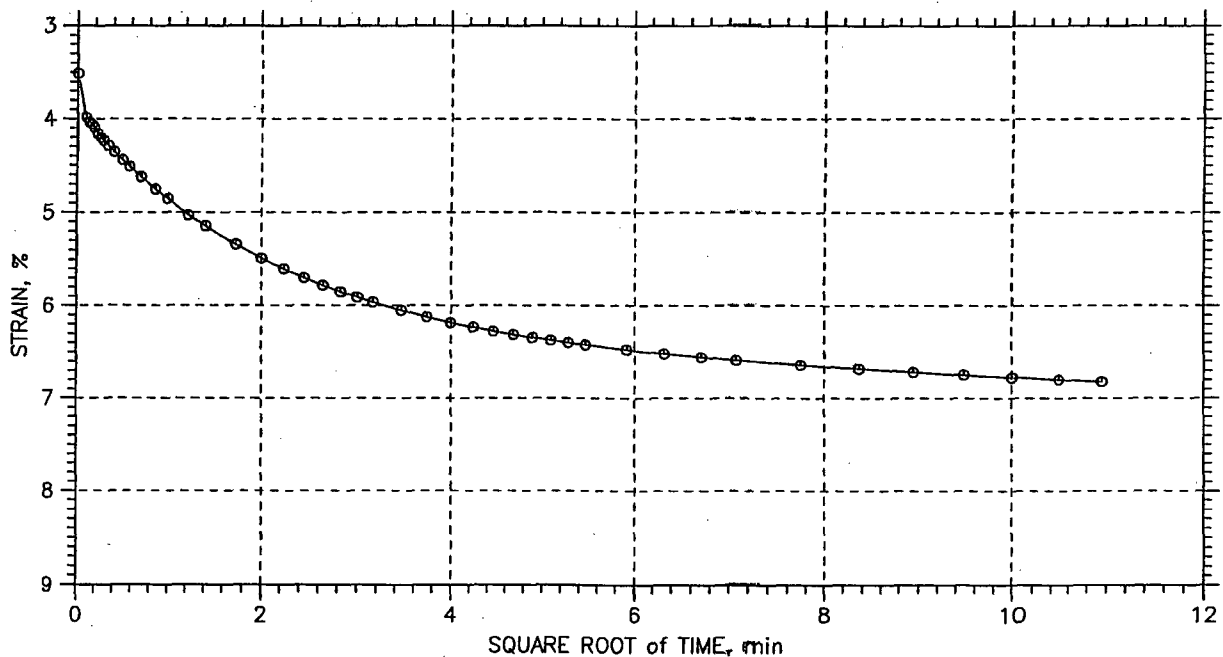
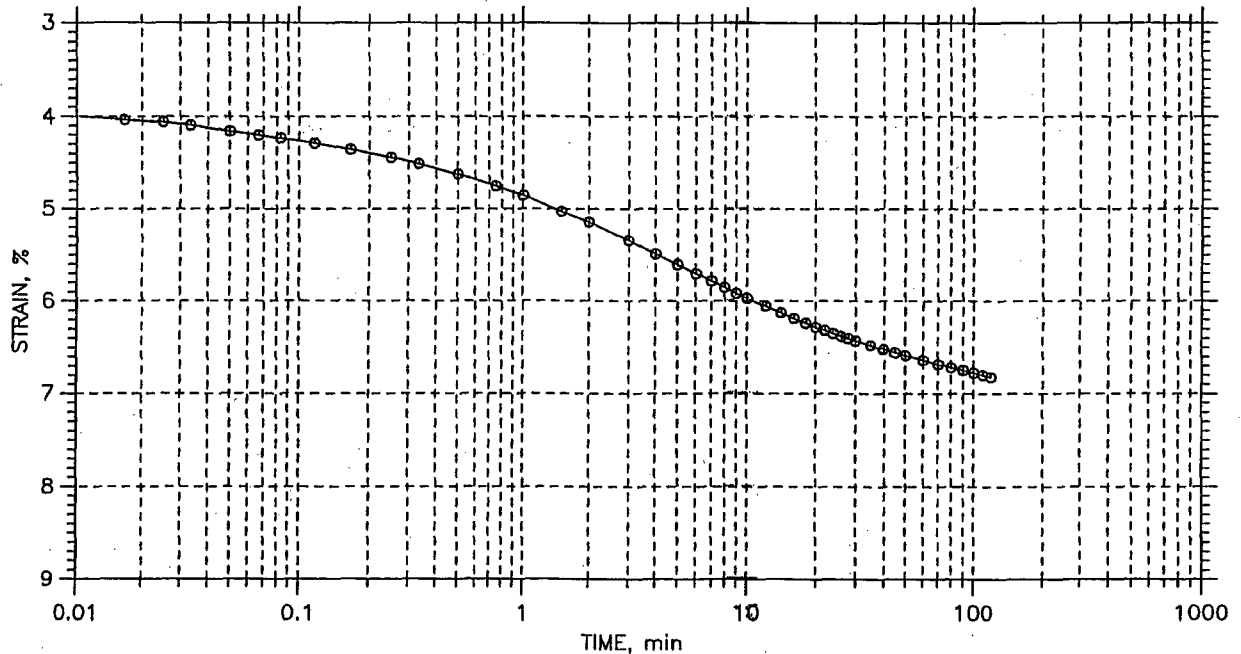
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	Boring No.: B-319	Tested By: md	Checked By: njh
	Sample No.: S-12	Test Date: 09/07/08	Depth: 43.5-45.2
	Test No.: C-3	Sample Type: tube	Elevation: ---
	Description: Moist, dark gray clay (CH), 87% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.28, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA

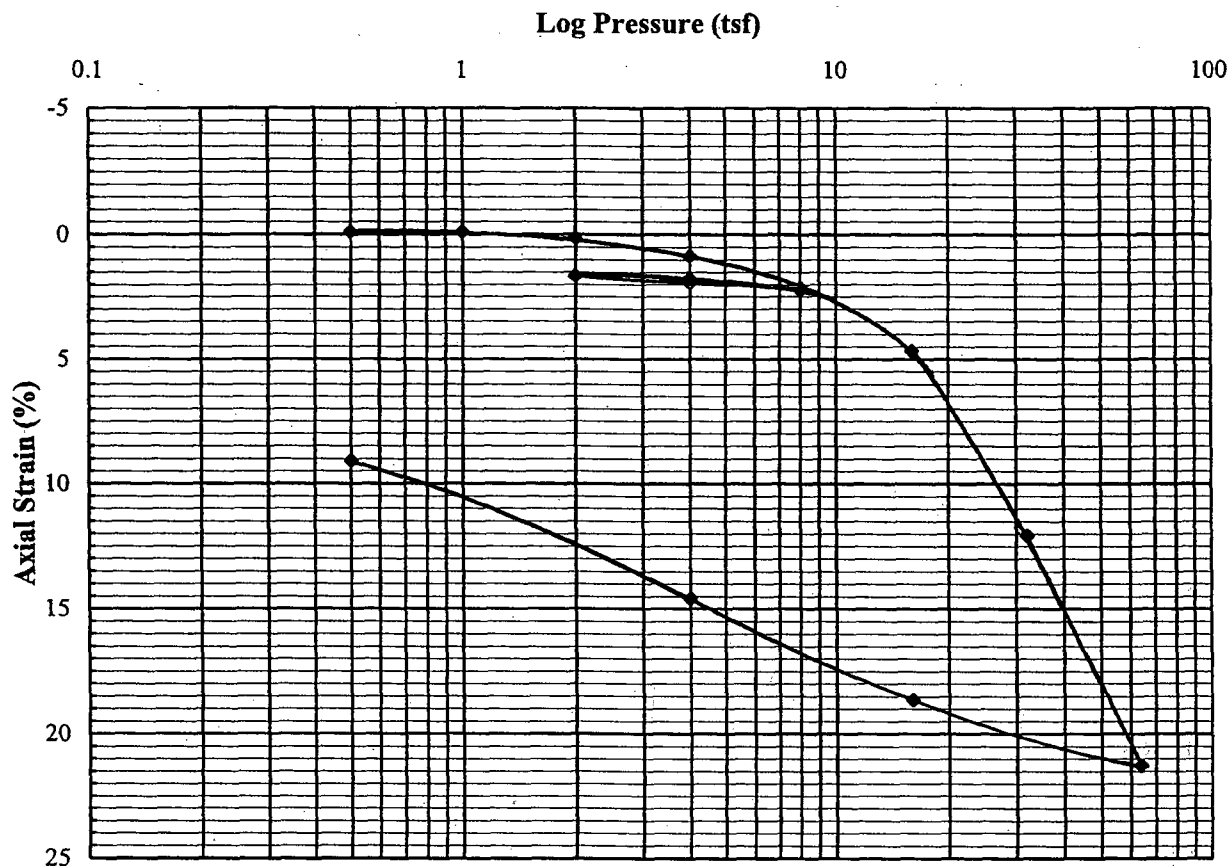
TIME CURVES

Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-319	Tested By: md	Checked By: njh
	Sample No.: S-12	Test Date: 09/07/08	Depth: 43.5-45.2
	Test No.: C-3	Sample Type: tube	Elevation: ---
	Description: Moist, dark gray clay (CH), 87% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.28, Recompression Ratio: 0.04		



Coefficient of Consolidation, C_v , equals 563 and 9 ft²/yr at average pressures of 3 and 12 tsf (square root of time method).

REVISED FORM FOR NCR NO. 25237-NCR-028
AND HEIGHT OF SPECIMEN DATA ENTRY
ERROR (NCR NO. 25237-NCR-031)
3/9/07

Probable Preconsolidation Pressure (P_p), tsf: 19				Recompression Ratio (C_{er}): 0.009		
Type of Specimen: Tube Sample				Compression Ratio (C_{ec}): 0.306		
Description: LEAN CLAY (CL) - gray					Initial	Final
				Water Content, %	35.8	30.6
LL: 45	PI: 27	Gs: 2.79	P_o' (tsf): 1.05	Void Ratio	1.03	0.84
% < No. 200: 99.7		Test Method: ASTM D2435 Method A		Saturation, %	97	100
Test Condition: Inundated @ 4 tsf				Dry Unit Weight, pcf	85.8	94.4
Remarks: Initial specimen height set at 0.750 in.; possible range in value could be 0.732 to 0.761 inch.				Project: Calvert Cliffs Nuclear Power Plant		
Average Water Content of Trimmings, %: 31.4				Location: Calvert County, MD		
 Schnabel Engineering				Boring: B-321	Schnabel No.: 06120048	
				Depth: 23.5-25.5 ft	Elevation: 47.2 to 45.2	
				Date: 2/15/2007	Reviewed by: CJS	
				Consolidation Test Report		

Consolidation Test Data Sheet

REVISED FORM FOR NCR
NO. 25237-NCR-028 and
25237-NCR-031
3/9/2007

Consolidometer ID: 5

2/15/07

Schnabel Contract: 06120048

Test Method: ASTM D2435 Method A

Project: Calvert Cliffs Nuclear Power Plant

Test Condition: Inundated @ 4 tsf

Initial Height of Specimen (H_o), in.: 0.7500

Boring No.: B-321

Height of Solids (H_s), in.: 0.3699

Depth: 23.5-25.5 ft

Seating Press. (tsf): 0.05

Initial Dial Gauge Reading (D_o), in.: -0.0005

Reviewed by: CJS

Pressure, P (tsf)	Time Readings Required	Date Load Applied	Time Load Applied	Load Applied By	A	B	C	D	Vertical Strain ⁵ , ϵ_i (%)	Void Ratio ⁶ , e_i
					Final ¹ Dial Reading, D_{fi} $\times 10^{-4}$ in.	Apparatus Correction ² , D_{ci} $\times 10^{-4}$ in.	Cumulative Change in Height ³ , ΔH_i in.	Height of Voids ⁴ , H_{vi} in.		
0.5		10/4/2006	9:20	DWC	-1	12	-0.0008	0.3809	-0.11	1.030
1		10/5/2006	9:20	DWC	8	21	-0.0008	0.3809	-0.11	1.030
2		10/6/2006	9:20	DWC	40	33	0.0012	0.3789	0.16	1.024
4		10/7/2006	9:20	DWC	99	40	0.0064	0.3737	0.85	1.010
8		10/9/2006	9:20	DWC	204	50	0.0159	0.3642	2.12	0.985
4		10/10/2006	9:20	DWC	181	40	0.0146	0.3655	1.95	0.988
2		10/11/2006	9:20	DWC	152	33	0.0124	0.3677	1.65	0.994
4		10/12/2006	9:20	DWC	166	40	0.0131	0.3670	1.75	0.992
8		10/13/2006	9:20	DWC	213	50	0.0168	0.3633	2.24	0.982
16		10/14/2006	9:20	CJS	408	63	0.0350	0.3451	4.67	0.933
32		10/16/2006	9:20	DWC	976	76	0.0905	0.2896	12.07	0.783
64		10/17/2006	9:20	DWC	1677	87	0.1595	0.2206	21.27	0.596
16		10/18/2006	9:20	DWC	1457	63	0.1399	0.2402	18.65	0.649
4		10/19/2006	9:20	DWC	1129	40	0.1094	0.2707	14.59	0.732
0.5		10/20/2006	9:20	DWC	689	12	0.0682	0.3119	9.09	0.843

- Notes:
- 1 "Final" based on test method; 24 hrs for Method A, end of primary for Method B.
 - 2 Correction value, for the current pressure, from the consolidometer's calibration curve.
 - 3 $\Delta H = D_{fi} - D_o - D_{ci} = \text{Col. A} - D_o - \text{Col. B}$
 - 4 $H_{vi} = (H_o - H_s) - \Delta H$
 - 5 $\epsilon_i = (\Delta H / H_o) \times 100 = (\text{Col. C} / H_o) \times 100$
 - 6 $e_i = H_{vi} / H_s = \text{Col. D} / H_s$



Load Time Readings

10/26/06

Project: Calvert Cliffs Nuclear Power Plant
 Schnabel Contract: 06120048
 Boring No.: B-321 Depth: 23.5-25.5ft.
 Reviewed by: CJS

Consol. ID: 5

Elapsed Time (min.)	Dial Guage Readings (inches)					
	4 tsf	32 tsf	X tsf	X tsf	X tsf	X tsf
	Reload 10/12/2006	Load 10/16/2006	Load Date	Load Date	Load Date	Load Date
0.1	0.0156	0.0468				
0.25	0.0158	0.0480				
0.5	0.0160	0.0492				
1	0.0161	0.0508				
2	0.0162	0.0531				
4	0.0163	0.0562				
8	0.0163	0.0604				
15	0.0163	0.0653				
30	0.0163	0.0716				
60	0.0164	0.0784				
120	0.0164	0.0844				
240	0.0165	0.0892				
480	0.0166	0.0931				
720	0.0166	0.0949				
960	0.0166	0.0961				
1200	0.0166	0.0968				
1440	0.0166	0.0976				
1680						
1920						
2160						
2400						
2640						
2880						



Consolidation Time Curves

10/26/06

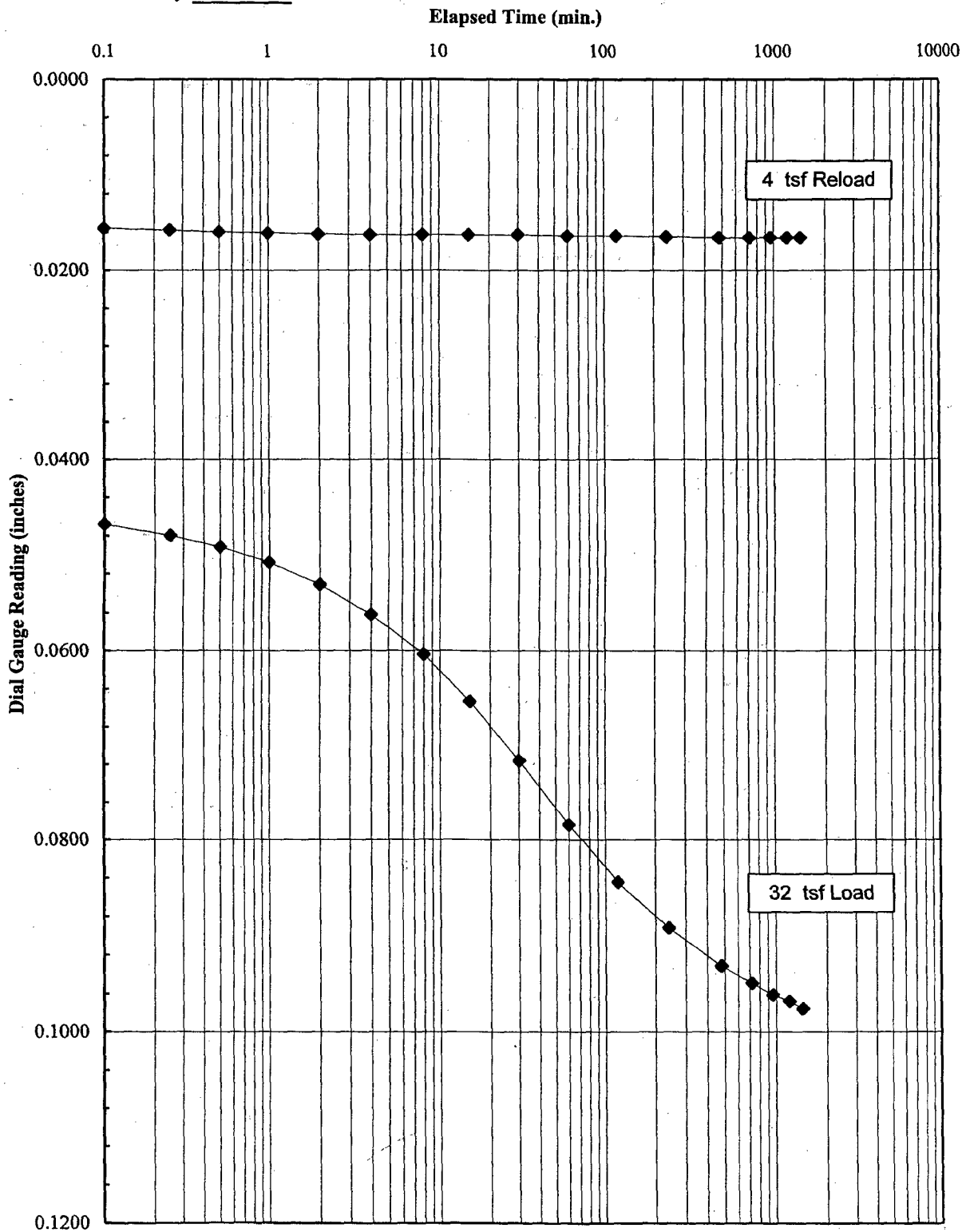
Project: Calvert Cliffs Nuclear Power Plant

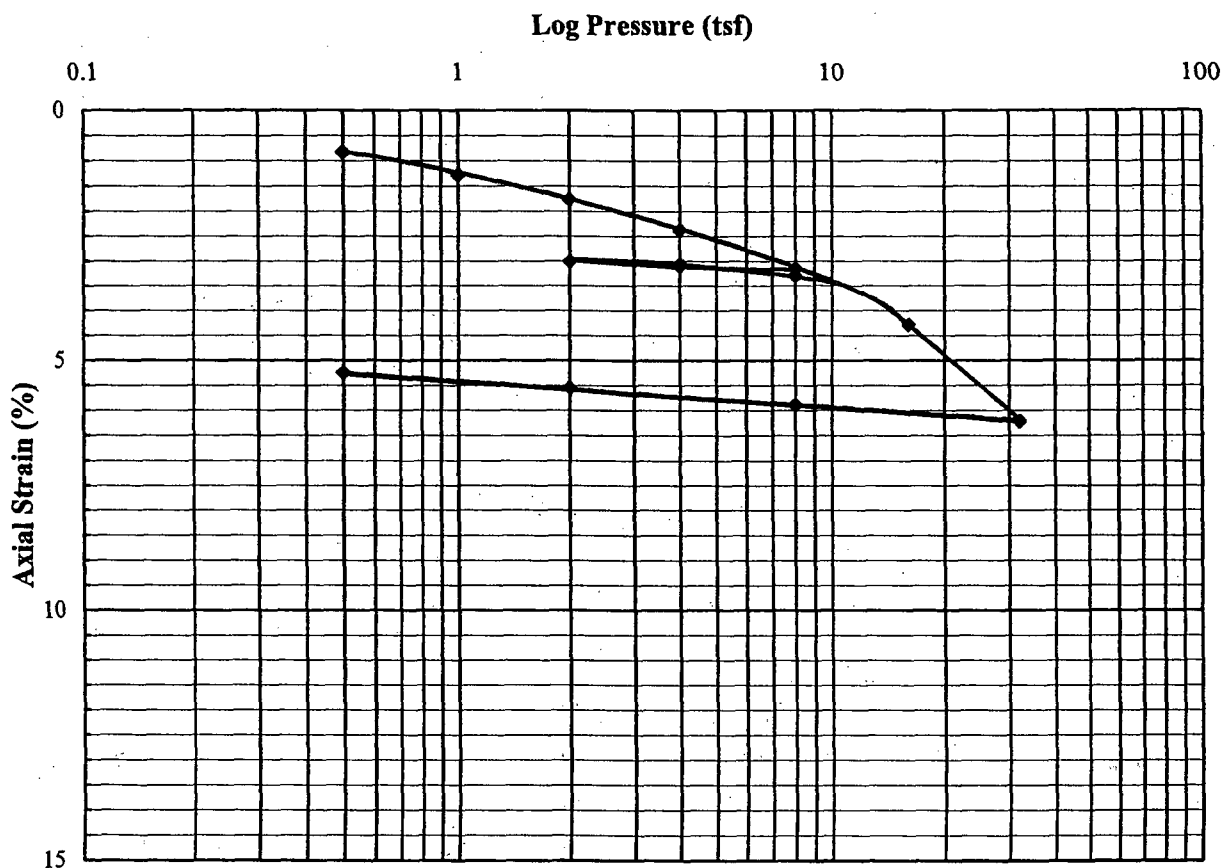
Schnabel Contract: 06120048

Boring No.: B-321

Depth: 23.5-25.5ft.

Reviewed by: CJS





REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/07

Probable Preconsolidation Pressure (Pp), tsf: 14.2				Recompression Ratio (C_{er}): 0.003	
Type of Specimen: Tube Sample				Compression Ratio (C_{ec}): 0.064	
Description: Fine SILTY SAND (SM) - gray					
				Initial	Final
LL: --- PI: NP Gs: 2.67 P_o' (tsf): 2.55				Water Content, %	25.5 26.3
% < No. 200: 15.3 Test Method: ASTM D2435 Method A				Void Ratio	0.72 0.63
Test Condition: Inundated @ 0.05 tsf				Saturation, %	95 100
				Dry Unit Weight, pcf	96.8 102.2
Remarks: Coefficient of Consolidation, C _v , equals 2013 ft ² /yr at an average pressure of 12 tsf (square root of time method).				Project: Calvert Cliffs Nuclear Power Plant	
Average Water Content of Trimmings, %: 24.0				Location: Calvert County, MD	
				Boring: B-321	Schnabel No.: 06120048
				Depth: 73.5-75.5 ft	Elevation: -2.8 to -4.8
				Date: 10/26/2006	Reviewed by: CJS
				Consolidation Test Report	

Consolidation Test Data Sheet

Consolidometer ID: 3

10/26/06

REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/2007

Schnabel Contract: 06120048

Project: Calvert Cliffs Nuclear Power Plant

Test Method: ASTM D2435 Method A

Test Condition: Inundated @ 0.05 tsf

Initial Height of Specimen (H_o), in.: 0.7315

Boring No.: B-321

Height of Solids (H_s), in.: 0.4253

Depth: 73.5-75.5 ft

Seating Press. (tsf): 0.05

Initial Dial Gauge Reading (D_o), in.: 0.0009

Reviewed by: CJS

Pressure, P (tsf)	Time Readings Required	Date Load Applied	Time Load Applied	Load Applied By	A	B	C	D	Vertical Strain ⁵ , ϵ_i (%)	Void Ratio ⁶ , e_i
					Final ¹ Dial Reading, D_f $\times 10^{-4}$ in.	Apparatus Correction ² , D_{ci} $\times 10^{-4}$ in.	Cumulative Change in Height ³ , ΔH_i in.	Height of Voids ⁴ , H_{vi} in.		
0.5		10/7/2006	9:10	DWC	76	6	0.0061	0.3002	0.83	0.706
1		10/9/2006	9:10	DWC	116	13	0.0094	0.2969	1.28	0.698
2		10/10/2006	9:10	DWC	158	20	0.0129	0.2934	1.76	0.690
4		10/11/2006	9:10	DWC	210	27	0.0174	0.2889	2.38	0.679
8		10/12/2006	9:10	DWC	275	36	0.0230	0.2833	3.14	0.666
4		10/13/2006	9:10	DWC	263	27	0.0227	0.2836	3.10	0.667
2		10/14/2006	9:10	CJS	249	20	0.0220	0.2843	3.01	0.668
4		10/16/2006	9:10	DWC	260	27	0.0224	0.2839	3.06	0.668
8		10/17/2006	9:10	DWC	286	36	0.0241	0.2822	3.29	0.664
16		10/18/2006	9:10	DWC	367	44	0.0314	0.2749	4.29	0.646
32		10/19/2006	9:10	DWC	517	53	0.0455	0.2608	6.22	0.613
8		10/20/2006	9:10	DWC	476	36	0.0431	0.2632	5.89	0.619
2		10/21/2006	9:10	DWC	435	20	0.0406	0.2657	5.55	0.625
0.5		10/23/2006	9:10	DWC	399	6	0.0384	0.2679	5.25	0.630

- Notes:
- 1 "Final" based on test method; 24 hrs for Method A, end of primary for Method B.
 - 2 Correction value, for the current pressure, from the consolidometer's calibration curve.
 - 3 $\Delta H = D_f - D_o - D_{ci} = \text{Col. A} - D_o - \text{Col. B}$
 - 4 $H_{vi} = (H_o - H_s) - \Delta H$
 - 5 $\epsilon_i = (\Delta H / H_o) \times 100 = (\text{Col. C} / H_o) \times 100$
 - 6 $e_i = H_{vi} / H_s = \text{Col. D} / H_s$



Load Time Readings

10/26/06

Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

Boring No.: B-321

Depth: 73.5-75.5 ft

Consol. ID: 3

Reviewed by: CJS

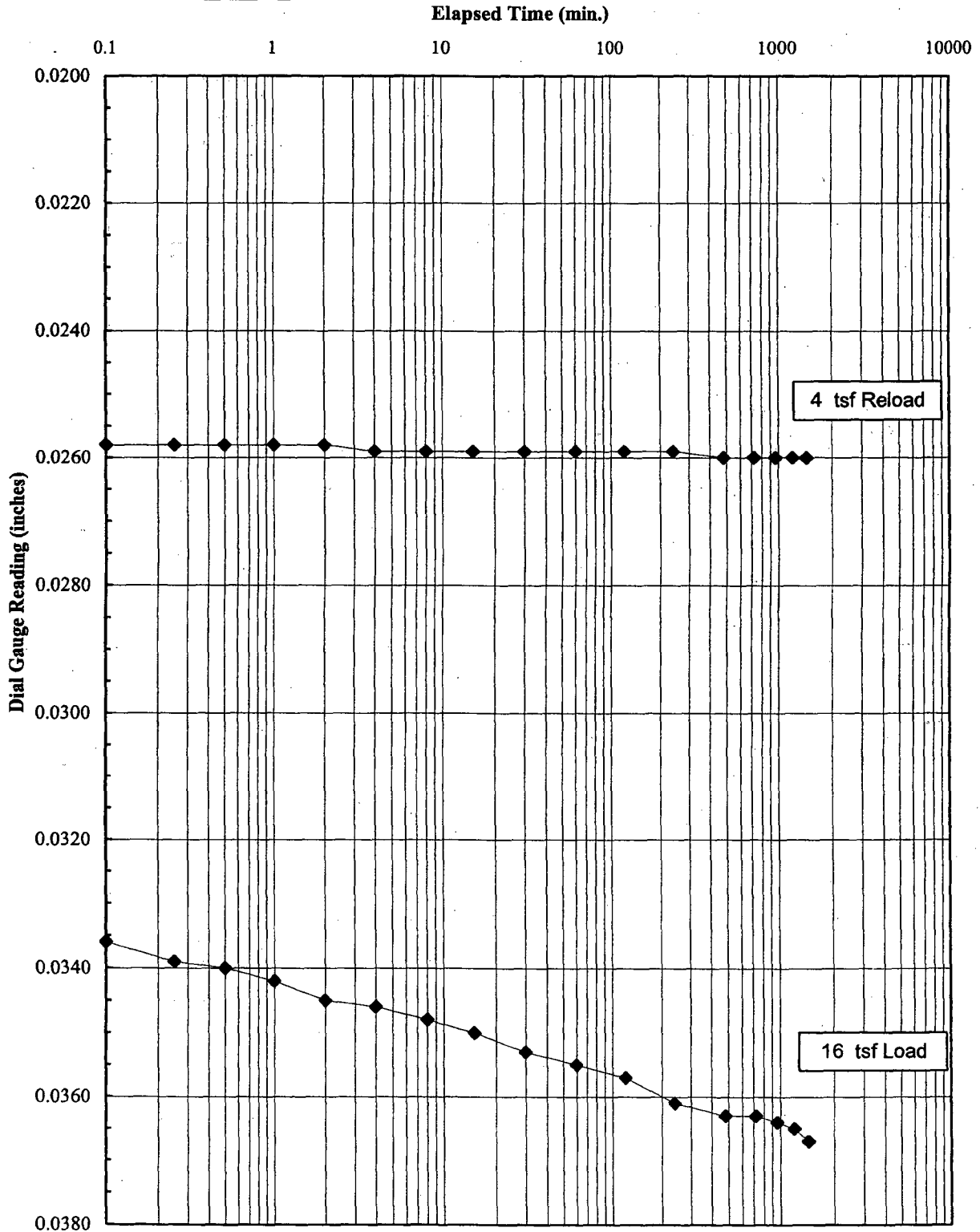
Elapsed Time (min.)	Dial Guage Readings (inches)					
	4 tsf	16 tsf	X tsf	X tsf	X tsf	X tsf
	Reload 10/16/2006	Load 10/18/2006	Load Date	Load Date	Load Date	Load Date
0.1	0.0258	0.0336				
0.25	0.0258	0.0339				
0.5	0.0258	0.0340				
1	0.0258	0.0342				
2	0.0258	0.0345				
4	0.0259	0.0346				
8	0.0259	0.0348				
15	0.0259	0.0350				
30	0.0259	0.0353				
60	0.0259	0.0355				
120	0.0259	0.0357				
240	0.0259	0.0361				
480	0.0260	0.0363				
720	0.0260	0.0363				
960	0.0260	0.0364				
1200	0.0260	0.0365				
1440	0.0260	0.0367				
1680						
1920						
2160						
2400						
2640						
2880						

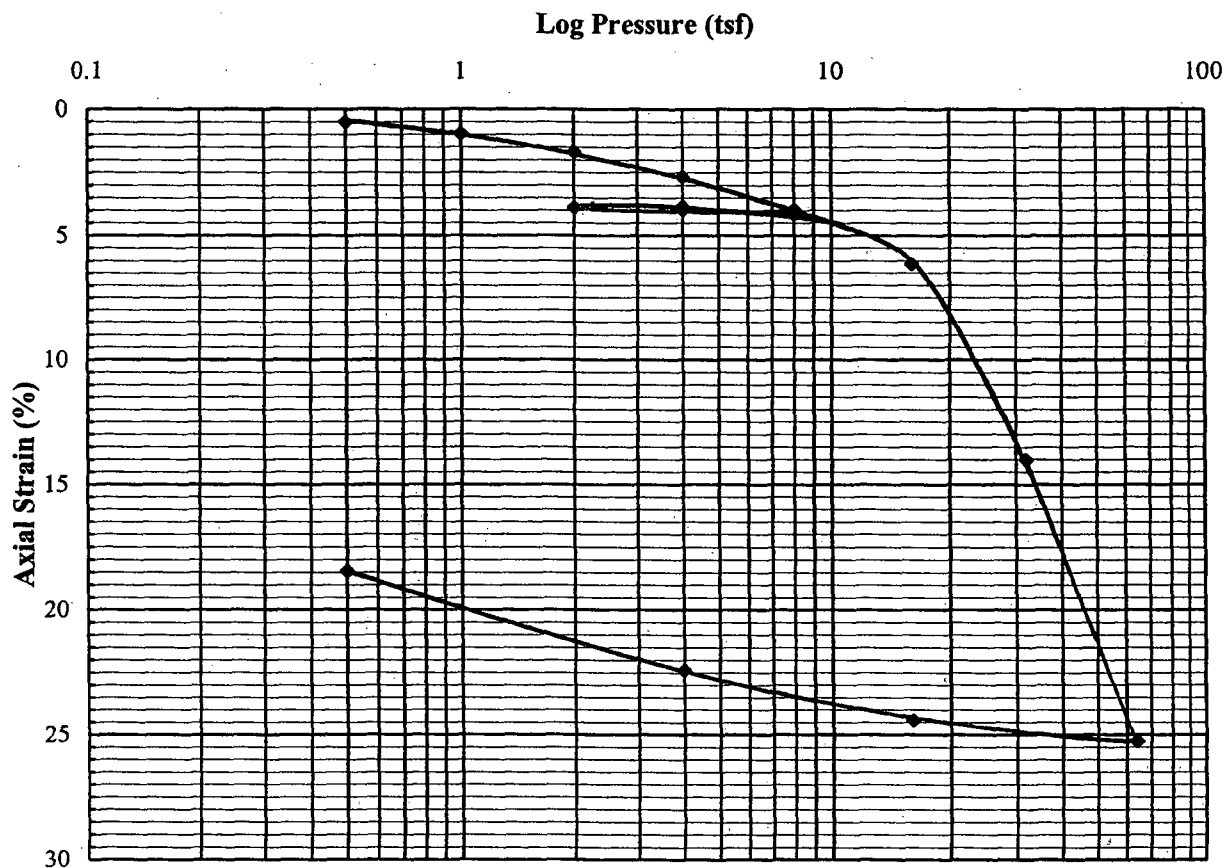
Consolidation Time Curves

10/26/06

Project: Calvert Cliffs Nuclear Power Plant
Schnabel Contract: 06120048
Boring No.: B-321 Depth: 73.5-75.5 ft

Reviewed by: CJS





REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/07

Probable Preconsolidation Pressure (Pp), tsf: 20.6				Recompression Ratio (C_{er}): 0.003	
Type of Specimen: Tube Sample				Compression Ratio (C_{ec}): 0.374	
Description: Sandy FAT CLAY (CH), contains shells - gray				Initial	Final
				Water Content, %	46.4 34.6
LL: 60	PI: 36	Gs: 2.70	P_o' (tsf): 4.00	Void Ratio	1.34 0.90
% < No. 200: 51.9		Test Method: ASTM D2435 Method A		Saturation, %	94 100
Test Condition: Inundated @ 0.5 tsf				Dry Unit Weight, pcf	72.1 88.4
Remarks: Coefficient of Consolidation, C _v , equals 2693 ft ² /yr at an average pressure of 24 tsf (square root of time method).				Project: Calvert Cliffs Nuclear Power Plant	
Average Water Content of Trimmings, %: 45.0				Location: Calvert County, MD	
				Boring: B-327	Schnabel No.: 06120048
				Depth: 113.5-114.2 ft	Elevation: -26.6 to -27.3
				Date: 11/21/2006	Reviewed by: CJS
				Consolidation Test Report	

Consolidation Test Data Sheet

Consolidometer ID: 4

11/21/06

Test Method: ASTM D2435 Method A

Test Condition: Inundated @ 0.5 tsf

REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/2007

Schnabel Contract: 06120048

Project: Calvert Cliffs Nuclear Power Plant

Initial Height of Specimen (H_o), in.: 0.7538

Height of Solids (H_s), in.: 0.3228

Boring No.: B-327

Depth: 113.5-114.2 ft

Seating Press. (tsf): 0.05

Initial Dial Gauge Reading (D_o), in.: 0.0000

Reviewed by: CJS

Pressure, P (tsf)	Time Readings Required	Date Load Applied	Time Load Applied	Load Applied By	A	B	C	D	Vertical Strain ⁵ , ϵ_i (%)	Void Ratio ⁶ , e_i
					Final ¹ Dial Reading, D_f $\times 10^{-4}$ in.	Apparatus Correction ² , D_{ci} $\times 10^{-4}$ in.	Cumulative Change in Height ³ , ΔH_i in.	Height of Voids ⁴ , H_{vi} in.		
0.5		10/7/2006	9:15	DWC	74	36	0.0038	0.4272	0.50	1.324
1		10/9/2006	9:15	DWC	118	45	0.0073	0.4237	0.97	1.313
2		10/10/2006	9:15	DWC	185	58	0.0127	0.4183	1.68	1.296
4		10/11/2006	9:15	DWC	270	69	0.0201	0.4109	2.67	1.273
8		10/12/2006	9:15	DWC	384	84	0.0300	0.4010	3.98	1.242
4		10/13/2006	9:15	DWC	370	69	0.0301	0.4009	3.99	1.242
2		10/14/2006	9:15	CJS	351	58	0.0293	0.4017	3.89	1.245
4		10/16/2006	9:15	DWC	360	69	0.0291	0.4019	3.86	1.245
8		10/17/2006	9:15	DWC	397	84	0.0313	0.3997	4.15	1.238
16		10/18/2006	9:15	DWC	566	104	0.0462	0.3848	6.13	1.192
32		10/19/2006	9:15	DWC	1180	123	0.1057	0.3253	14.02	1.008
64		10/20/2006	9:15	DWC	2048	143	0.1905	0.2405	25.27	0.745
16		10/21/2006	9:15	DWC	1945	104	0.1841	0.2469	24.42	0.765
4		10/23/2006	9:15	DWC	1758	69	0.1689	0.2621	22.41	0.812
0.5		10/24/2006	9:15	DWC	1427	36	0.1391	0.2919	18.45	0.904

- Notes:
- 1 "Final" based on test method; 24 hrs for Method A, end of primary for Method B.
 - 2 Correction value, for the current pressure, from the consolidometer's calibration curve.
 - 3 $\Delta H = D_f - D_o - D_{ci} = \text{Col. A} - D_o - \text{Col. B}$
 - 4 $H_{vi} = (H_o - H_s) - \Delta H$
 - 5 $\epsilon_i = (\Delta H / H_o) \times 100 = (\text{Col. C} / H_o) \times 100$
 - 6 $e_i = H_{vi} / H_s = \text{Col. D} / H_s$

Consol 8/2006 Rev. 1



Load Time Readings

11/21/06

Project: Calvert Cliffs Nuclear Power Plant
Schnabel Contract: 06120048
Boring No.: B-327 Depth: 113.5-114.2 ft
Reviewed by: CJS

Consol. ID: 4

Elapsed Time (min.)	Dial Guage Readings (inches)					
	4 tsf Reload	32 tsf Load	X tsf Load	X tsf Load	X tsf Load	X tsf Load
	10/16/2006	10/19/2006	Date	Date	Date	Date
0.1	0.0359	0.0716				
0.25	0.0359	0.0752				
0.5	0.0359	0.0780				
1	0.0359	0.0807				
2	0.0359	0.0830				
4	0.0359	0.0855				
8	0.0359	0.0884				
15	0.0359	0.0915				
30	0.0359	0.0949				
60	0.0360	0.0986				
120	0.0360	0.1027				
240	0.0360	0.1071				
480	0.0360	0.1116				
720	0.0360	0.1140				
960	0.0360	0.1158				
1200	0.0360	0.1170				
1440	0.0360	0.1180				
1680						
1920						
2160						
2400						
2640						
2880						

Consolidation Time Curves

11/21/06

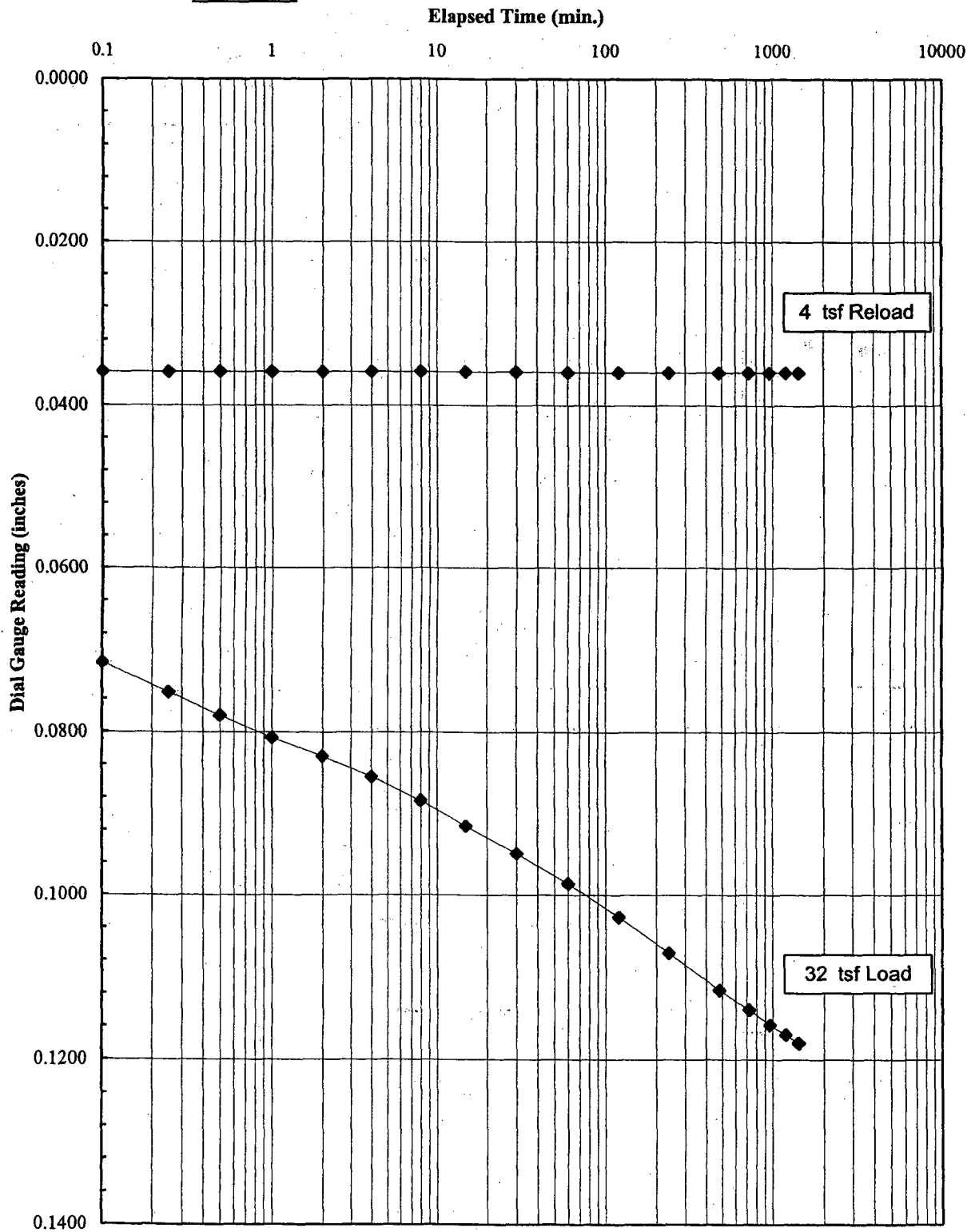
Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

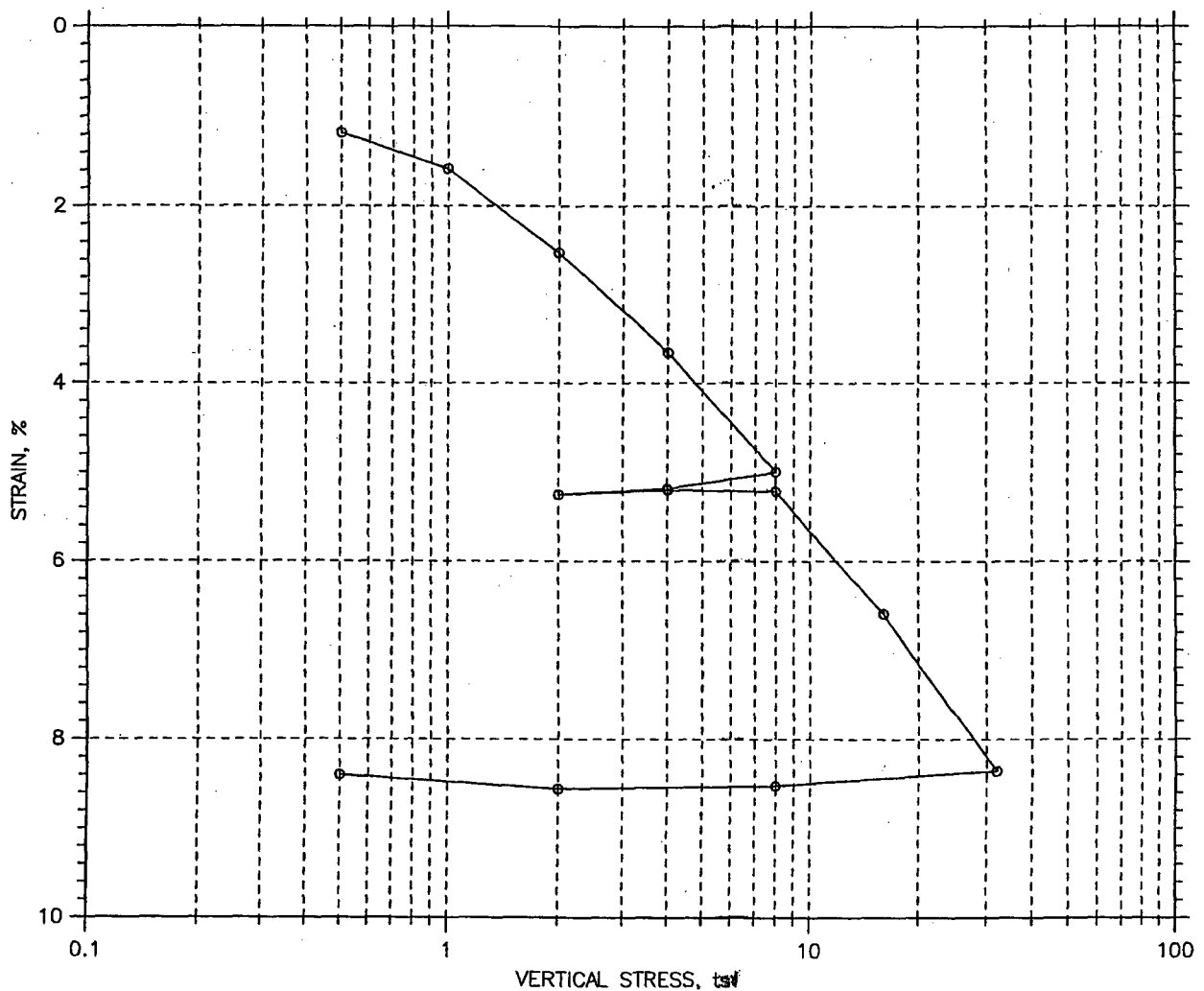
Boring No.: B-327

Depth: 113.5-114.2 ft

Reviewed by: CJS



CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	28.19	27.09
Preconsolidation Pressure: 2.3 tsf				Dry Unit Weight, pcf	87.46	95.48
Compression Index: ---				Saturation, %	83.43	97.48
Diameter: 2.5 in		Height: 1 in		Void Ratio	0.90	0.74
LL: 72	PL: 41	PI: 31	GS: 2.66			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs	Location: MD	Project No.: GTX-6880
	Boring No.: B-328	Tested By: md	Checked By: jdt
	Sample No.: S-16	Test Date: 09/11/06	Depth: 63.5-65.5
	Test No.: C-8	Sample Type: tube	Elevation: ---
	Description: Moist, dark gray organic silt (OH), 87% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System Q - Compression Ratio: .06, Recompression Ratio: >0.01		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs
Boring No.: B-328
Sample No.: S-16
Test No.: C-8

Location: MD
Tested By: md
Test Date: 09/11/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 63.5-65.5
Elevation: ---

Soil Description: Moist, dark gray organic silt (OH), 87% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System Q - Compression Ratio: .06, Recompression Ratio: >0.01

Measured Specific Gravity: 2.66
Initial Void Ratio: 0.90
Final Void Ratio: 0.74

Liquid Limit: 72
Plastic Limit: 41
Plasticity Index: 31

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID	245	RING		1842
Wt. Container + Wet Soil, gm	246.93	352.11	350.87	150.8
Wt. Container + Dry Soil, gm	194.43	320.34	320.34	120.4
Wt. Container, gm	8.24	207.65	207.65	8.17
Wt. Dry Soil, gm	186.19	112.69	112.69	112.23
Water Content, %	28.20	28.19	27.09	27.09
Void Ratio	---	0.90	0.74	---
Degree of Saturation, %	---	83.43	97.48	---
Dry Unit Weight, pcf	---	87.46	95.482	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs
Boring No.: B-328
Sample No.: S-16
Test No.: C-8

Location: MD
Tested By: md
Test Date: 09/11/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 63.5-65.5
Elevation: ---

Soil Description: Moist, dark gray organic silt (OH), 87% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System Q - Compression Ratio: .06, Recompression Ratio: >0.01

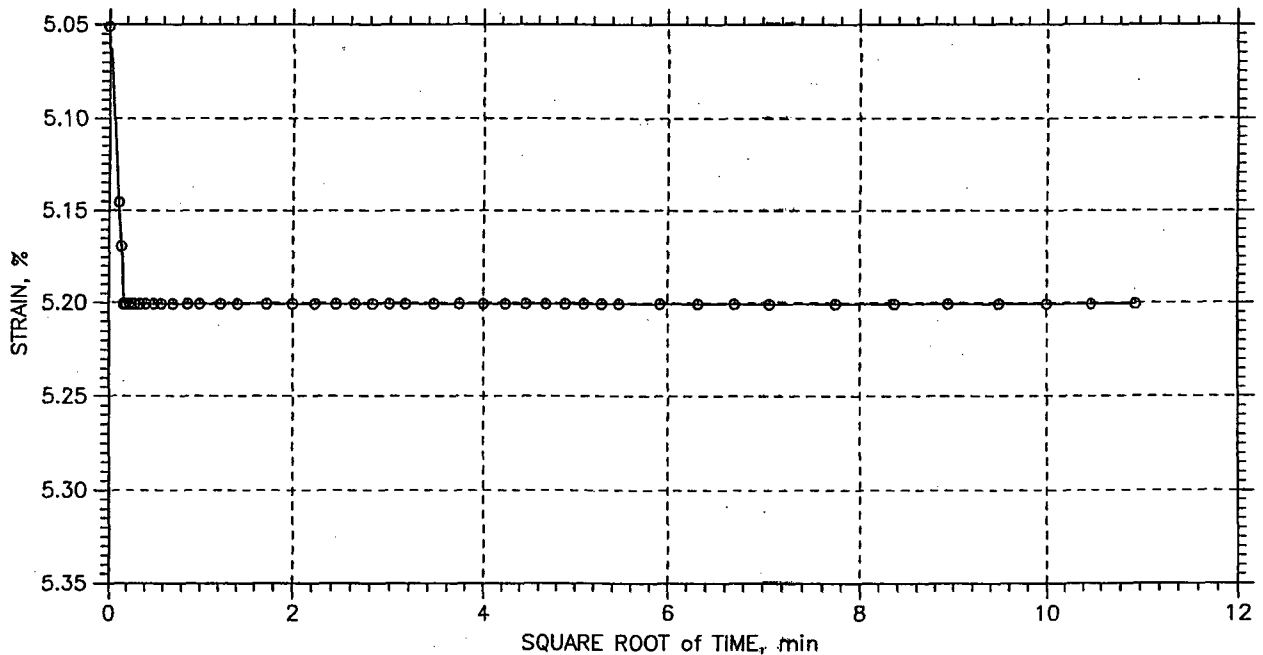
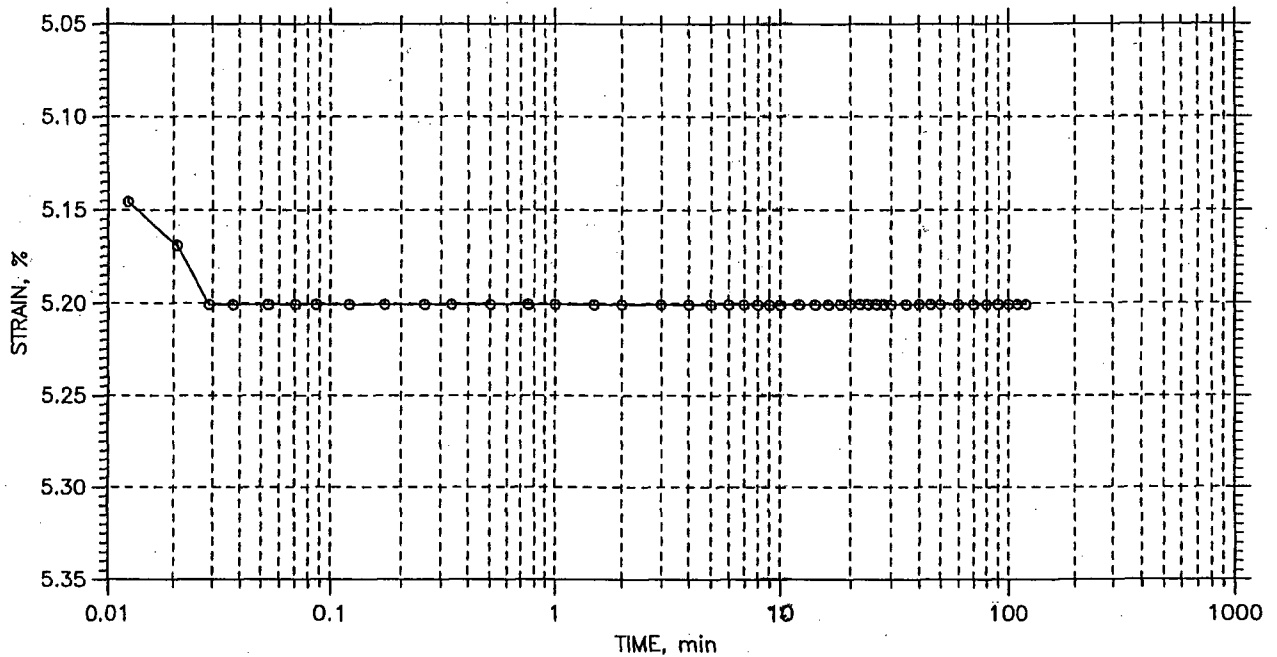
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	TSO Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.01177	0.876	1.18	0.1	0.0	1.30e-002	0.00e+000	1.30e-002
2	1	0.01582	0.869	1.58	0.1	0.0	1.27e-002	1.88e-002	1.51e-002
3	2	0.0252	0.851	2.52	0.1	0.1	9.74e-003	1.42e-002	1.16e-002
4	4	0.03657	0.829	3.66	0.0	0.0	1.75e-002	2.11e-002	1.91e-002
5	8	0.04996	0.804	5.00	0.0	0.0	1.71e-002	2.13e-002	1.90e-002
6	4	0.05185	0.800	5.18	0.0	0.0	5.14e-002	0.00e+000	5.14e-002
7	2	0.05252	0.799	5.25	0.0	0.0	4.30e-002	0.00e+000	4.30e-002
8	4	0.05201	0.800	5.20	0.0	0.0	5.73e-002	0.00e+000	5.73e-002
9	8	0.05216	0.800	5.22	0.4	0.0	1.67e-003	0.00e+000	1.67e-003
10	16	0.06586	0.774	6.59	0.0	0.0	1.76e-002	2.35e-002	2.01e-002
11	32	0.08358	0.740	8.36	0.0	0.0	2.34e-002	2.35e-002	2.34e-002
12	8	0.08527	0.737	8.53	0.0	0.0	3.38e-002	0.00e+000	3.38e-002
13	2	0.08559	0.736	8.56	0.0	0.0	2.76e-002	0.00e+000	2.76e-002
14	0.5	0.08402	0.739	8.40	0.0	0.0	2.15e-002	0.00e+000	2.15e-002

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



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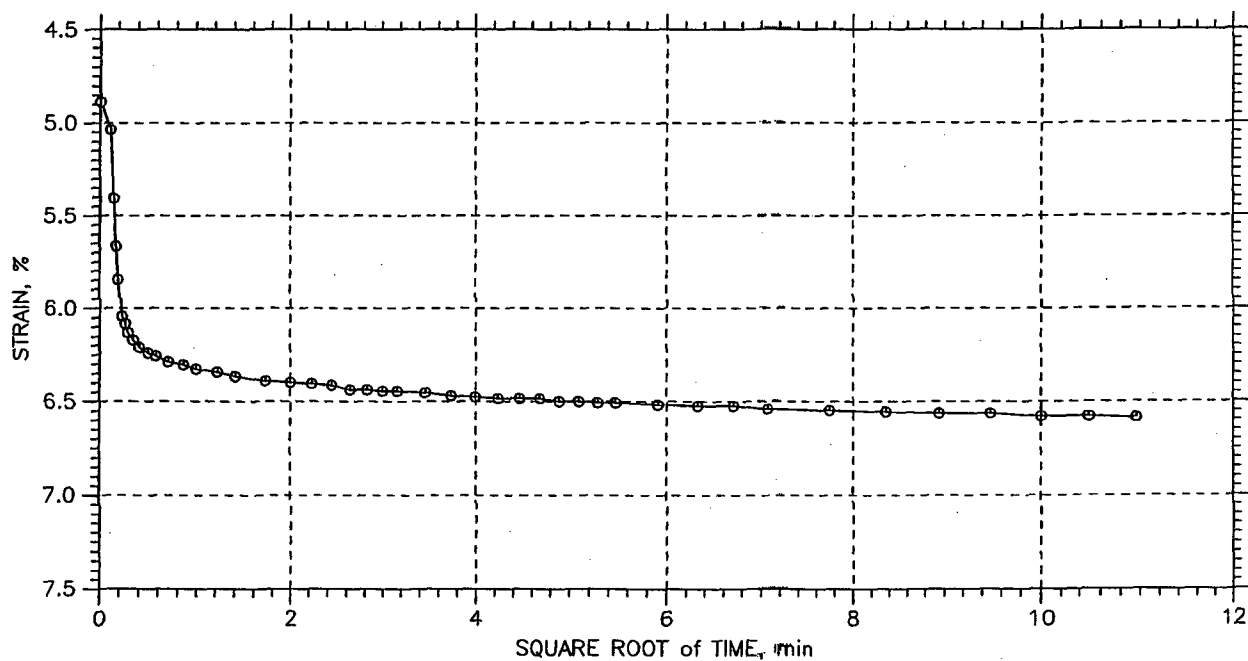
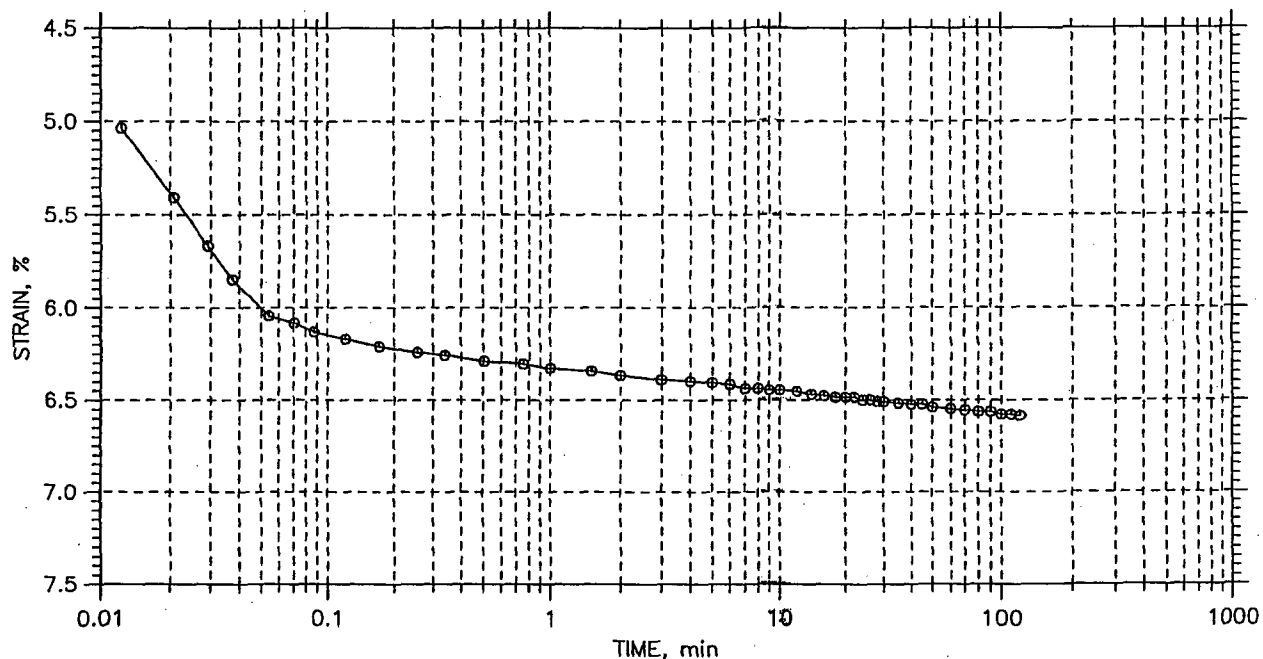
Project: Calvert Cliffs	Location: MD	Project No.: GTX-6880
Boring No.: B-328	Tested By: md	Checked By: jdt
Sample No.: S-16	Test Date: 09/11/06	Depth: 63.5-65.5
Test No.: C-8	Sample Type: tube	Elevation: ---
Description: Moist, dark gray organic silt (OH), 87% passing #200 sieve, inundated @ 0.5 tsf		
Remarks: System Q - Compression Ratio: .06, Recompression Ratio: >0.01		

CONSOLIDATION TEST DATA

TIME CURVES

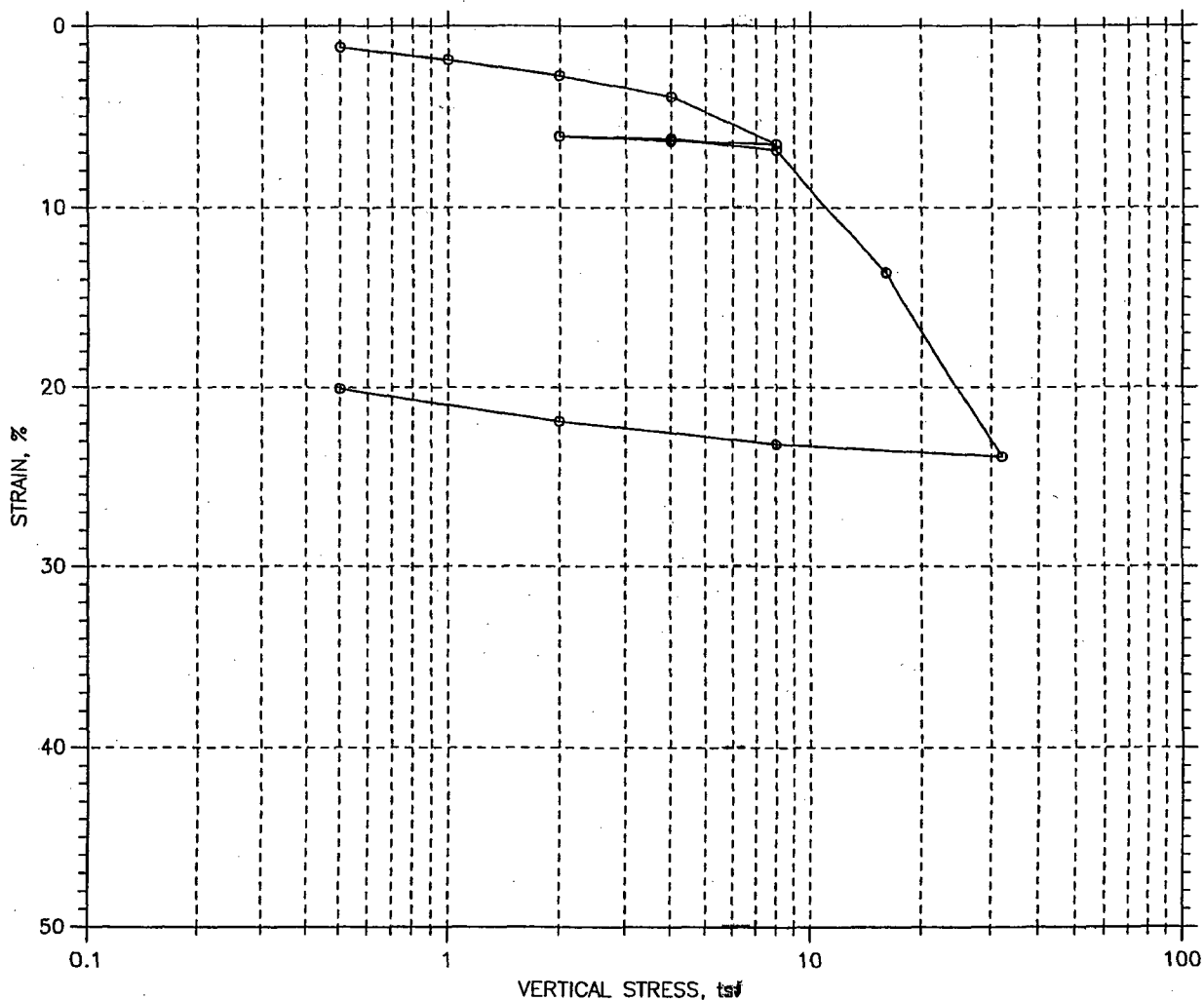
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs	Location: MD	Project No.: GTX-6880
	Boring No.: B-328	Tested By: md	Checked By: jdt
	Sample No.: S-16	Test Date: 09/11/06	Depth: 63.5-65.5
	Test No.: C-8	Sample Type: tube	Elevation: ---
	Description: Moist, dark gray organic silt (OH), 87% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System Q - Compression Ratio: .06, Recompression Ratio: >0.01		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test
Overburden Pressure: ---		Water Content, %		44.40	37.22
Preconsolidation Pressure: 10 tsf		Dry Unit Weight, pcf		67.94	84.99
Compression Index: ---		Saturation, %		79.76	100.00
Diameter: 2.5 in	Height: 1 in		Void Ratio		1.54
LL: 72	PL: 45	PI: 27	GS: 2.76		

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-328	Tested By: md	Checked By: njh
	Sample No.: S-28	Test Date: 09/09/06	Depth: 123.5-125.1
	Test No.: C-6	Sample Type: tube	Elevation: ---
	Description: Moist, olive gray silt with sand (MH), 83% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.38, Recompression Ratio: 0.02		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear
Boring No.: B-328
Sample No.: S-28
Test No.: C-6

Location: Calvert County, MD
Tested By: md
Test Date: 09/09/06
Sample Type: tube

Project No.: GTX-6880
Checked By: njh
Depth: 123.5-125.6
Elevation: ---

Soil Description: Moist, olive gray silt with sand (MH), 83% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: 0.38, Recompression Ratio: 0.02

Measured Specific Gravity: 2.76
Initial Void Ratio: 1.54
Final Void Ratio: 1.03

Liquid Limit: 72
Plastic Limit: 45
Plasticity Index: 27

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID	1225	RING		1111
Wt. Container + Wet Soil, gm	172.09	342.88	336.6	127.46
Wt. Container + Dry Soil, gm	121.87	304.02	304.02	95.07
Wt. Container, gm	8.37	216.48	216.48	8.05
Wt. Dry Soil, gm	113.5	87.537	87.537	87.02
Water Content, %	44.25	44.40	37.22	37.22
Void Ratio	---	1.54	1.03	---
Degree of Saturation, %	---	79.76	100.00	---
Dry Unit Weight, pcf	---	67.936	84.99	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear
Boring No.: B-328
Sample No.: S-28
Test No.: C-6

Location: Calvert County, MD
Tested By: md
Test Date: 09/09/06
Sample Type: tube

Project No.: GTX-6880
Checked By: njh
Depth: 123.5-125.t
Elevation: ---

Soil Description: Moist, olive gray silt with sand (MH), 83% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: 0.38, Recompression Ratio: 0.02

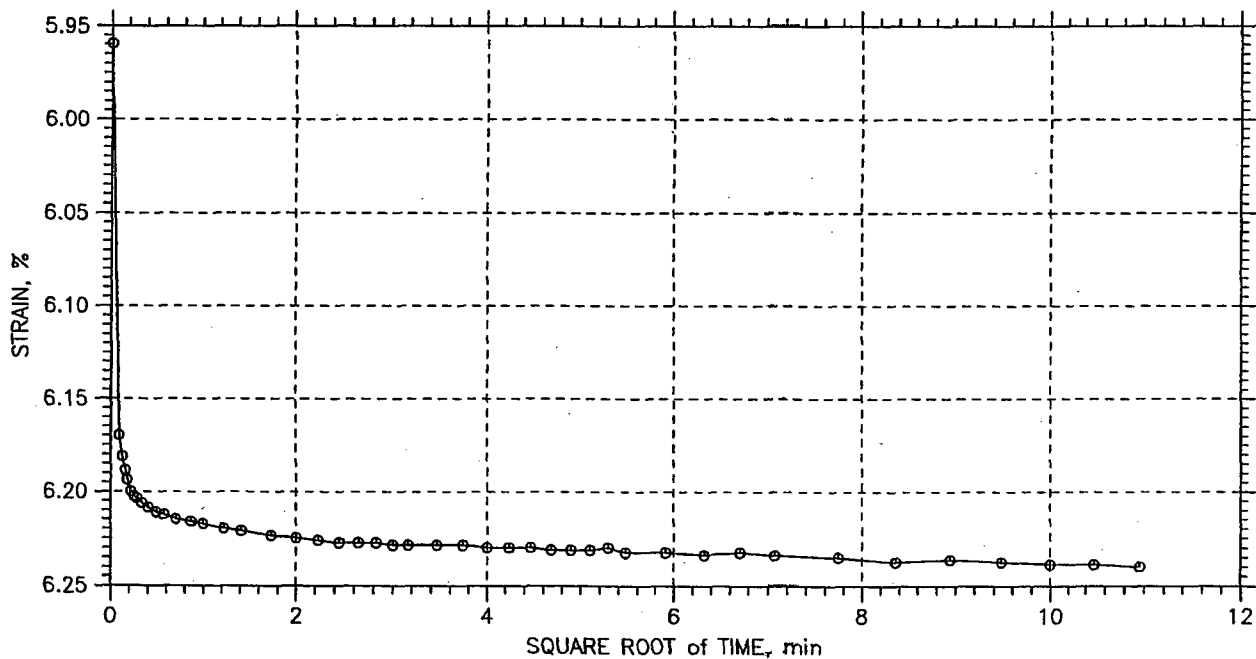
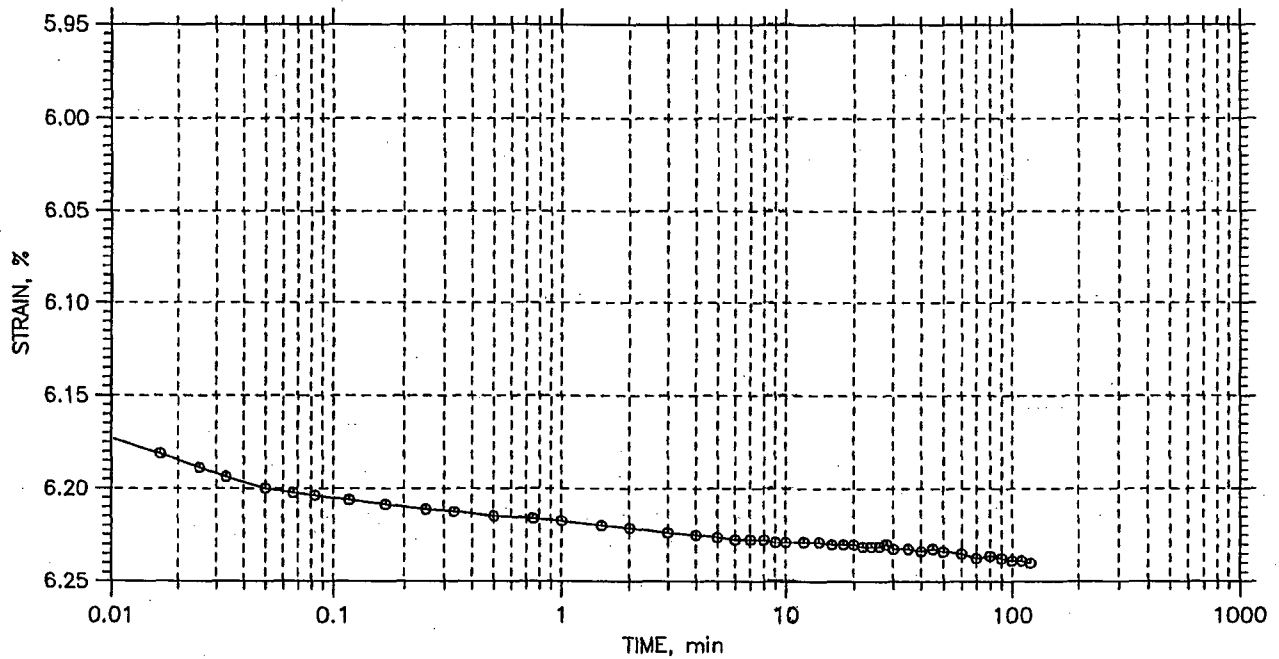
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Sq.Rt. min	Fitting Log min	Coefficient of Consolidation		
							Sq.Rt. in^2/sec	Log in^2/sec	Ave. in^2/sec
1	0.5	0.01171	1.507	1.17	0.0	0.0	2.77e-002	0.00e+000	2.77e-002
2	1	0.01889	1.488	1.89	0.0	0.0	2.06e-002	3.21e-002	2.51e-002
3	2	0.02737	1.467	2.74	0.0	0.0	5.02e-002	4.00e-002	4.45e-002
4	4	0.03904	1.437	3.90	0.0	0.0	2.18e-002	5.35e-002	3.10e-002
5	8	0.06528	1.371	6.53	0.1	0.0	7.44e-003	4.97e-002	1.29e-002
6	4	0.06356	1.375	6.36	0.0	0.0	1.67e-001	0.00e+000	1.67e-001
7	2	0.061	1.382	6.10	0.0	0.0	7.35e-002	0.00e+000	7.35e-002
8	4	0.0624	1.378	6.24	0.0	0.0	1.47e-001	0.00e+000	1.47e-001
9	8	0.06856	1.362	6.86	0.7	0.0	9.70e-004	0.00e+000	9.70e-004
10	16	0.136	1.191	13.60	0.3	0.0	2.27e-003	1.92e-002	4.06e-003
11	32	0.2389	0.930	23.89	0.6	0.3	8.66e-004	1.71e-003	1.15e-003
12	8	0.2319	0.948	23.19	0.0	0.0	6.63e-002	0.00e+000	6.63e-002
13	2	0.2189	0.981	21.89	0.7	0.0	7.08e-004	0.00e+000	7.08e-004
14	0.5	0.2007	1.027	20.07	2.9	3.4	1.78e-004	1.52e-004	1.64e-004

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



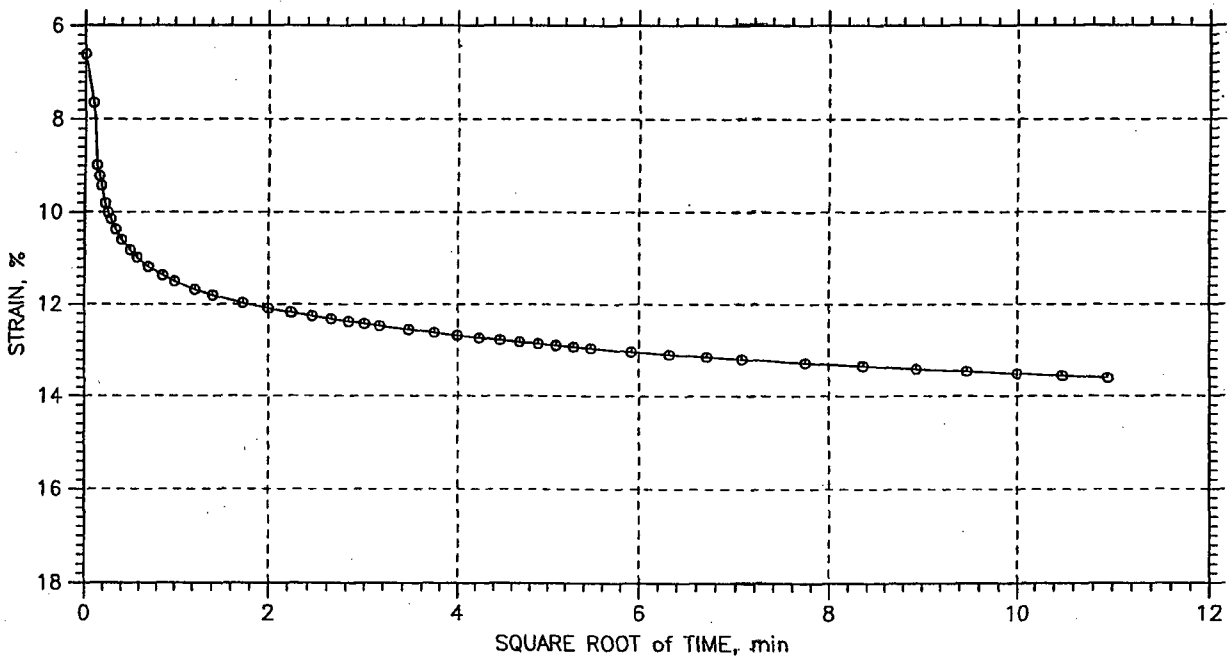
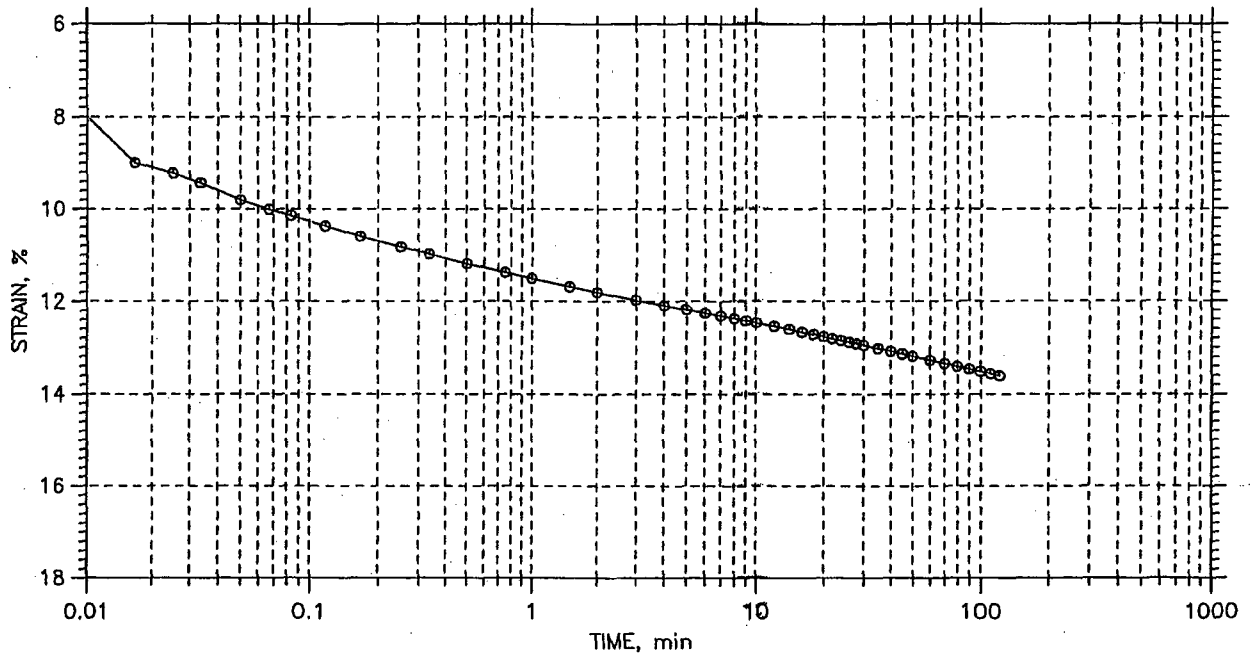
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-328	Tested By: md	Checked By: njh
	Sample No.: S-28	Test Date: 09/09/06	Depth: 123.5-125.t
	Test No.: C-6	Sample Type: tube	Elevation: ---
	Description: Moist, olive gray silt with sand (MH), 83% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.38, Recompression Ratio: 0.02		

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 10 of 14

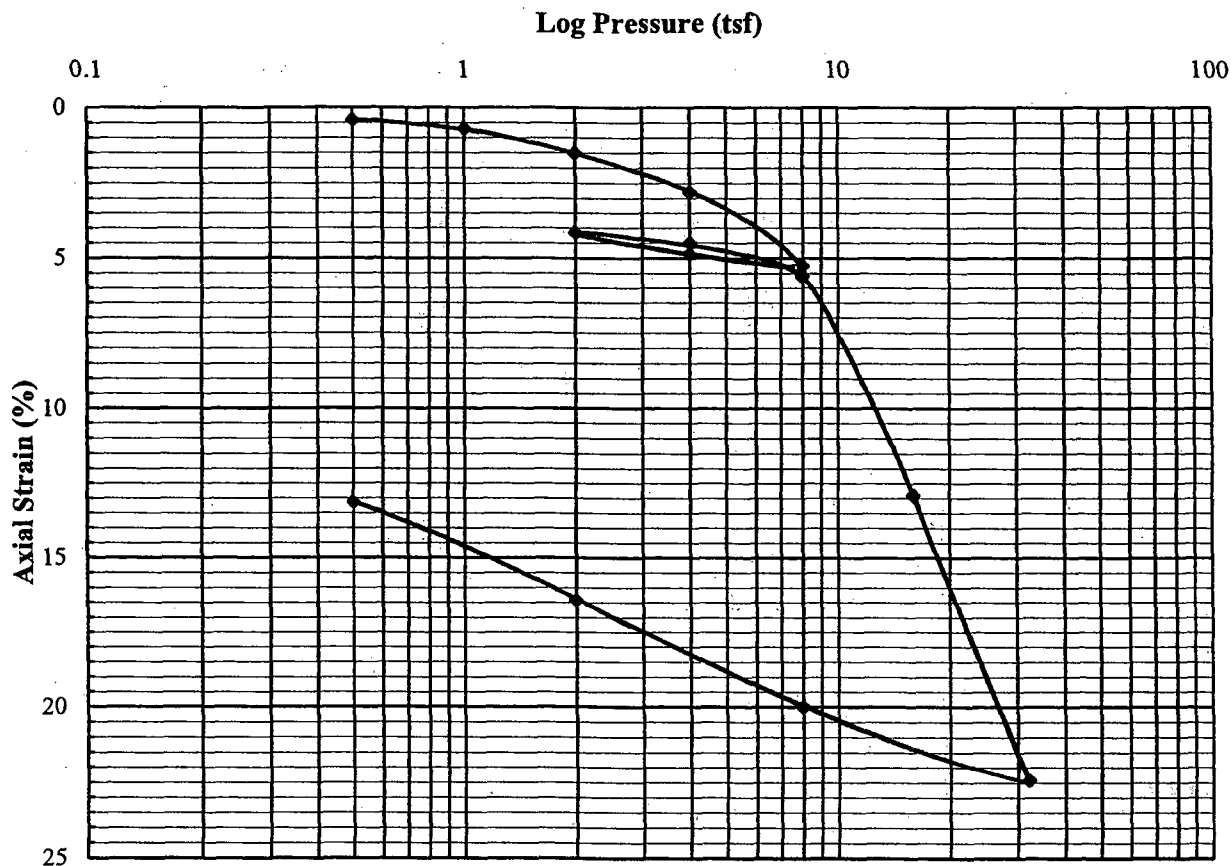
Stress: 16. tsf



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Project: Calvert Cliffs Nuclear	Location: Calvert County, MD	Project No.: GTX-6880
Boring No.: B-328	Tested By: md	Checked By: njh
Sample No.: S-28	Test Date: 09/09/06	Depth: 123.5-125.t
Test No.: C-6	Sample Type: tube	Elevation: ---
Description: Moist, olive gray silt with sand (MH), 83% passing #200 sieve, inundated @ 0.5 tsf		
Remarks: System G - Compression Ratio: 0.38, Recompression Ratio: 0.02		



REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/2007

Probable Preconsolidation Pressure (Pp), tsf: 9.3				Recompression Ratio (C_{er}): 0.021	
Type of Specimen: Tube Sample				Compression Ratio (C_{ec}): 0.316	
Description: FAT CLAY with sand (CH) - gray					
LL: 52	PI: 33	Gs: 2.82	P_o' (tsf): 1.15	Water Content, %	Initial 39.5 Final 31.4
% < No. 200: 85.3		Test Method: ASTM D2435 Method A		Void Ratio	1.15 0.87
Test Condition: Inundated @ 2 tsf				Saturation, %	97 100
Remarks: Coefficient of Consolidation, C _v , equals 196 and 17 ft ² /yr at average pressures of 3 and 12 tsf (square root of time method).				Dry Unit Weight, pcf	81.7 94.0
Average Water Content of Trimmings, %: 37.4				Project: Calvert Cliffs Nuclear Power Plant	
				Location: Calvert County, MD	
				Boring: B-333	Schnabel No.: 06120048
				Depth: 28.5-30.5 ft.	Elevation: 61 to 59 ft
				Date: 11/21/2006	Reviewed by: CJS
Consolidation Test Report					

Consolidation Test Data Sheet

Consolidometer ID: 3

11/21/06

REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/07

Schnabel Contract: 06120048

Project: Calvert Cliffs Nuclear Power Plant

Test Method: ASTM D2435 Method A

Test Condition: Inundated @ 2 tsf

Initial Height of Specimen (H_o), in.: 0.7497

Boring No.: B-333

Height of Solids (H_s), in.: 0.3481

Depth: 28.5-30.5ft.

Seating Press. (tsf): 0.05

Initial Dial Gauge Reading (D_o), in.: -0.0010

Reviewed by: CJS

Pressure, P (tsf)	Time Readings Required	Date Load Applied	Time Load Applied	Load Applied By	A	B	C	D	Vertical Strain ⁵ , ϵ_i (%)	Void Ratio ⁶ , e_i
					Final ¹ Dial Reading, D_{fi} $\times 10^{-4}$ in.	Apparatus Correction ² , D_{ci} $\times 10^{-4}$ in.	Cumulative Change in Height ³ , ΔH_i in.	Height of Voids ⁴ , H_{vi} in.		
0.5		10/14/2006	9:25	CJS	29	8	0.0031	0.3985	0.41	1.145
1		10/16/2006	9:00	DWC	56	13	0.0053	0.3963	0.71	1.138
2		10/17/2006	9:00	DWC	120	17	0.0113	0.3903	1.51	1.121
4		10/18/2006	9:00	DWC	224	25	0.0209	0.3807	2.79	1.094
8		10/19/2006	9:00	DWC	424	39	0.0395	0.3621	5.27	1.040
4		10/20/2006	9:00	DWC	379	25	0.0364	0.3652	4.86	1.049
2		10/21/2006	9:00	DWC	319	17	0.0312	0.3704	4.16	1.064
4		10/23/2006	9:00	DWC	352	25	0.0337	0.3679	4.50	1.057
8		10/24/2006	9:00	DWC	450	39	0.0421	0.3595	5.62	1.033
16		10/25/2006	9:00	DWC	1005	48	0.0967	0.3049	12.90	0.876
32		10/26/2006	9:00	DWC	1727	56	0.1681	0.2335	22.42	0.671
8		10/27/2006	9:00	DWC	1528	39	0.1499	0.2517	19.99	0.723
2		10/30/2006	1:00	DWC	1239	17	0.1232	0.2784	16.43	0.800
0.5		10/31/2006	1:00	DWC	983	8	0.0985	0.3031	13.14	0.871

- Notes: 1 "Final" based on test method; 24 hrs for Method A, end of primary for Method B.
 2 Correction value, for the current pressure, from the consolidometer's calibration curve.
 3 $\Delta H = D_{fi} - D_o - D_{ci} = \text{Col. A} - D_o - \text{Col. B}$
 4 $H_{vi} = (H_o - H_s) - \Delta H$
 5 $\epsilon_i = (\Delta H / H_o) \times 100 = (\text{Col. C} / H_o) \times 100$
 6 $e_i = H_{vi} / H_s = \text{Col. D} / H_s$



Load Time Readings

11/21/06

Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

Boring No.: B-333

Depth: 28.5-30.5ft.

Consol. ID: 3

Reviewed by: CJS

Elapsed Time (min.)	Dial Guage Readings (inches)					
	4 tsf Reload	32 tsf Load	X tsf Load	X tsf Load	X tsf Load	X tsf Load
	10/23/2006	10/26/2006	Date	Date	Date	Date
0.1	0.0174	0.0441				
0.25	0.0175	0.0457				
0.5	0.0176	0.0473				
1	0.0177	0.0496				
2	0.0178	0.0525				
4	0.0178	0.0561				
8	0.0178	0.0608				
15	0.0179	0.0657				
30	0.0179	0.0715				
60	0.0179	0.0770				
120	0.0180	0.0817				
240	0.0180	0.0856				
480	0.0181	0.0890				
720	0.0181	0.0907				
960	0.0181	0.0918				
1200	0.0181	0.0926				
1440	0.0181	0.0933				
1680						
1920						
2160						
2400						
2640						
2880						



Consolidation Time Curves

11/21/06

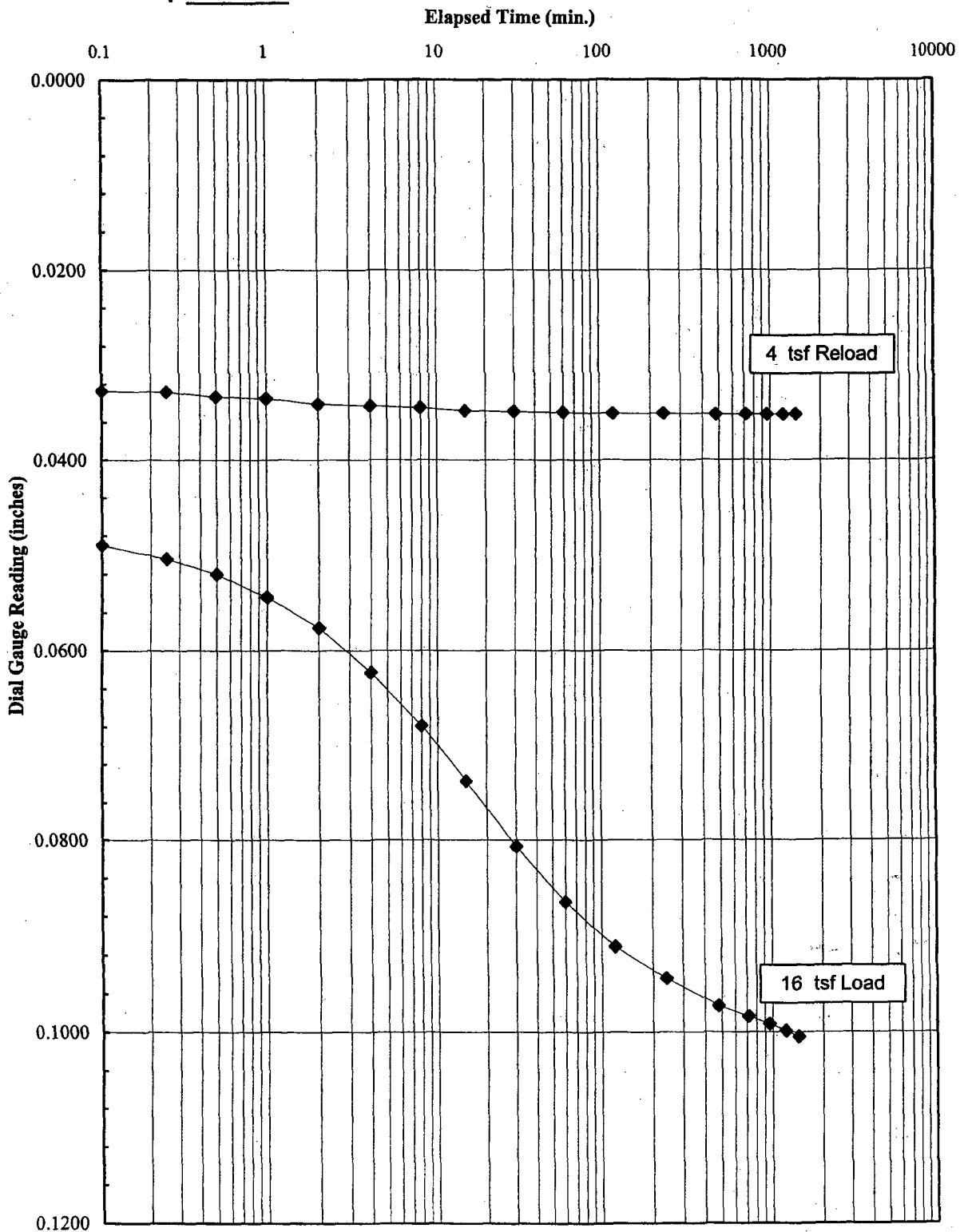
Project: Calvert Cliffs Nuclear Power Plant

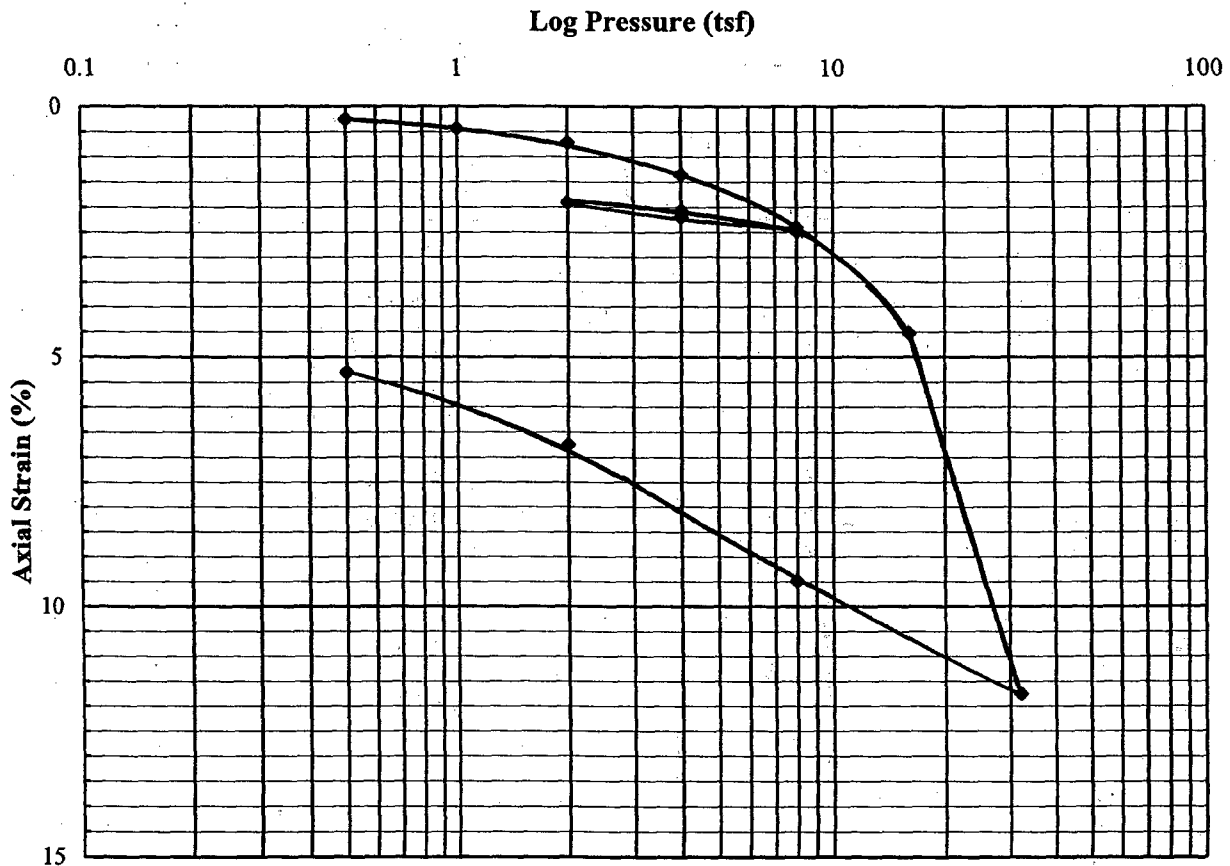
Schnabel Contract: 06120048

Boring No.: B-333

Depth: 28.5-30.5ft.

Reviewed by: CJS





REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/07

Probable Preconsolidation Pressure (Pp), tsf: 15.2				Recompression Ratio (C_{er}): 0.009	
Type of Specimen: Tube Sample				Compression Ratio (C_{ec}): 0.240	
Description: FAT CLAY (CH) - gray				Initial	Final
LL: 61	PI: 38	Gs: 2.85	P_o' (tsf): 1.40	Water Content, %	37.2 34.9
% < No. 200: 98.8		Test Method: ASTM D2435 Method A		Void Ratio	1.10 0.99
Test Condition: Inundated @ 2.0tsf				Saturation, %	96 100
				Dry Unit Weight, pcf	84.6 89.3
Remarks: Coefficient of Consolidation, C _v , equals 279 and 34 ft/yr at average pressures of 3 and 16 tsf (square root of time method).				Project: Calvert Cliffs Nuclear Power Plant	
Average Water Content of Trimmings, %: 32.8				Location: Calvert County, MD	
				Boring: B-333	Schnabel No.: 06120048
				Depth: 38.5-40.5ft.	Elevation: 51 to 49 ft
				Date: 11/21/2006	Reviewed by: CJS
				Consolidation Test Report	

Consolidation Test Data Sheet

Consolidometer ID: 3

11/21/06

Test Method: ASTM D2435 Method A

Test Condition: Inundated @ 2.0tsf

REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/2007

Schnabel Contract: 06120048

Project: Calvert Cliffs Nuclear Power Plant

Initial Height of Specimen (H_o), in.: 0.7504

Boring No.: B-333

Height of Solids (H_s), in.: 0.3569

Depth: 38.5-40.5ft.

Seating Press. (tsf): 0.05

Initial Dial Gauge Reading (D_o), in.: -0.0002

Reviewed by: CJS

Pressure, P (tsf)	Time Readings Required	Date Load Applied	Time Load Applied	Load Applied By	A	B	C	D	Vertical Strain ⁵ , ϵ_i (%)	Void Ratio ⁶ , e_i
					Final ¹ Dial Reading, D_{fi} $\times 10^{-4}$ in.	Apparatus Correction ² , D_{ci} $\times 10^{-4}$ in.	Cumulative Change in Height ³ , ΔH_i in.	Height of Voids ⁴ , H_{vi} in.		
0.5		10/25/2006	9:10	DWC	23	6	0.0019	0.3916	0.25	1.097
1		10/26/2006	9:10	DWC	44	13	0.0033	0.3902	0.44	1.093
2		10/27/2006	9:10	DWC	72	20	0.0054	0.3881	0.72	1.087
4		10/31/2006	9:10	DWC	127	27	0.0102	0.3833	1.36	1.074
8		11/1/2006	9:10	DWC	214	36	0.0180	0.3755	2.40	1.052
4		11/2/2006	9:10	DWC	190	27	0.0165	0.3770	2.20	1.056
2		11/3/2006	9:10	DWC	162	20	0.0144	0.3791	1.92	1.062
4		11/4/2006	9:10	CJS	181	27	0.0156	0.3779	2.08	1.059
8		11/6/2006	9:10	DWC	221	36	0.0187	0.3748	2.49	1.050
16		11/7/2006	9:10	DWC	382	44	0.0340	0.3595	4.53	1.007
32		11/8/2006	9:10	DWC	933	53	0.0882	0.3053	11.75	0.855
8		11/9/2006	9:10	DWC	746	36	0.0712	0.3223	9.49	0.903
2		11/10/2006	9:10	DWC	525	20	0.0507	0.3428	6.76	0.961
0.5		11/11/2006	9:10	DWC	402	6	0.0398	0.3537	5.30	0.991

- Notes:
- 1 "Final" based on test method; 24 hrs for Method A, end of primary for Method B.
 - 2 Correction value, for the current pressure, from the consolidometer's calibration curve.
 - 3 $\Delta H = D_{fi} - D_o - D_{ci} = \text{Col. A} - D_o - \text{Col. B}$
 - 4 $H_{vi} = (H_o - H_s) - \Delta H$
 - 5 $\epsilon_i = (\Delta H / H_o) \times 100 = (\text{Col. C} / H_o) \times 100$
 - 6 $e_i = H_{vi} / H_s = \text{Col. D} / H_s$



Load Time Readings

11/21/06

Project: Calvert Cliffs Nuclear Power Plant
 Schnabel Contract: 06120048
 Boring No.: B-333 Depth: 38.5-40.5ft.
 Reviewed by: CJS

Consol. ID: 3

Elapsed Time (min.)	Dial Guage Readings (inches)					
	4 tsf	32 tsf	X tsf	X tsf	X tsf	X tsf
	Reload 11/4/2006	Load 11/8/2006	Load Date	Load Date	Load Date	Load Date
0.1	0.0174	0.0441				
0.25	0.0175	0.0457				
0.5	0.0176	0.0473				
1	0.0177	0.0496				
2	0.0178	0.0525				
4	0.0178	0.0561				
8	0.0178	0.0608				
15	0.0179	0.0657				
30	0.0179	0.0715				
60	0.0179	0.0770				
120	0.0180	0.0817				
240	0.0180	0.0856				
480	0.0181	0.0890				
720	0.0181	0.0907				
960	0.0181	0.0918				
1200	0.0181	0.0926				
1440	0.0181	0.0933				
1680						
1920						
2160						
2400						
2640						
2880						

Consolidation Time Curves

11/21/06

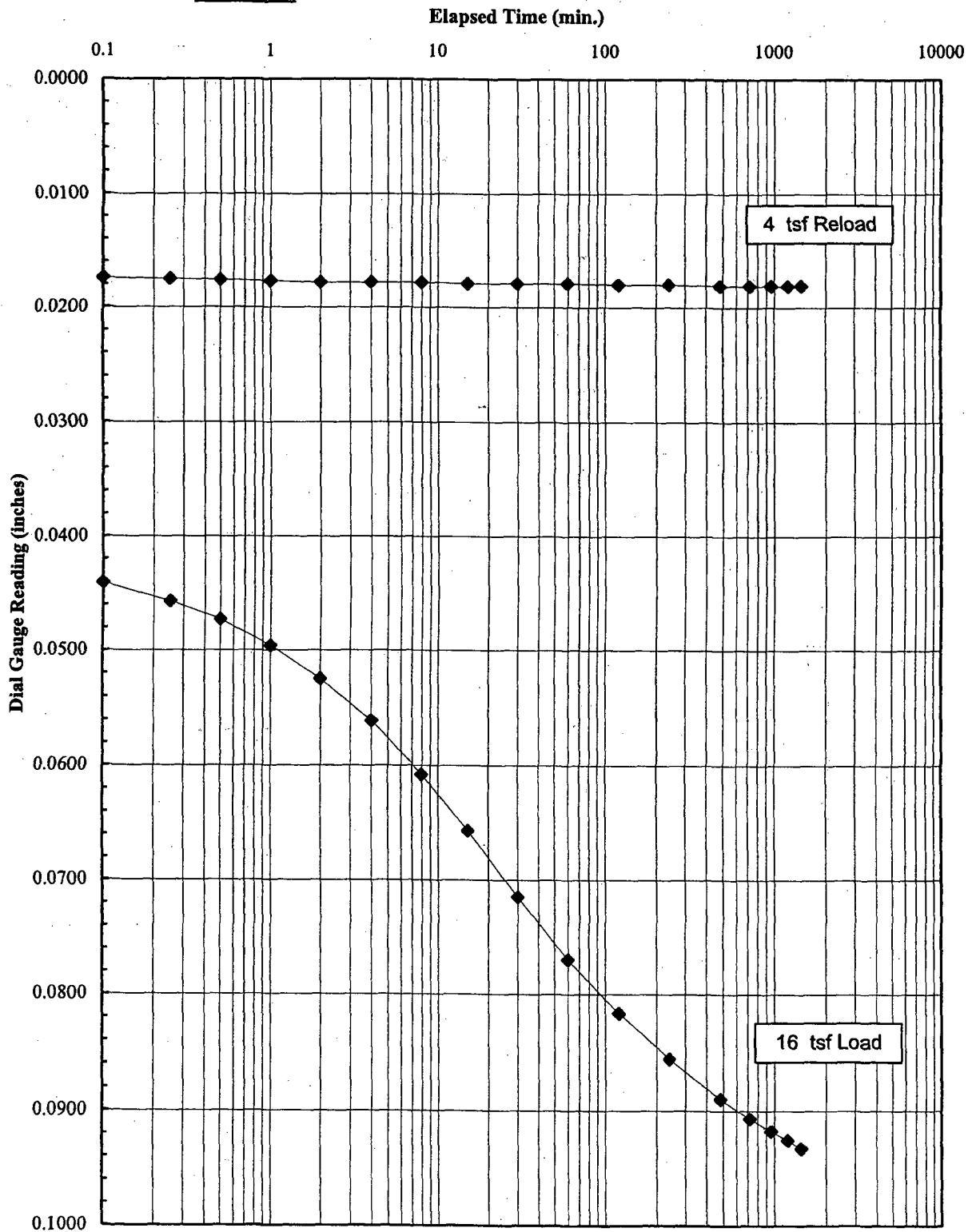
Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

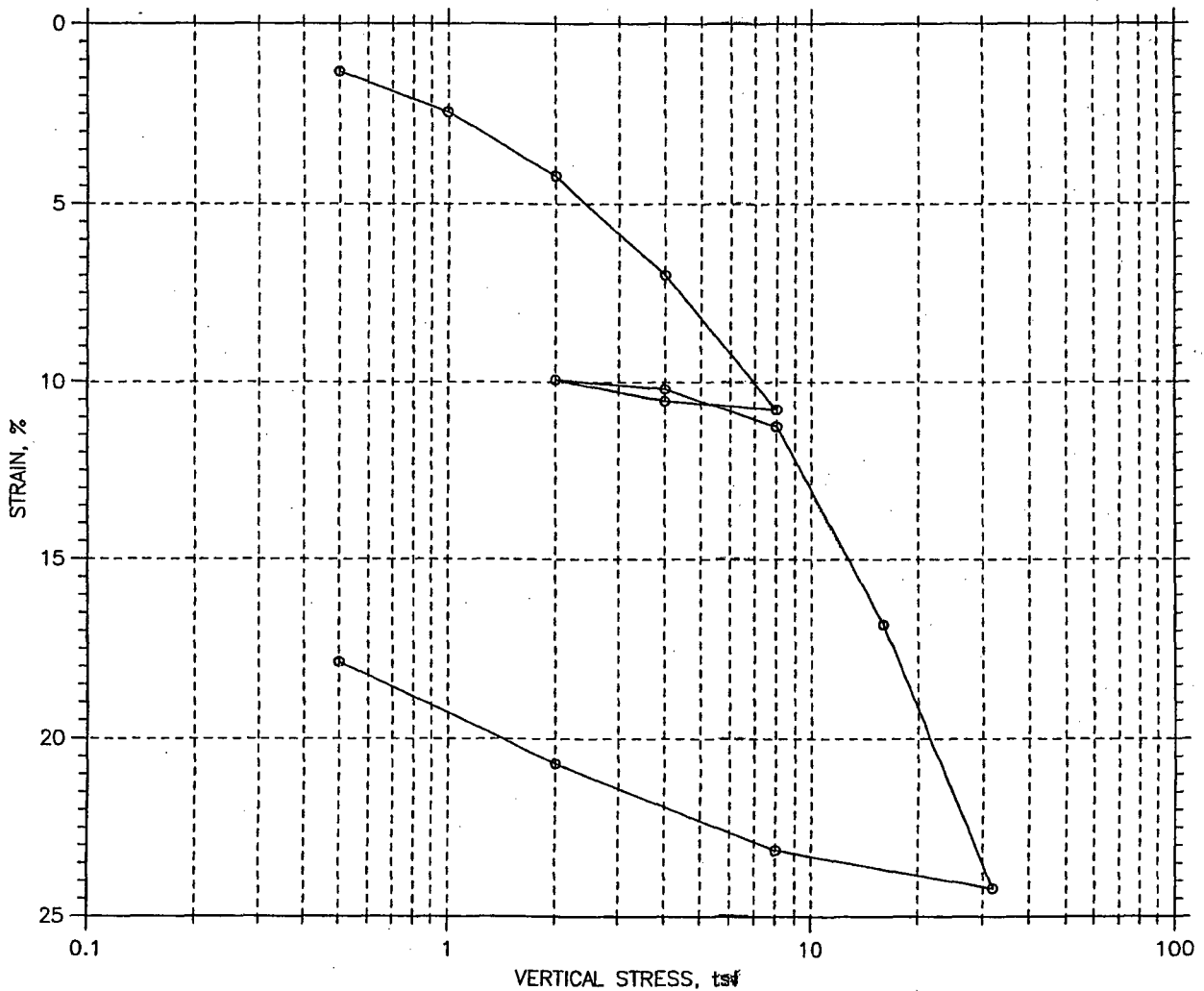
Boring No.: B-333

Depth: 38.5-40.5ft.

Reviewed by: CJS



CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	38.34	27.36
Preconsolidation Pressure: 5.3 tsf				Dry Unit Weight, pcf	79.63	96.94
Compression Index: ---				Saturation, %	92.70	99.99
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.12	0.74
LL: 51	PL: 16	PI: 35	GS: 2.70			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County	Project No.: GTX-6880
	Boring No.: B-334	Tested By: md	Checked By: jdt
	Sample No.: S-8	Test Date: 09/11/2006	Depth: 23-25
	Test No.: C-9	Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray clay with sand (CH), 79% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System T - Compression Ratio: 0.22, Recompression Ratio: 0.02		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
 Boring No.: B-334
 Sample No.: S-8
 Test No.: C-9

Location: Calvert County
 Tested By: md
 Test Date: 09/11/2006
 Sample Type: tube

Project No.: GTX-6880
 Checked By: jdt
 Depth: 23-25
 Elevation: ---

Soil Description: Moist, dark greenish gray clay with sand (CH), 79% passing #200 sieve, inundated @ 0.5 tsf
 Remarks: System T - Compression Ratio: 0.22 , Recompression Ratio: 0.02

Measured Specific Gravity: 2.70
 Initial Void Ratio: 1.12
 Final Void Ratio: 0.74

Liquid Limit: 51
 Plastic Limit: 16
 Plasticity Index: 35

Initial Height: 1.00 in
 Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
	Six	RING		1729
Wt. Container + Wet Soil, gm	216.61	251.1	239.83	140.93
Wt. Container + Dry Soil, gm	164.26	211.76	211.76	112.48
Wt. Container, gm	7.95	109.16	109.16	8.49
Wt. Dry Soil, gm	156.31	102.6	102.6	103.99
Water Content, %	33.49	35.34	27.36	27.36
Void Ratio	---	1.12	0.74	---
Degree of Saturation, %	---	92.70	99.99	---
Dry Unit Weight, pcf	---	79.626	96.942	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-334
Sample No.: S-8
Test No.: C-9

Location: Calvert County
Tested By: md
Test Date: 09/11/2006
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 23-25
Elevation: ---

Soil Description: Moist, dark greenish gray clay with sand (CH), 79% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System T - Compression Ratio: 0.22, Recompression Ratio: 0.02

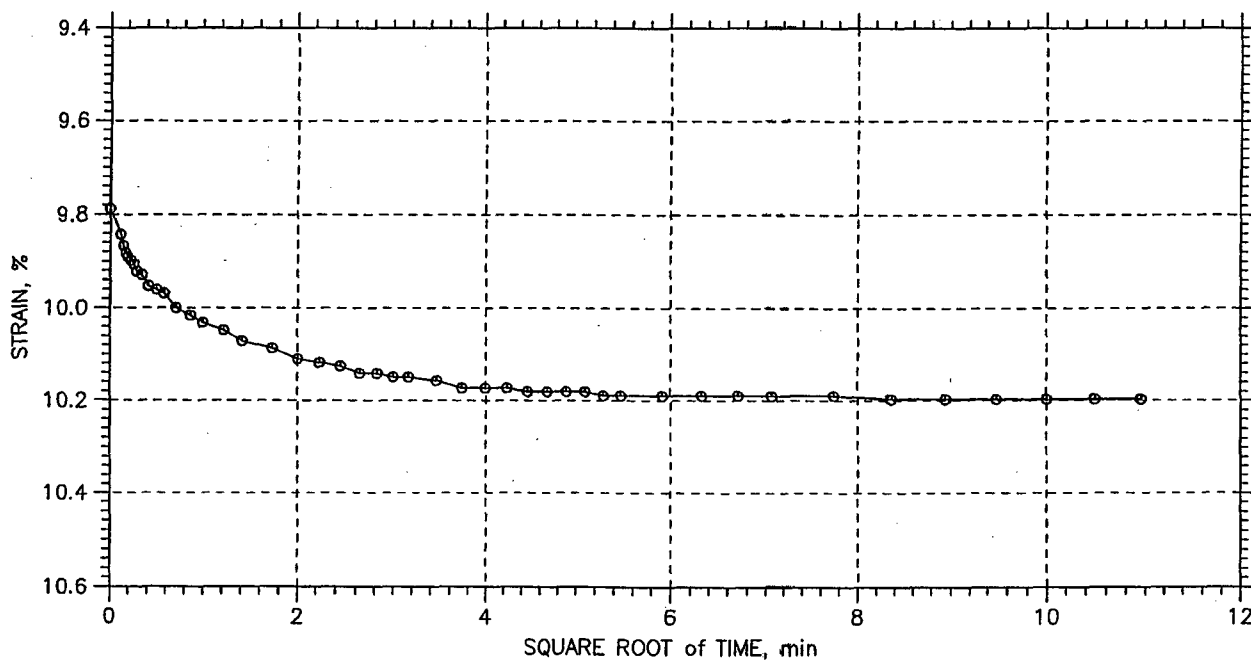
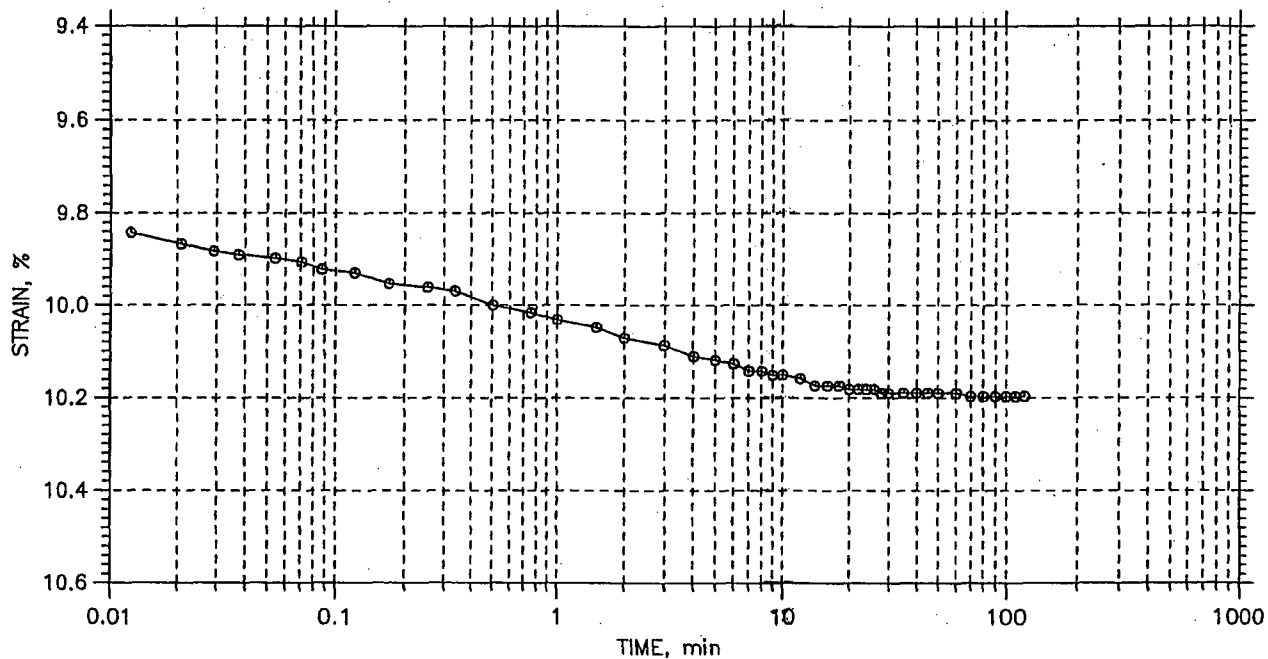
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.01318	1.089	1.32	0.1	0.1	8.69e-003	1.03e-002	9.41e-003
2	1	0.02453	1.065	2.45	0.1	0.1	5.95e-003	8.32e-003	6.94e-003
3	2	0.04216	1.028	4.22	0.3	0.1	2.64e-003	9.60e-003	4.14e-003
4	4	0.06976	0.969	6.98	0.6	0.0	1.20e-003	0.00e+000	1.20e-003
5	8	0.1078	0.889	10.78	1.8	1.9	3.89e-004	3.54e-004	3.71e-004
6	4	0.1054	0.894	10.54	0.8	0.0	8.17e-004	0.00e+000	8.17e-004
7	2	0.09933	0.907	9.93	2.1	3.3	3.17e-004	2.02e-004	2.47e-004
8	4	0.102	0.901	10.20	0.6	0.0	1.13e-003	0.00e+000	1.13e-003
9	8	0.1126	0.878	11.26	1.9	1.9	3.40e-004	3.49e-004	3.44e-004
10	16	0.1681	0.761	16.81	6.4	10.5	9.43e-005	5.79e-005	7.18e-005
11	32	0.242	0.604	24.20	13.9	14.2	3.75e-005	3.67e-005	3.71e-005
12	8	0.2312	0.627	23.12	3.1	3.5	1.55e-004	1.36e-004	1.45e-004
13	2	0.207	0.679	20.70	12.8	0.0	3.93e-005	0.00e+000	3.93e-005
14	0.5	0.1786	0.739	17.86	56.0	0.0	9.57e-006	0.00e+000	9.57e-006

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



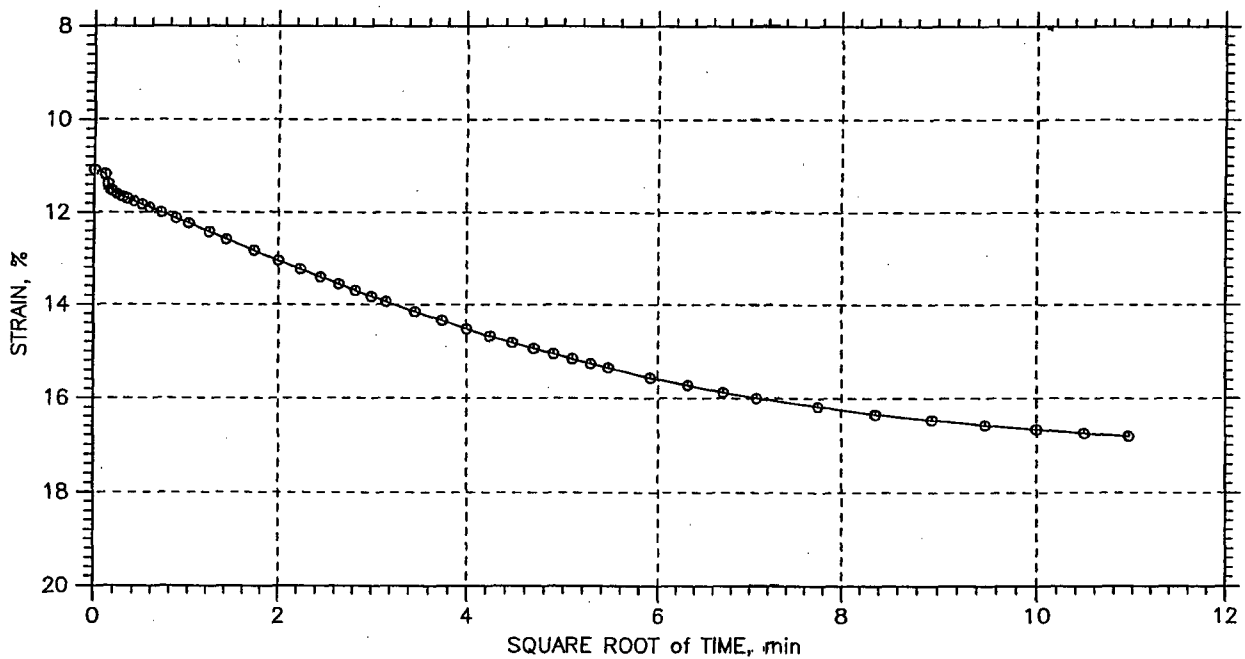
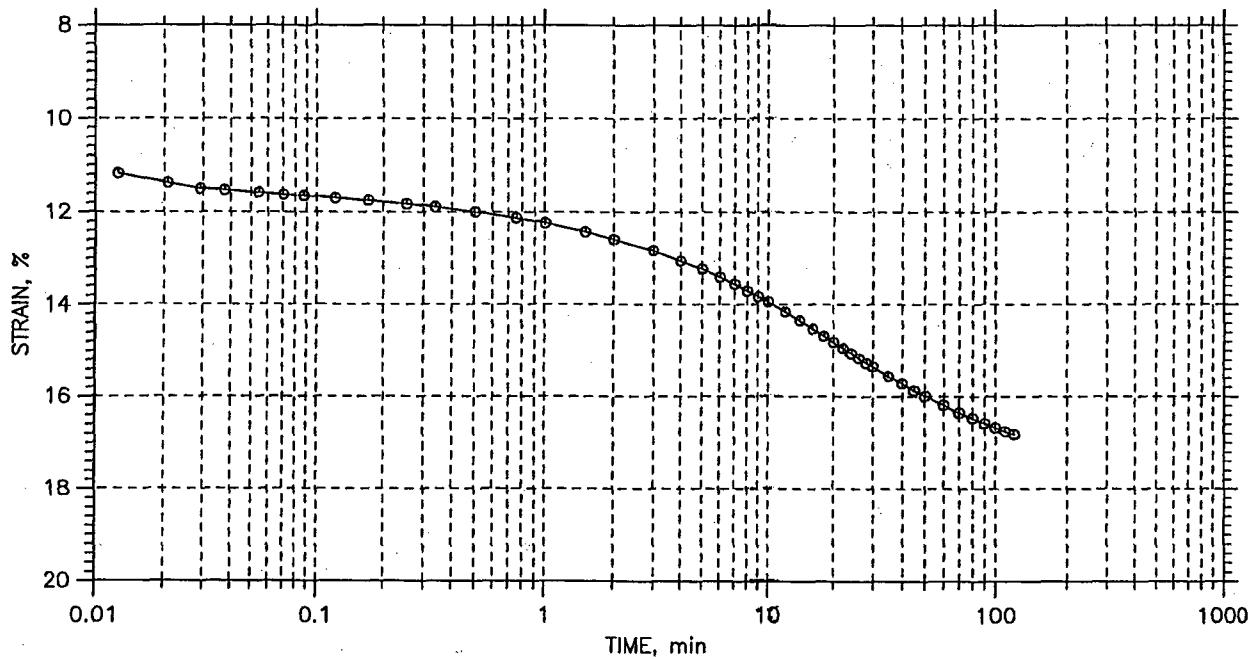
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County	Project No.: GTX-6880
	Boring No.: B-334	Tested By: md	Checked By: jdt
	Sample No.: S-8	Test Date: 09/11/2006	Depth: 23-25
	Test No.: C-9	Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray clay with sand (CH), 79% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System T - Compression Ratio: 0.22, Recompression Ratio: 0.02		

CONSOLIDATION TEST DATA

TIME CURVES

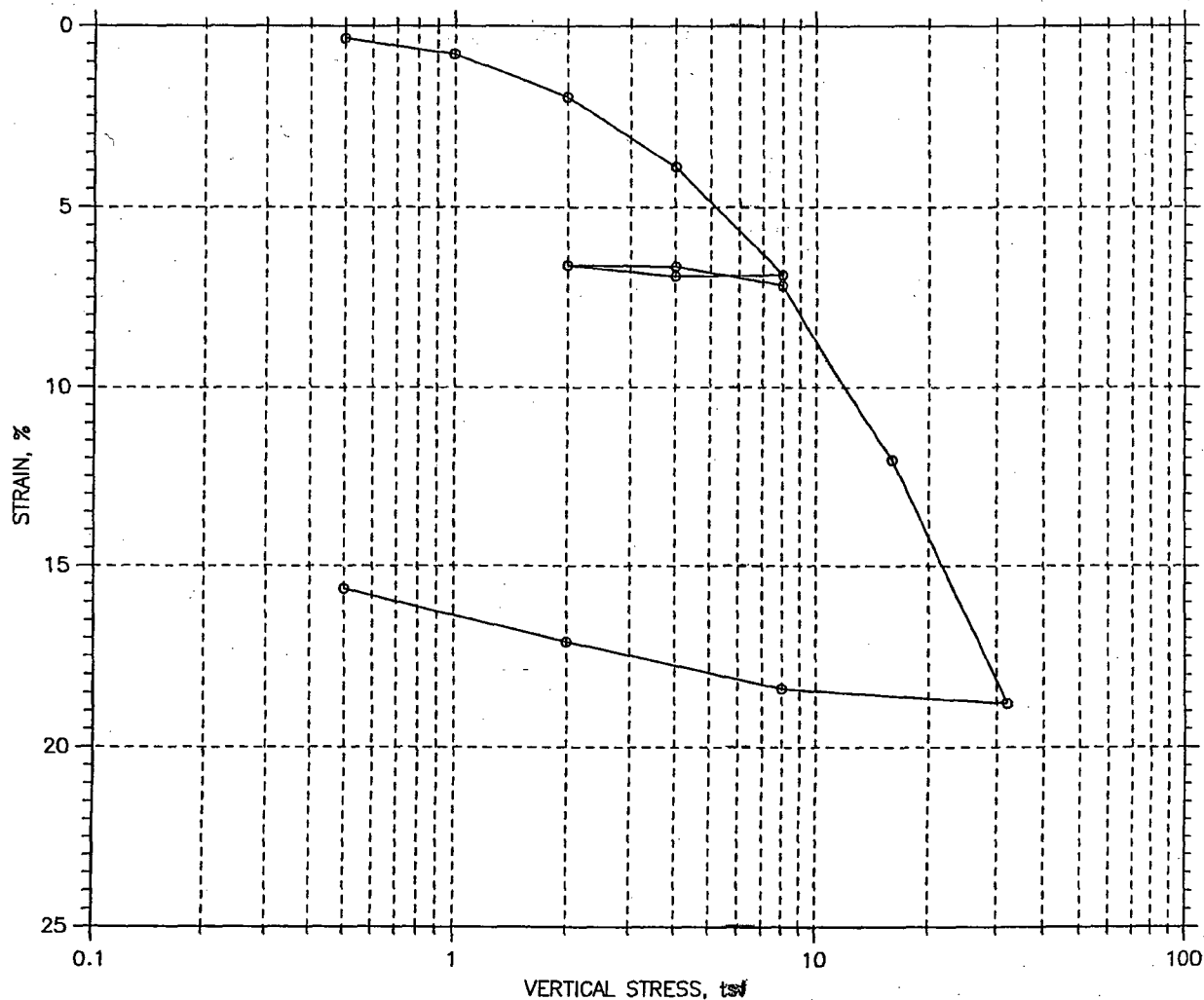
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County	Project No.: GTX-6880
	Boring No.: B-334	Tested By: md	Checked By: jdt
	Sample No.: S-8	Test Date: 09/11/2006	Depth: 23-25
	Test No.: C-9	Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray clay with sand (CH), 79% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System T - Compression Ratio: 0.22 , Recompression Ratio: 0.02		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	31.56	27.21
Preconsolidation Pressure: 5.4 tsf				Dry Unit Weight, pcf	82.16	97.38
Compression Index: ---				Saturation, %	80.76	100.00
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.06	0.74
LL: 47	PL: 13	Pl: 34	GS: 2.71			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP		Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-334		Tested By: md	Checked By: jdt
	Sample No.: S-10		Test Date: 09/11/2006	Depth: 33-34.7
	Test No.: C-10		Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray clay (CL), 95% passing #200 sieve, inundated @ 0.5 tsf			
	Remarks: System S - Compression Ratio: 0.20, Recompression Ratio: 0.02			

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-334
Sample No.: S-10
Test No.: C-10

Location: Calvert County, MD
Tested By: md
Test Date: 09/11/2006
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 33-34.7
Elevation: ---

Soil Description: Moist, dark greenish gray clay (CL), 95% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System 8 - Compression Ratio: 0.20, Recompression Ratio: 0.02

Measured Specific Gravity: 2.71
Initial Void Ratio: 1.06
Final Void Ratio: 0.74

Liquid Limit: 47
Plastic Limit: 13
Plasticity Index: 34

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimblings	Specimen+Ring	Specimen+Ring	Trimblings
	Island	RING		1492
Wt. Container + Wet Soil, gm	291.7	355.84	351.23	143.68
Wt. Container + Dry Soil, gm	222.11	322.42	322.42	114.78
Wt. Container, gm	8.98	216.56	216.56	8.57
Wt. Dry Soil, gm	213.13	105.86	105.86	106.21
Water Content, %	32.65	31.56	27.21	27.21
Void Ratio	---	1.06	0.74	---
Degree of Saturation, %	---	80.76	100.00	---
Dry Unit Weight, pcf	---	82.159	97.375	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-334
Sample No.: S-10
Test No.: C-10

Location: Calvert County, MD
Tested By: md
Test Date: 09/11/2006
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 33-34.7
Elevation: ---

Soil Description: Moist, dark greenish gray clay (CL), 95% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System S - Compression Ratio: 0.20, Recompression Ratio: 0.02

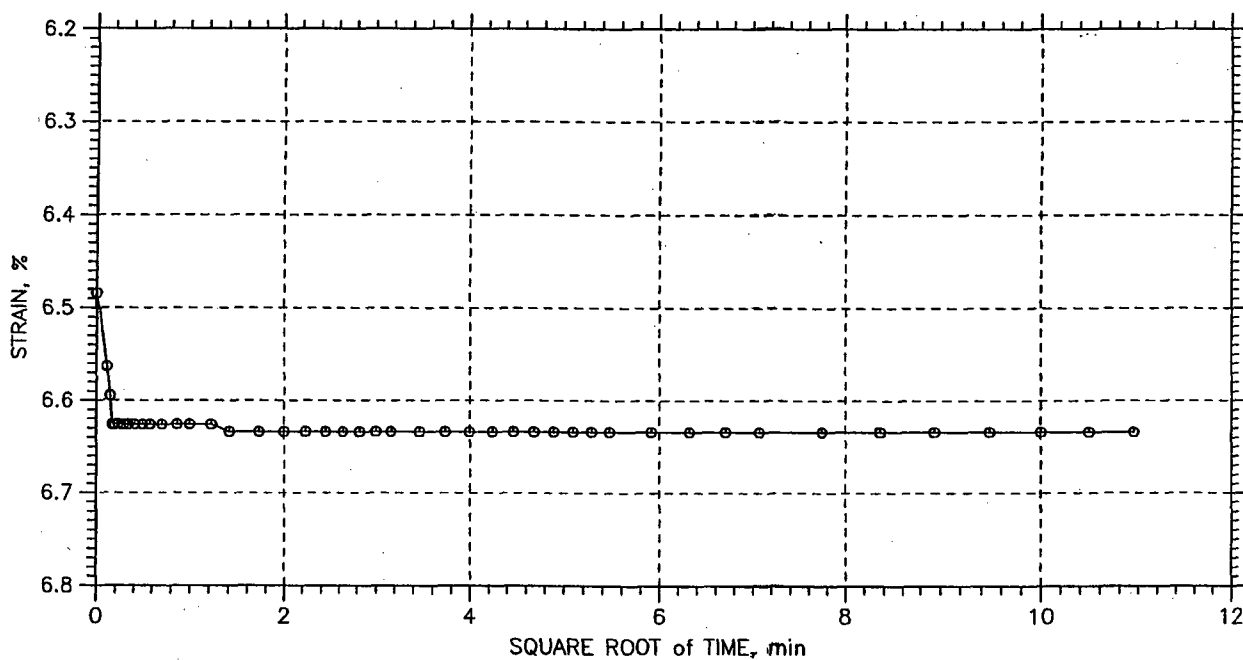
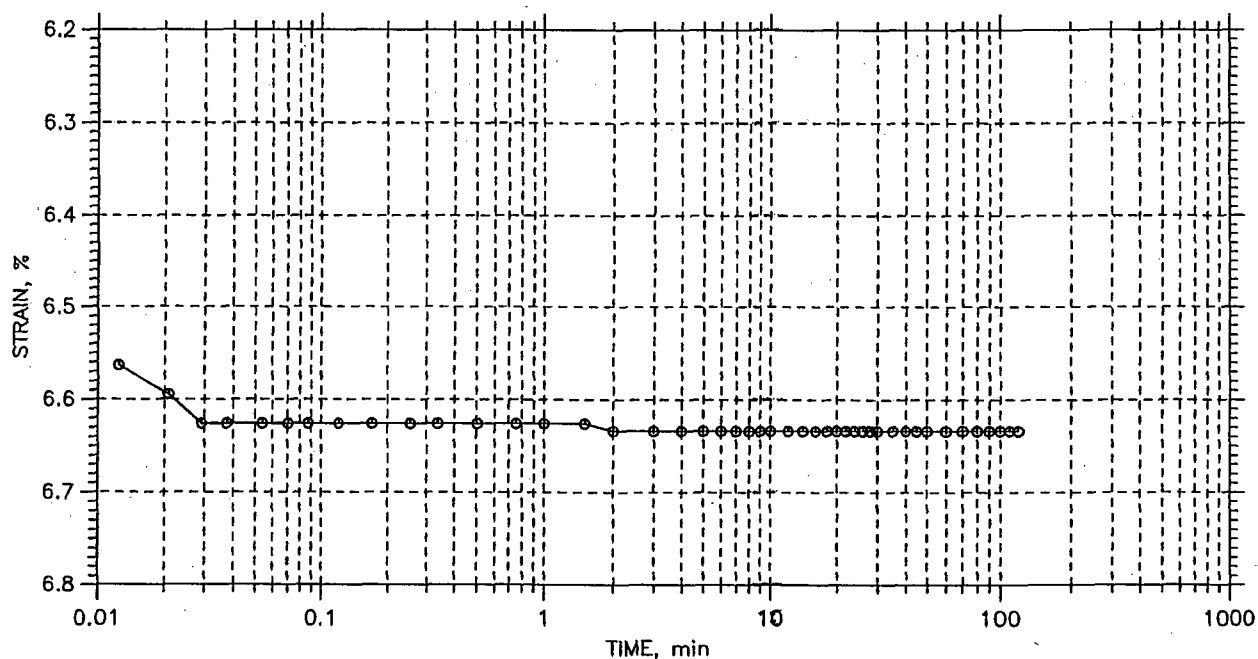
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Sq.Rt. min	Fitting Log min	Coefficient of Consolidation		
							Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.00346	1.052	0.35	0.0	0.0	1.73e-002	0.00e+000	1.73e-002
2	1	0.007832	1.043	0.78	0.1	0.0	1.28e-002	1.71e-002	1.46e-002
3	2	0.01972	1.019	1.97	0.1	0.0	1.47e-002	1.60e-002	1.53e-002
4	4	0.0389	0.979	3.89	0.1	0.1	1.24e-002	1.55e-002	1.38e-002
5	8	0.06862	0.918	6.86	0.1	0.0	1.30e-002	1.60e-002	1.43e-002
6	4	0.06902	0.917	6.90	0.0	0.0	4.85e-002	0.00e+000	4.85e-002
7	2	0.06598	0.923	6.60	0.0	0.0	3.45e-002	0.00e+000	3.45e-002
8	4	0.06634	0.923	6.63	0.0	0.0	4.82e-002	0.00e+000	4.82e-002
9	8	0.07153	0.912	7.15	0.1	0.0	8.07e-003	0.00e+000	8.07e-003
10	16	0.1204	0.811	12.04	0.1	0.1	7.31e-003	1.23e-002	9.16e-003
11	32	0.1878	0.672	18.78	0.6	0.2	9.69e-004	2.50e-003	1.40e-003
12	8	0.1837	0.681	18.37	0.0	0.0	1.67e-002	1.92e-002	1.79e-002
13	2	0.1709	0.707	17.09	0.4	0.0	1.31e-003	0.00e+000	1.31e-003
14	0.5	0.1563	0.737	15.63	2.7	0.0	2.13e-004	0.00e+000	2.13e-004

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



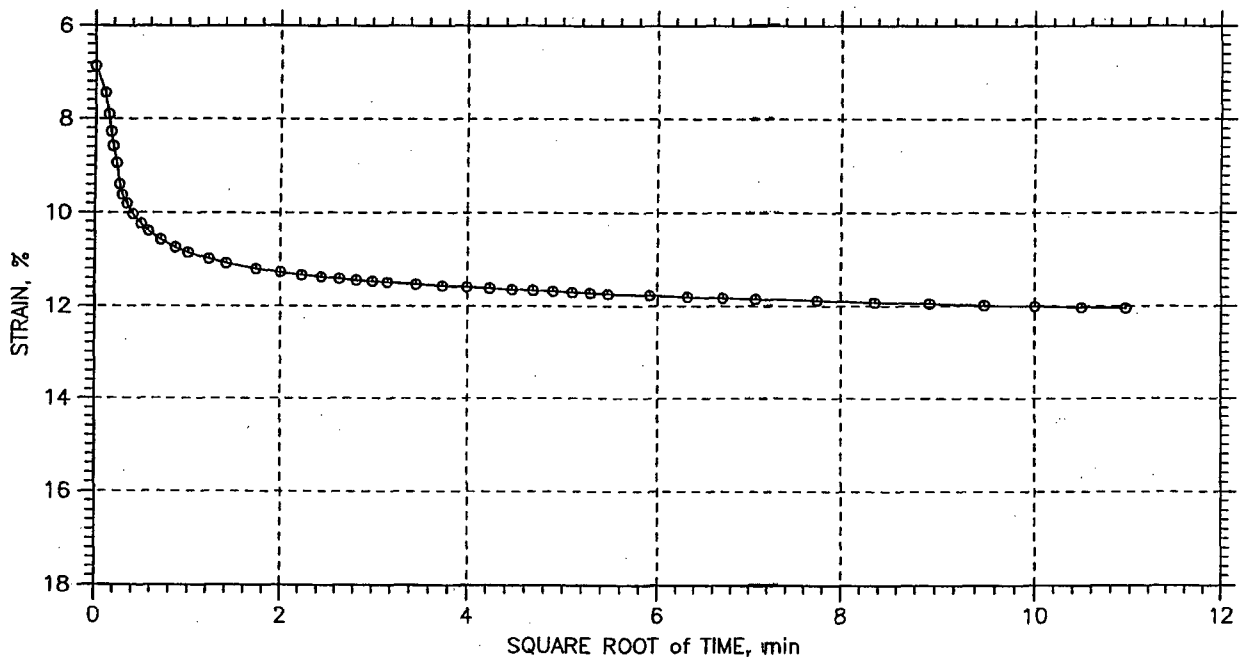
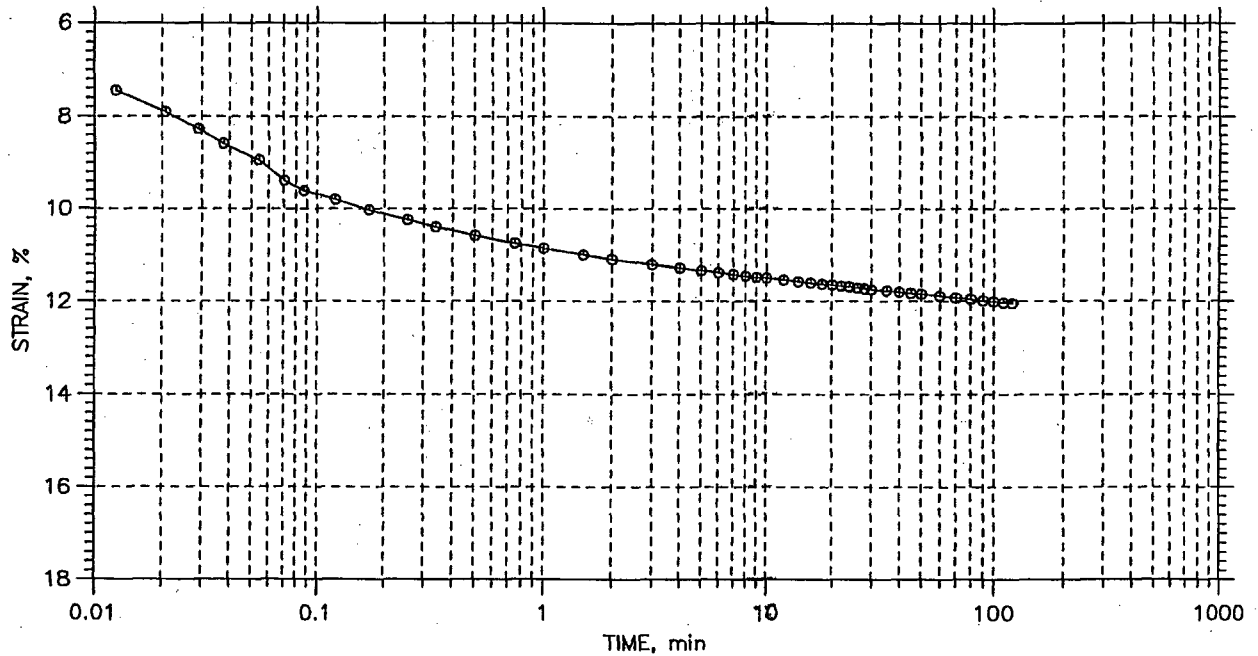
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-334	Tested By: md	Checked By: jdt
	Sample No.: S-10	Test Date: 09/11/2006	Depth: 33-34.7
	Test No.: C-10	Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray clay (CL), 95% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System S - Compression Ratio: 0.20, Recompression Ratio: 0.02		

CONSOLIDATION TEST DATA

TIME CURVES

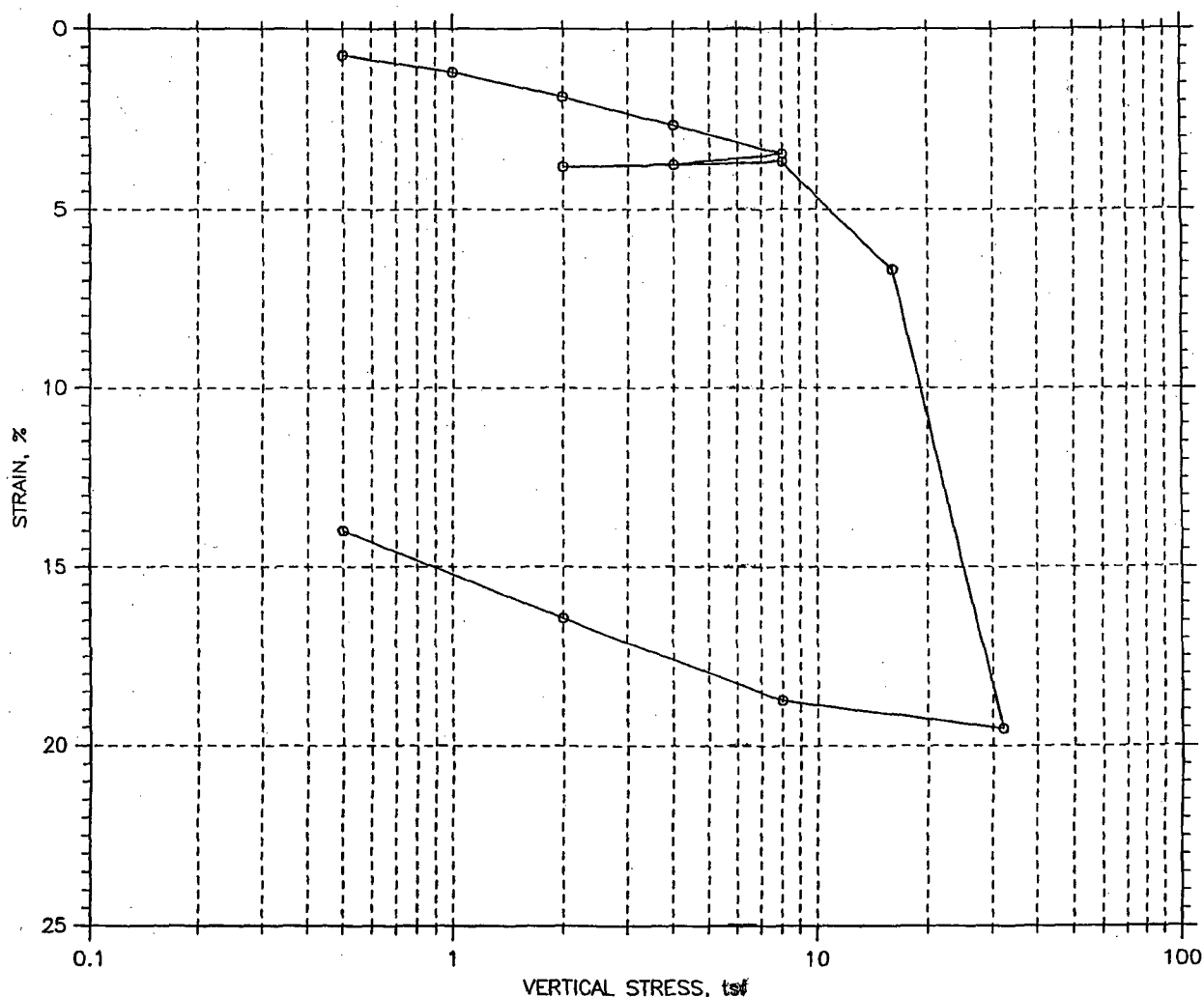
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-334	Tested By: md	Checked By: jdt
	Sample No.: S-10	Test Date: 09/11/2006	Depth: 33-34.7
	Test No.: C-10	Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray clay (CL), 95% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System S - Compression Ratio: 0.20, Recompression Ratio: 0.02		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test
Overburden Pressure: ---				61.95	51.21
Preconsolidation Pressure: 13 tsf				60.37	70.18
Compression Index: ---				94.32	99.99
Diameter: 2.5 in		Height: 1 in		Void Ratio	
LL: 85		PL: 54		1.74	
PI: 31		GS: 2.65		1.36	

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-401	Tested By: md	Checked By: jdt
	Sample No.: S-28	Test Date: 09/14/06	Depth: 123.5-124.8
	Test No.: C-13	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray silt with sand (MH), 82% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System R - Compression Ratio: 0.43, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
 Boring No.: B-401
 Sample No.: S-28
 Test No.: C-13

Location: Calvert County, MD
 Tested By: md
 Test Date: 09/14/06
 Sample Type: tube

Project No.: GTX-6880
 Checked By: jdt
 Depth: 123.5-124.8
 Elevation: ---

Soil Description: Moist, dark olive gray silt with sand (MH), 82% passing #200 sieve, inundated @ 0.5 tsf
 Remarks: System R - Compression Ratio: 0.43, Recompression Ratio: 0.03

Measured Specific Gravity: 2.65
 Initial Void Ratio: 1.74
 Final Void Ratio: 1.36

Liquid Limit: 85
 Plastic Limit: 54
 Plasticity Index: 31

Initial Height: 1.00 in
 Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimming	Specimen+Ring	Specimen+Ring	Trimming
	1135	RING		1031
Wt. Container + Wet Soil, gm	219.52	235.24	226.89	128.2
Wt. Container + Dry Soil, gm	144.15	187.06	187.06	87.62
Wt. Container, gm	8.17	109.27	109.27	8.38
Wt. Dry Soil, gm	135.98	77.785	77.785	79.24
Water Content, %	55.43	61.95	51.21	51.21
Void Ratio	---	1.74	1.36	---
Degree of Saturation, %	---	94.32	99.99	---
Dry Unit Weight, pcf	---	60.368	70.182	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-401
Sample No.: S-28
Test No.: C-13

Location: Calvert County, MD
Tested By: md
Test Date: 09/14/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 123.5-124.8
Elevation: ---

Soil Description: Moist, dark olive gray silt with sand (MH), 82% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System R - Compression Ratio: 0.43, Recompression Ratio: 0.03

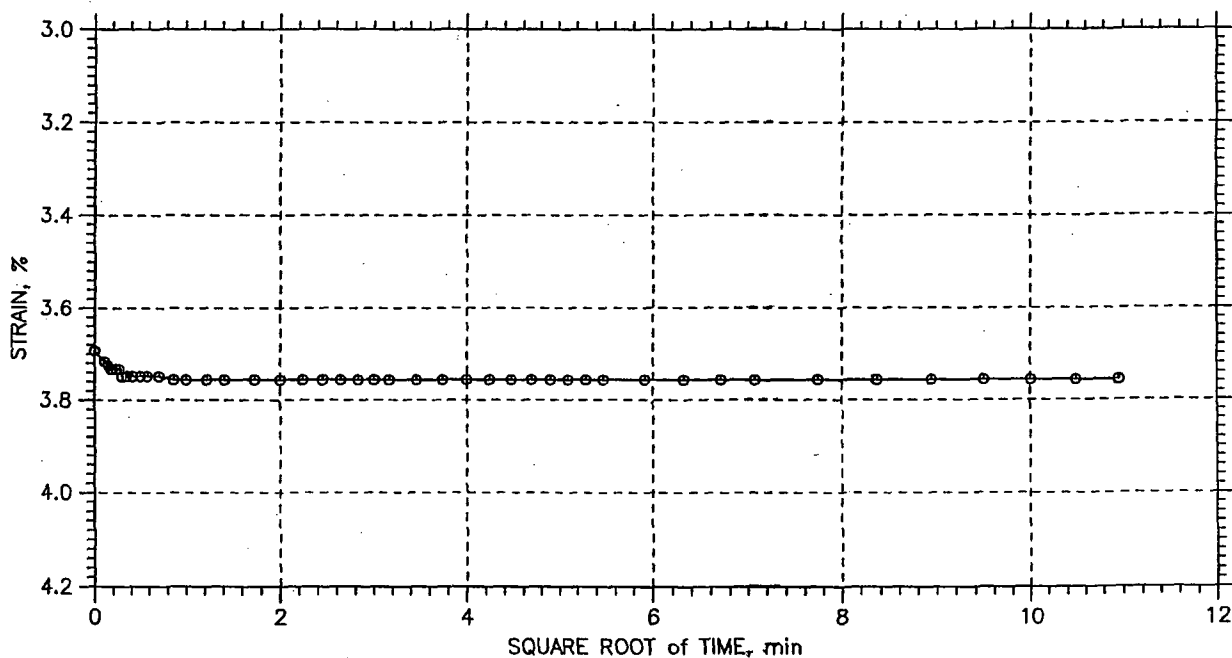
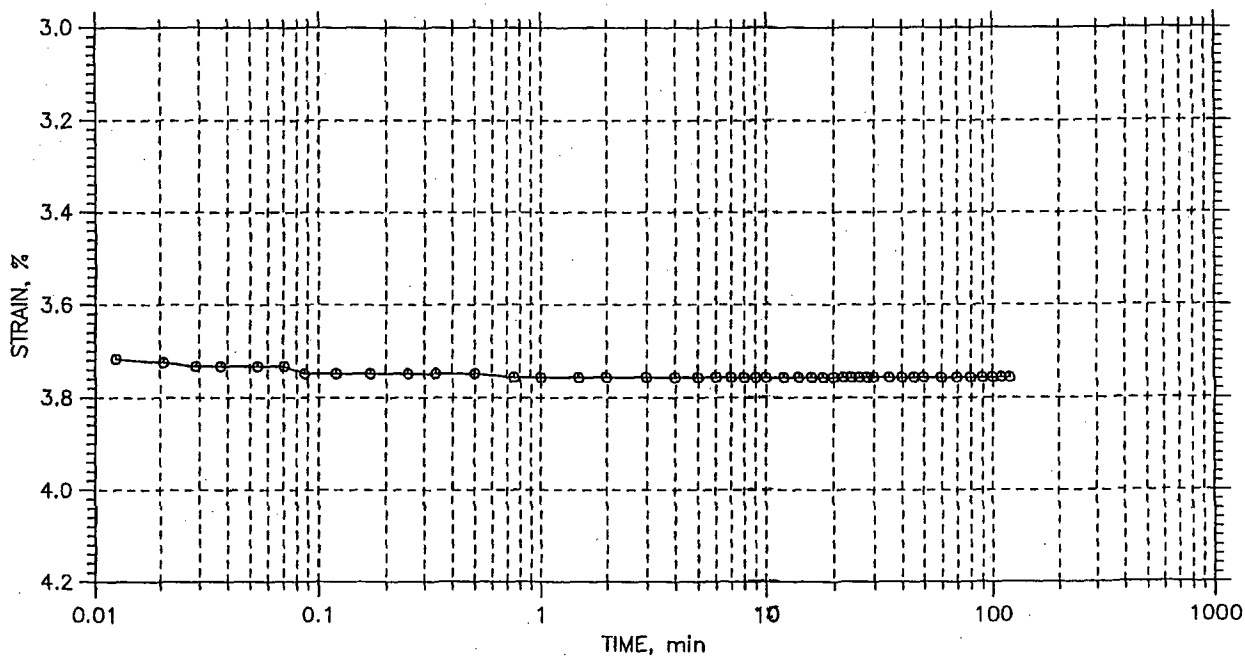
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Sq.Rt. min	Fitting Log min	Coefficient of Consolidation		
							Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.007234	1.721	0.72	0.1	0.1	1.31e-002	1.40e-002	1.35e-002
2	1	0.01189	1.708	1.19	0.1	0.1	1.23e-002	1.41e-002	1.32e-002
3	2	0.0187	1.689	1.87	0.0	0.0	2.05e-002	2.11e-002	2.08e-002
4	4	0.02661	1.668	2.66	0.0	0.0	1.59e-002	1.86e-002	1.72e-002
5	8	0.03453	1.646	3.45	0.1	0.1	5.43e-003	1.21e-002	7.51e-003
6	4	0.03748	1.638	3.75	0.0	0.0	7.12e-002	0.00e+000	7.12e-002
7	2	0.03811	1.636	3.81	1.0	0.0	7.90e-004	0.00e+000	7.90e-004
8	4	0.03756	1.638	3.76	0.0	0.0	3.57e-002	0.00e+000	3.57e-002
9	8	0.03665	1.640	3.67	3.7	0.0	2.06e-004	0.00e+000	2.06e-004
10	16	0.06693	1.557	6.69	0.6	0.1	1.28e-003	5.62e-003	2.08e-003
11	32	0.1952	1.205	19.52	3.6	4.7	1.74e-004	1.32e-004	1.50e-004
12	8	0.1876	1.226	18.76	0.7	0.0	8.14e-004	0.00e+000	8.14e-004
13	2	0.1643	1.290	16.43	6.5	6.7	8.56e-005	8.29e-005	8.43e-005
14	0.5	0.1398	1.357	13.98	9.3	11.9	6.37e-005	4.99e-005	5.59e-005

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



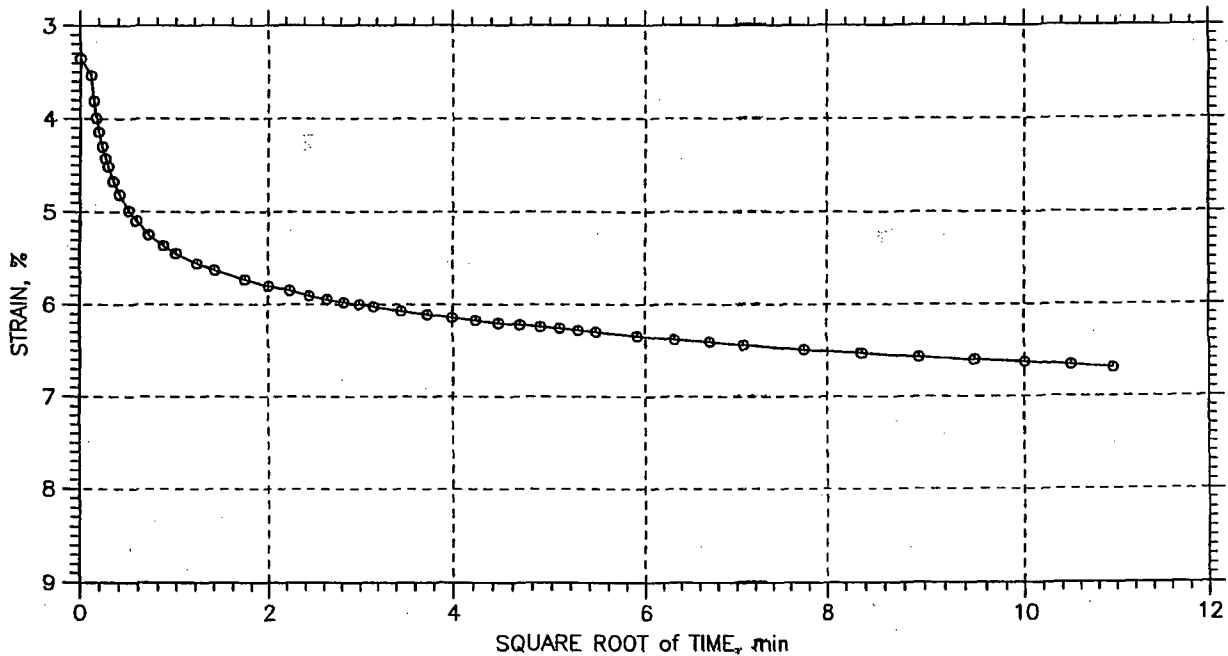
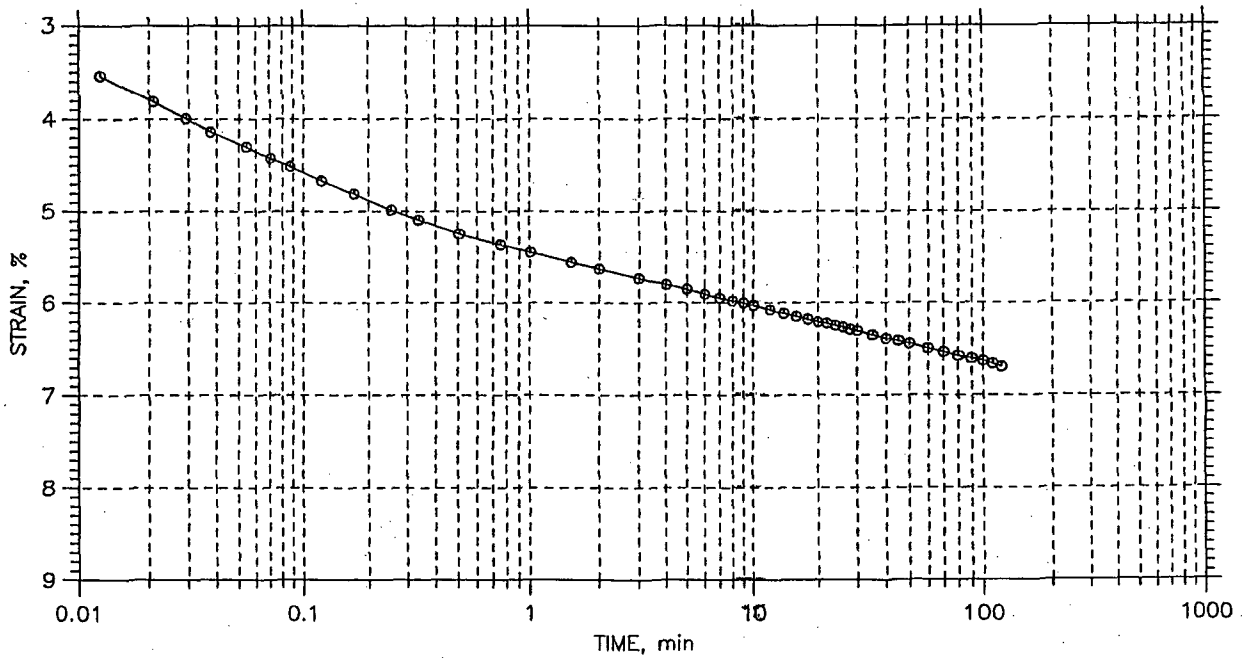
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-401	Tested By: md	Checked By: jdt
	Sample No.: S-28	Test Date: 09/14/06	Depth: 123.5-124.8
	Test No.: C-13	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray silt with sand (MH), 82% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System R - Compression Ratio: 0.43, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

TIME CURVES

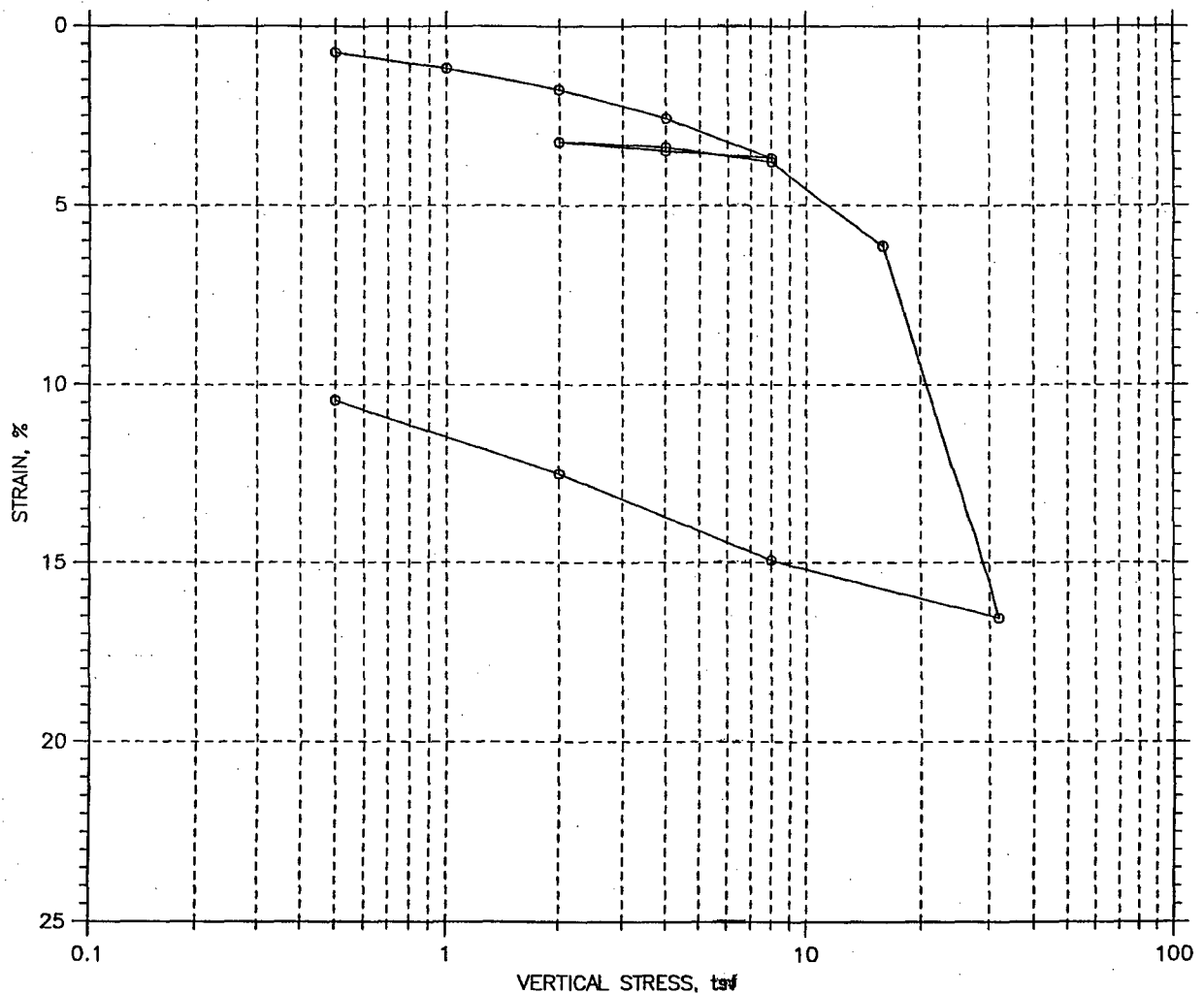
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-401	Tested By: md	Checked By: jdt
	Sample No.: S-28	Test Date: 09/14/06	Depth: 123.5-124.8
	Test No.: C-13	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray silt with sand (MH), 82% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System R - Compression Ratio: 0.43, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	55.36	48.74
Preconsolidation Pressure: 14 tsf				Dry Unit Weight, pcf	64.66	72.19
Compression Index: ---				Saturation, %	94.12	100.00
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.56	1.29
LL: 81	PL: 54	PI: 27	GS: 2.65			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-401	Tested By: md	Checked By: jdt
	Sample No.: S-35	Test Date: 09/14/06	Depth: 158.5-159.3
	Test No.: C-12	Sample Type: tube	Elevation: ---
	Description: Moist, olive sandy silt (MH), 59% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.35, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-401
Sample No.: S-35
Test No.: C-12

Location: Calvert County, MD
Tested By: md
Test Date: 09/14/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 158.5-159.3
Elevation: ---

Soil Description: Moist, olive sandy silt (MH), 59% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: 0.35, Recompression Ratio: 0.03

Measured Specific Gravity: 2.65
Initial Void Ratio: 1.56
Final Void Ratio: 1.29

Liquid Limit: 81
Plastic Limit: 54
Plasticity Index: 27

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
	1490	RING		1425
Wt. Container + Wet Soil, gm	176.72	345.9	340.39	135.15
Wt. Container + Dry Soil, gm	117.51	299.78	299.78	93.71
Wt. Container, gm	8.05	216.47	216.47	8.69
Wt. Dry Soil, gm	109.46	83.312	83.312	85.02
Water Content, %	54.09	55.36	48.74	48.74
Void Ratio	---	1.56	1.29	---
Degree of Saturation, %	---	98.12	100.00	---
Dry Unit Weight, pcf	---	64.657	72.188	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-401
Sample No.: S-35
Test No.: C-12

Location: Calvert County, MD
Tested By: md
Test Date: 09/14/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 158.5-159.3
Elevation: ---

Soil Description: Moist, olive sandy silt (MH), 59% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: 0.35, Recompression Ratio: 0.03

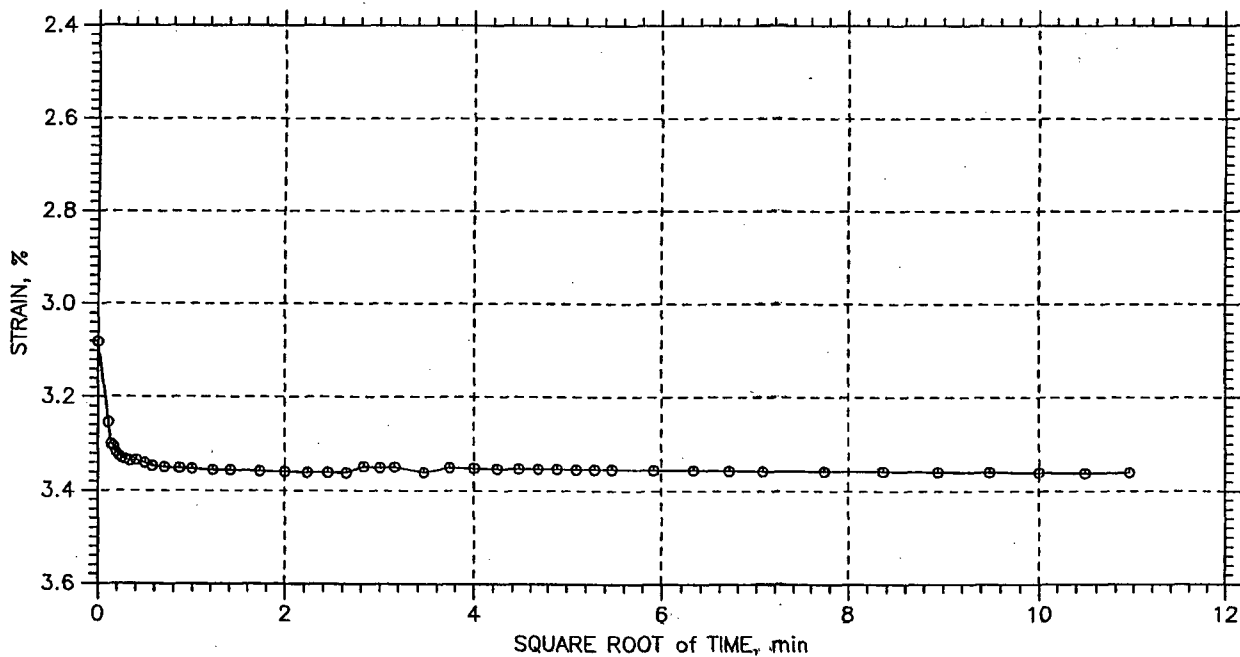
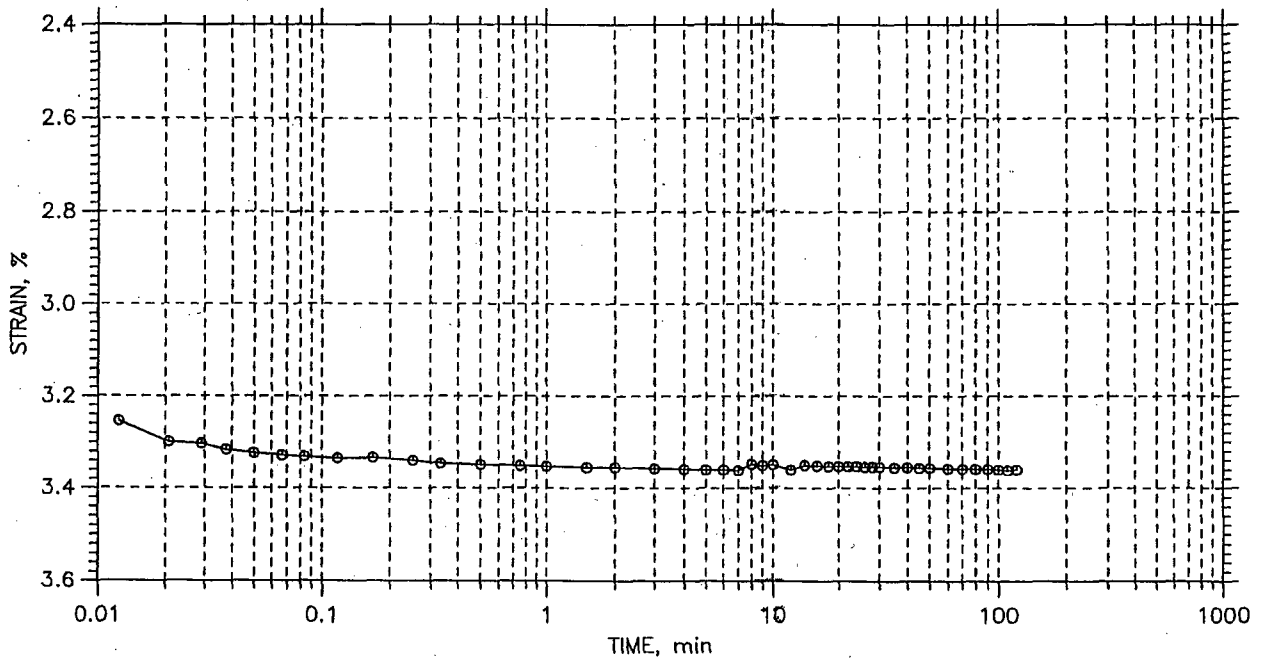
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.007286	1.540	0.73	0.0	0.0	4.27e-002	0.00e+000	4.27e-002
2	1	0.01169	1.529	1.17	0.0	0.0	4.50e-002	3.74e-002	4.09e-002
3	2	0.01761	1.514	1.76	0.0	0.0	2.28e-002	4.40e-002	3.00e-002
4	4	0.02555	1.493	2.56	0.0	0.0	3.39e-002	6.08e-002	4.36e-002
5	8	0.03663	1.465	3.66	0.0	0.0	2.13e-002	0.00e+000	2.13e-002
6	4	0.03462	1.470	3.46	0.0	0.0	1.01e-001	0.00e+000	1.01e-001
7	2	0.03221	1.476	3.22	0.0	0.0	9.97e-002	0.00e+000	9.97e-002
8	4	0.0336	1.473	3.36	0.0	0.0	7.38e-002	0.00e+000	7.38e-002
9	8	0.03771	1.462	3.77	0.0	0.0	9.67e-002	0.00e+000	9.67e-002
10	16	0.06136	1.402	6.14	0.3	0.0	2.55e-003	0.00e+000	2.55e-003
11	32	0.1654	1.135	16.54	2.6	0.0	2.48e-004	0.00e+000	2.48e-004
12	8	0.1492	1.177	14.92	0.2	0.0	3.53e-003	0.00e+000	3.53e-003
13	2	0.1249	1.239	12.49	2.6	3.1	2.35e-004	1.95e-004	2.13e-004
14	0.5	0.1043	1.292	10.43	5.4	8.7	1.18e-004	7.38e-005	9.09e-005

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



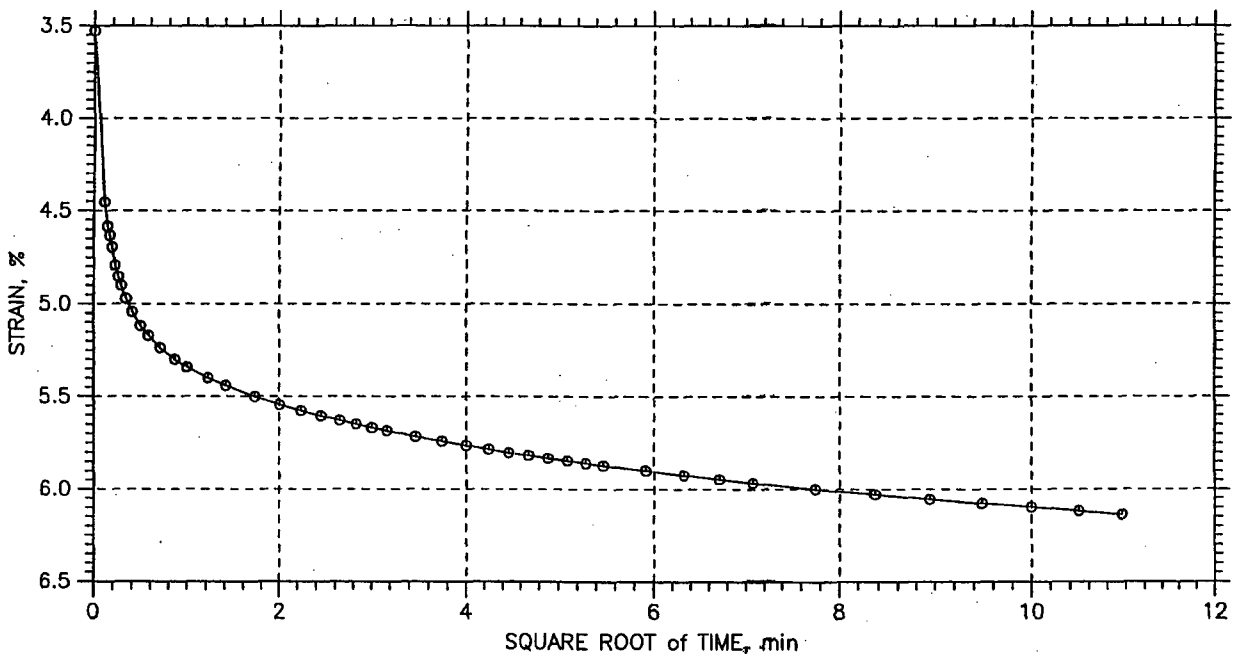
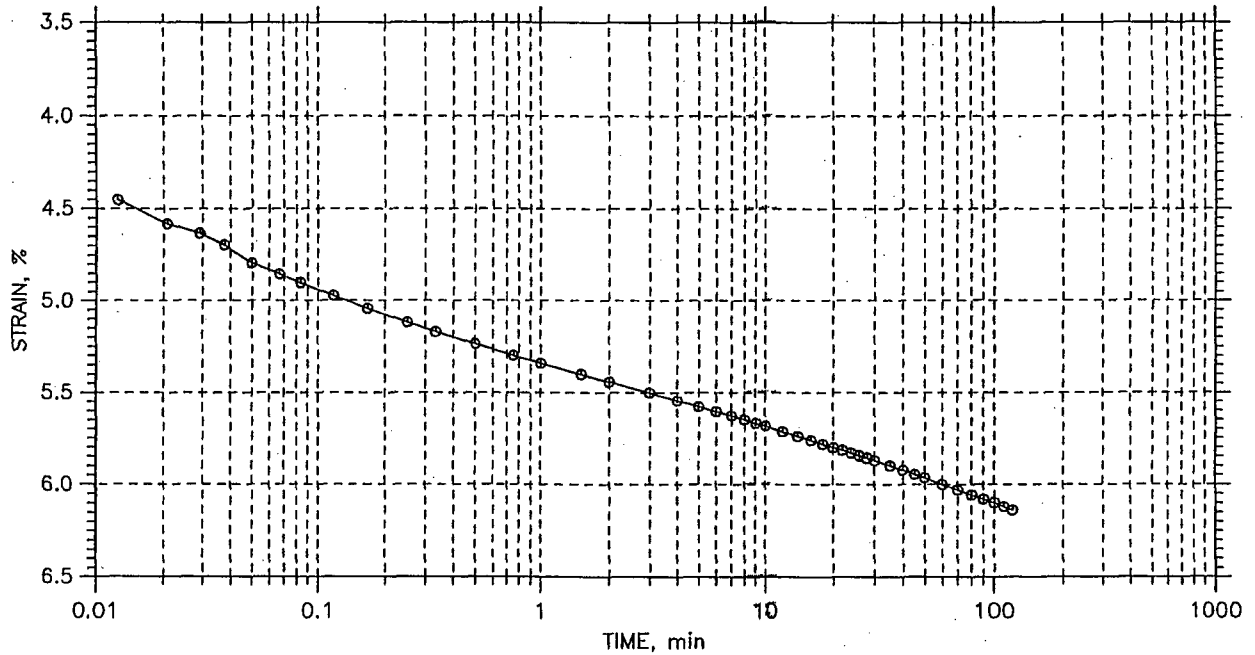
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-401	Tested By: md	Checked By: jdt
	Sample No.: S-35	Test Date: 09/14/08	Depth: 158.5-159.3
	Test No.: C-12	Sample Type: tube	Elevation: ---
	Description: Moist, olive sandy silt (MH), 59% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.35, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

TIME CURVES

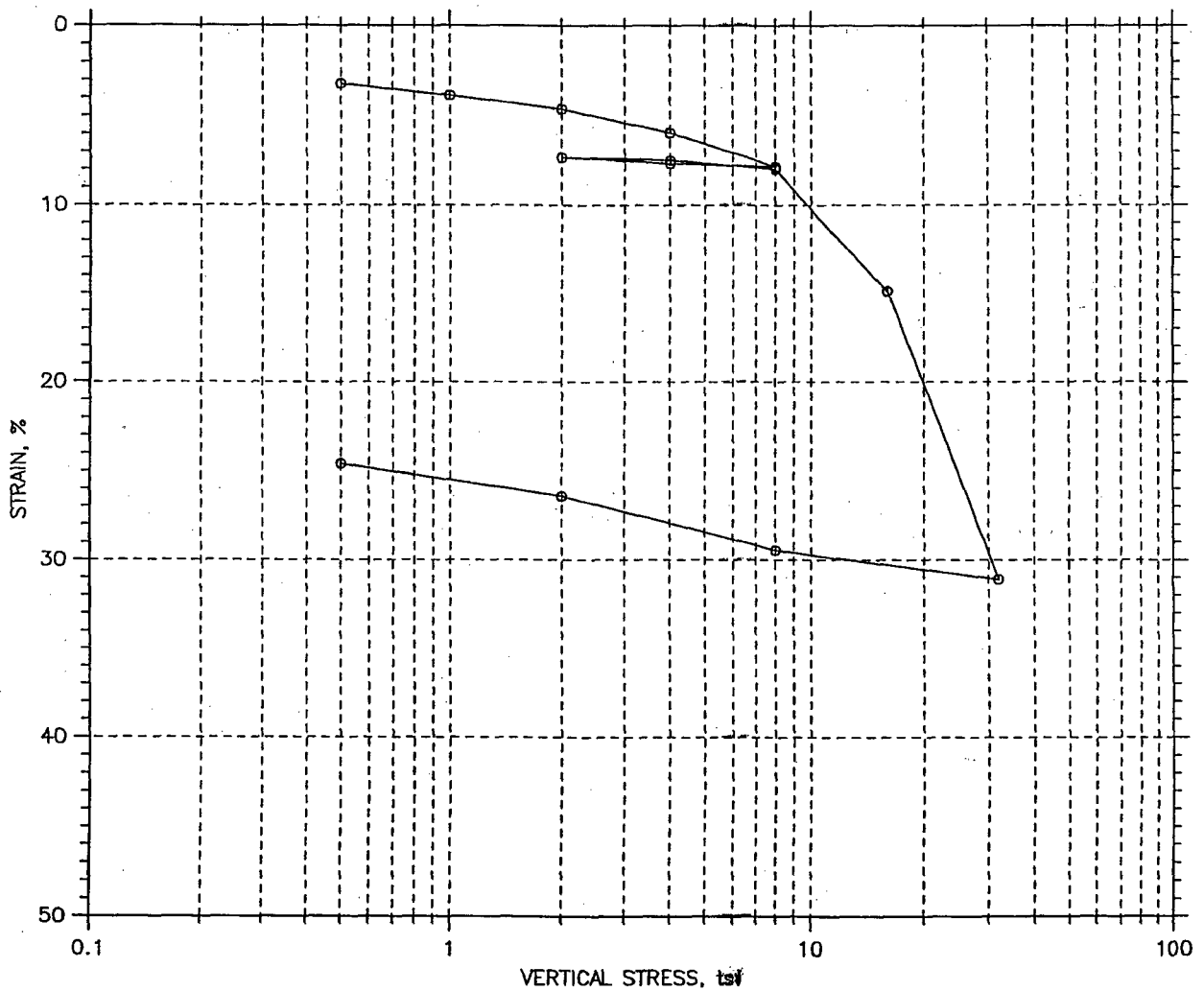
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-401	Tested By: md	Checked By: jdt
	Sample No.: S-35	Test Date: 09/14/06	Depth: 158.5-159.3
	Test No.: C-12	Sample Type: tube	Elevation: ---
	Description: Moist, olive sandy silt (MH), 59% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.35, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	86.00	67.63
Preconsolidation Pressure: 11 tsf				Dry Unit Weight, pcf	45.32	60.11
Compression Index: ---				Saturation, %	84.72	100.00
Diameter: 2.5 in		Height: 1 in		Void Ratio	2.80	1.87
LL: 57	PL: 17	PI: 40	GS: 2.76			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-401	Tested By: md	Checked By: jdt
	Sample No.: S-37	Test Date: 09/14/2006	Depth: 173.5-174.4
	Test No.: C-14	Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray clay (CH), 98% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System S - Compression Ratio: 0.54, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-401
Sample No.: S-37
Test No.: C-14

Location: Calvert County, MD
Tested By: md
Test Date: 09/14/2006
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 173.5-174.4
Elevation: ---

Soil Description: Moist, dark greenish gray clay (CH), 98% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System S - Compression Ratio: 0.54, Recompression Ratio: 0.04

Measured Specific Gravity: 2.76
Initial Void Ratio: 2.80
Final Void Ratio: 1.87

Liquid Limit: 57
Plastic Limit: 17
Plasticity Index: 40

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
	1131	RING		1768
Wt. Container + Wet Soil, gm	160.45	325.27	314.54	109.15
Wt. Container + Dry Soil, gm	92.83	275.05	275.05	68.48
Wt. Container, gm	8.19	216.65	216.65	8.34
Wt. Dry Soil, gm	84.64	58.398	58.398	60.14
Water Content, %	79.89	86.00	67.63	67.63
Void Ratio	---	2.60	1.87	---
Degree of Saturation, %	---	84.72	100.00	---
Dry Unit Weight, pcf	---	45.322	60.11	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-401
Sample No.: S-37
Test No.: C-14

Location: Calvert County, MD
Tested By: md
Test Date: 09/14/2006
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 173.5-174.4
Elevation: ---

Soil Description: Moist, dark greenish gray clay (CH), 98% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System S - Compression Ratio: 0.54, Recompression Ratio: 0.04

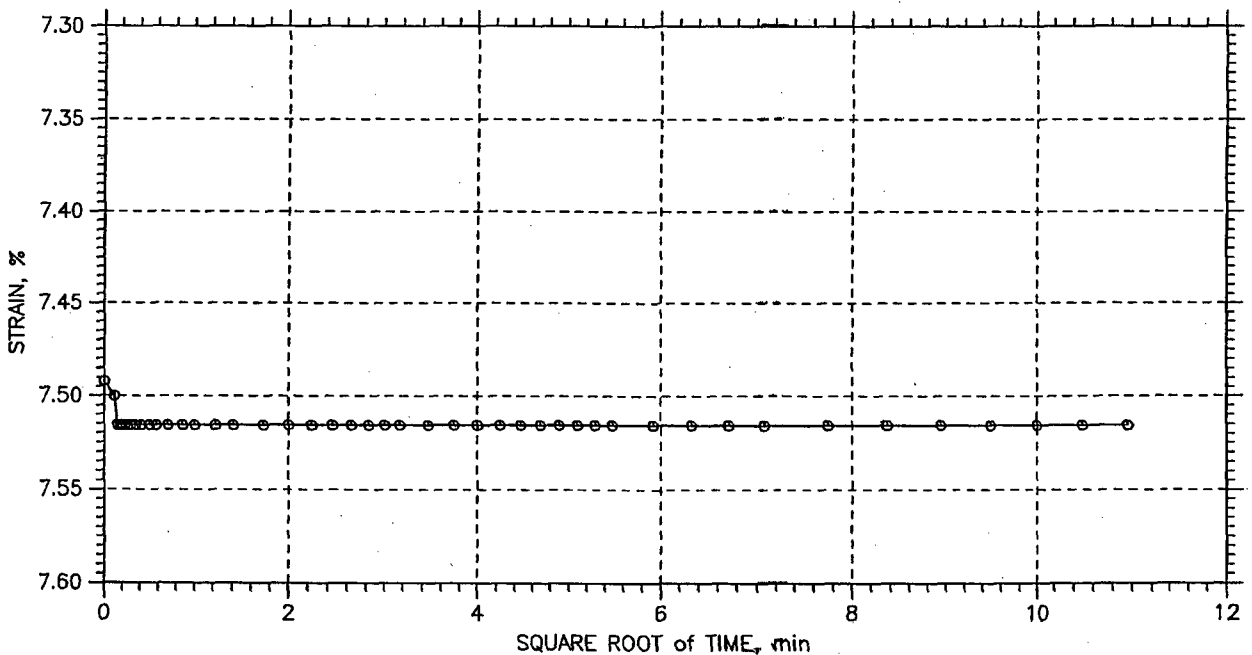
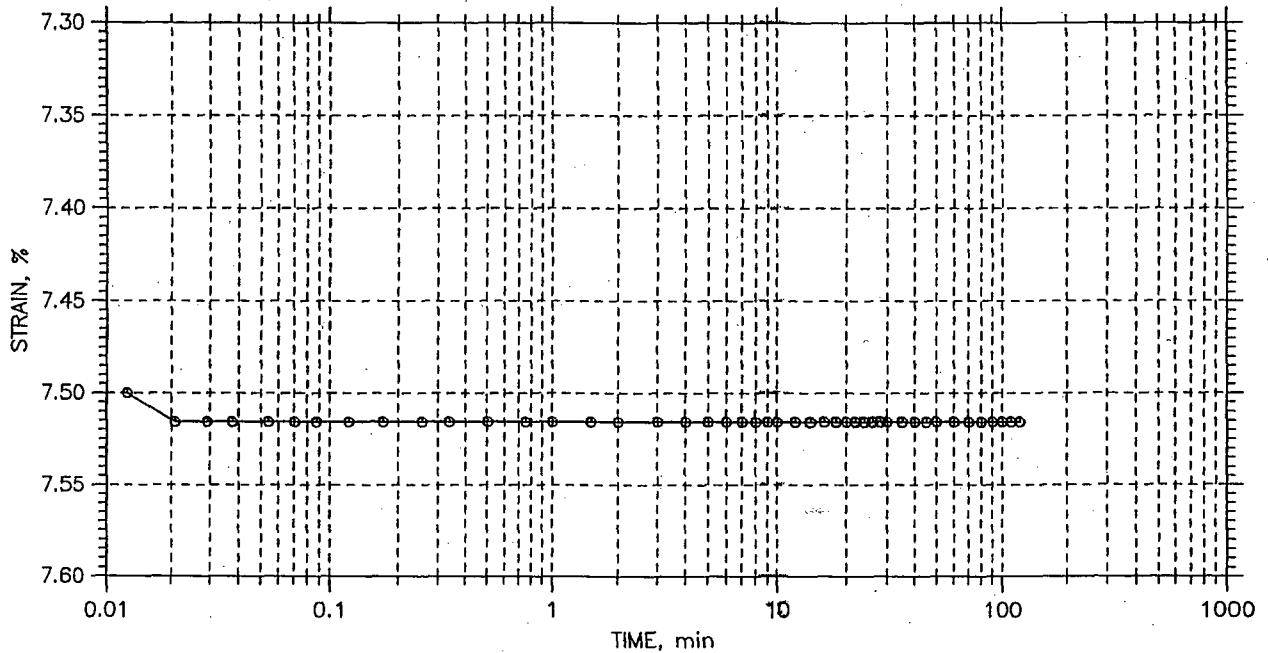
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.03236	2.679	3.24	0.2	0.0	4.95e-003	0.00e+000	4.95e-003
2	1	0.03894	2.654	3.89	0.1	0.0	1.45e-002	0.00e+000	1.45e-002
3	2	0.0463	2.626	4.63	0.1	0.0	7.44e-003	1.90e-002	1.07e-002
4	4	0.05965	2.575	5.96	0.1	0.0	1.46e-002	1.58e-002	1.51e-002
5	8	0.0785	2.503	7.85	0.1	0.0	1.37e-002	1.89e-002	1.59e-002
6	4	0.07681	2.510	7.68	0.0	0.0	4.03e-002	0.00e+000	4.03e-002
7	2	0.0735	2.522	7.35	0.0	0.0	3.91e-002	0.00e+000	3.91e-002
8	4	0.07516	2.516	7.52	0.0	0.0	4.46e-002	0.00e+000	4.46e-002
9	8	0.07976	2.498	7.98	0.0	0.0	3.64e-002	0.00e+000	3.64e-002
10	16	0.1489	2.236	14.89	4.3	0.0	1.48e-004	0.00e+000	1.48e-004
11	32	0.3109	1.620	31.09	1.3	1.2	3.86e-004	4.08e-004	3.97e-004
12	8	0.2944	1.683	29.44	0.4	0.4	9.01e-004	9.19e-004	9.10e-004
13	2	0.2642	1.797	26.42	1.9	2.5	2.21e-004	1.70e-004	1.92e-004
14	0.5	0.246	1.866	24.60	6.6	8.1	6.94e-005	5.60e-005	6.20e-005

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



GeoTesting
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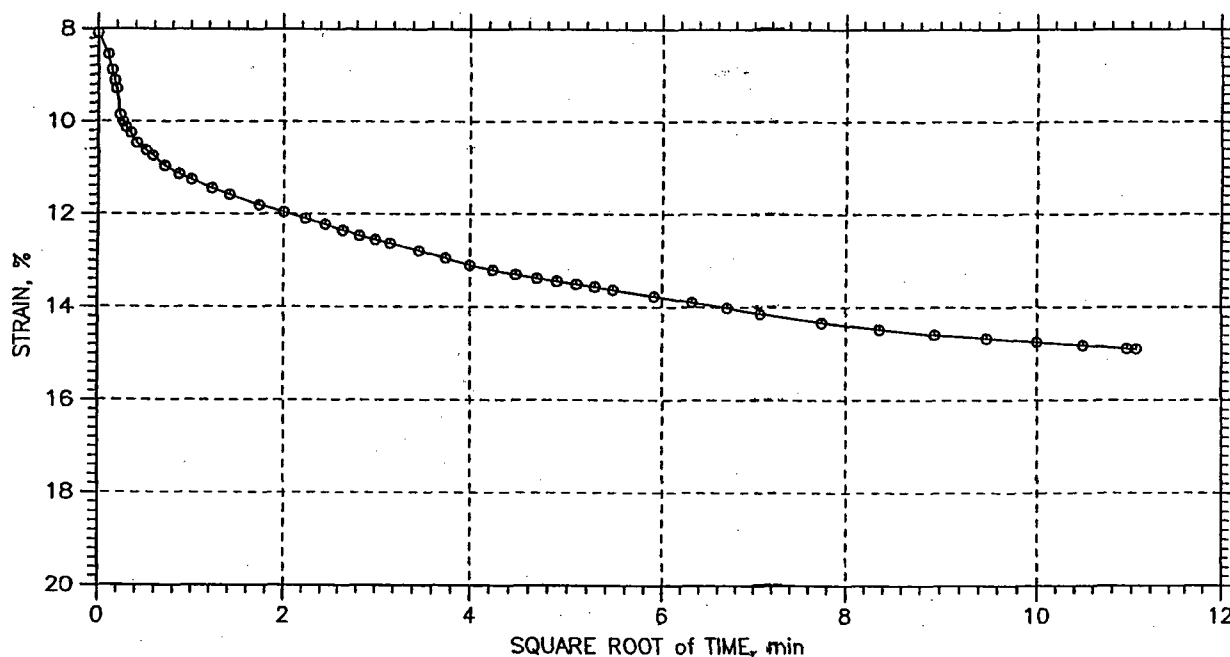
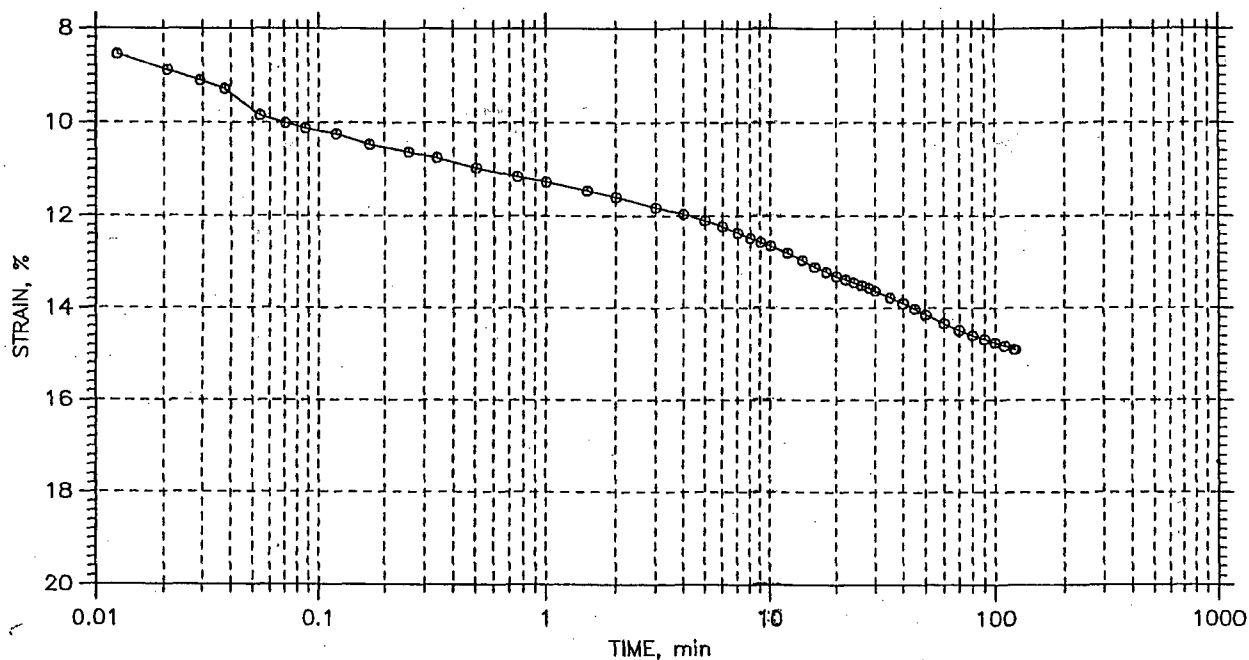
Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
Boring No.: B-401	Tested By: md	Checked By: jdt
Sample No.: S-37	Test Date: 09/14/2006	Depth: 173.5-174.4
Test No.: C-14	Sample Type: tube	Elevation: ---
Description: Moist, dark greenish gray clay (CH), 98% passing #200 sieve, inundated @ 0.5 tsf		
Remarks: System S - Compression Ratio: 0.54, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA

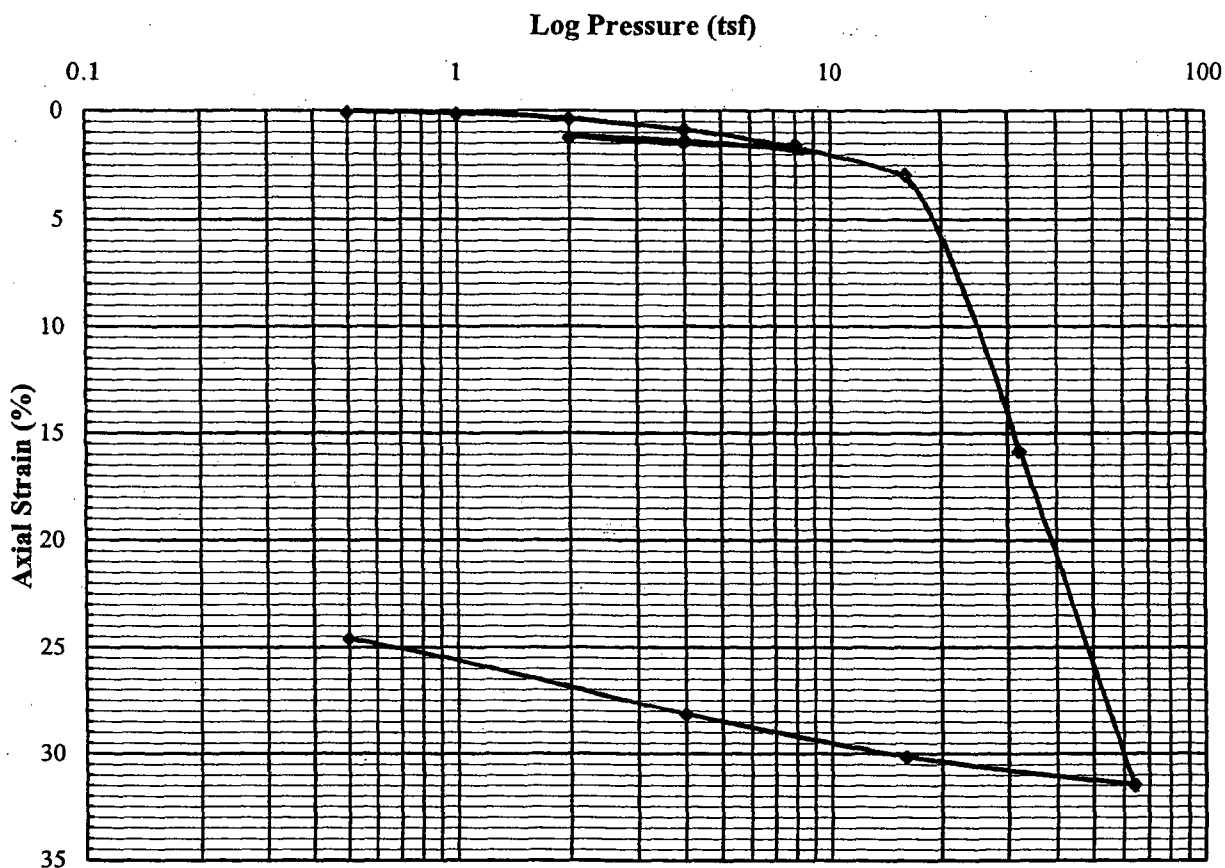
TIME CURVES

Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-401	Tested By: md	Checked By: jdt
	Sample No.: S-37	Test Date: 09/14/2006	Depth: 173.5-174.4
	Test No.: C-14	Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray clay (CH), 98% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System S - Compression Ratio: 0.54, Recompression Ratio: 0.04		



Coefficient of Consolidation, C_v , equals 476 ft²/yr at an average pressure of 24 tsf (square root of time method).

REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/07

Probable Preconsolidation Pressure (P_p), tsf: 18.3				Recompression Ratio ($C_{\alpha r}$): 0.006	
Type of Specimen: Tube Sample				Compression Ratio ($C_{\alpha c}$): 0.519	
Description: ELASTIC SILT (MH) - green gray				Initial	Final
				Water Content, %	102.4 / 70.6
				Void Ratio	2.41 / 1.57
				Saturation, %	100 / 100
				Dry Unit Weight, pcf	43.1 / 57.2
LL: 140 PI: 75 Gs: 2.36 P_o' (tsf): 7.45					
% < No. 200: 98.7 Test Method: ASTM D2435 Method A					
Test Condition: Inundated @ 4 tsf					
Remarks: Oven dried LL = 112				Project: Calvert Cliffs Nuclear Power Plant	
Average Water Content of Trimmings, %: 100.5				Location: Calvert County, MD	
				Boring: B-401	Schnabel No.: 06120048
				Depth: 243.5-244.4 ft	Elevation: -171.4 to -172.3
				Date: 11/21/2006	Reviewed by: CJS
				Consolidation Test Report	

Consolidation Test Data Sheet

Consolidometer ID: 5 11/21/06

REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/2007

Schnabel Contract: 06120048

Project: Calvert Cliffs Nuclear Power Plant

Test Method: ASTM D2435 Method A

Test Condition: Inundated @ 4 tsf

Initial Height of Specimen (H_o), in.: 0.7512

Height of Solids (H_s), in.: 0.2201

Boring No.: B-401

Depth: 243.5-244.4 ft

Seating Press. (tsf): 0.05

Initial Dial Gauge Reading (D_o), in.: 0.0000

Reviewed by: CJS

Pressure, P (tsf)	Time Readings Required	Date Load Applied	Time Load Applied	Load Applied By	A Final ¹ Dial Reading, D_f $\times 10^{-4}$ in.	B Apparatus Correction ² , D_a $\times 10^{-4}$ in.	C Cumulative Change in Height ³ , ΔH_i in.	D Height of Voids ⁴ , $H_{v,i}$ in.	Vertical Strain ⁵ , ϵ_i (%)	Void Ratio ⁶ , e_i
0.5		10/24/2006	9:20	DWC	19	12	0.0007	0.5304	0.09	2.410
1		10/25/2006	9:20	DWC	34	21	0.0013	0.5298	0.17	2.407
2		10/26/2006	9:20	DWC	61	33	0.0028	0.5283	0.37	2.400
4		10/27/2006	9:20	DWC	105	40	0.0065	0.5246	0.87	2.383
8		10/28/2006	9:20	CJS	167	50	0.0117	0.5194	1.56	2.360
4		10/30/2006	9:20	DWC	150	40	0.0110	0.5201	1.46	2.363
2		10/31/2006	9:20	DWC	127	33	0.0094	0.5217	1.25	2.370
4		11/1/2006	9:20	DWC	143	40	0.0103	0.5208	1.37	2.366
8		11/2/2006	9:20	DWC	175	50	0.0125	0.5186	1.66	2.356
16		11/3/2006	9:20	DWC	284	63	0.0221	0.5090	2.94	2.312
32		11/4/2006	9:20	CJS	1267	76	0.1191	0.4120	15.86	1.872
64		11/6/2006	9:20	DWC	2452	87	0.2365	0.2946	31.48	1.338
16		11/7/2006	9:20	DWC	2330	63	0.2267	0.3044	30.18	1.383
4		11/8/2006	9:20	DWC	2156	40	0.2116	0.3195	28.17	1.451
0.5		11/9/2006	9:20	DWC	1860	12	0.1848	0.3463	24.60	1.573

Notes: 1 "Final" based on test method; 24 hrs for Method A, end of primary for Method B.

2 Correction value, for the current pressure, from the consolidometer's calibration curve.

3 $\Delta H = D_f - D_o - D_a = \text{Col. A} - D_o - \text{Col. B}$

4 $H_{v,i} = (H_o - H_s) - \Delta H$

5 $\epsilon_i = (\Delta H / H_o) \times 100 = (\text{Col. C} / H_o) \times 100$

6 $e_i = H_{v,i} / H_s = \text{Col. D} / H_s$



Load Time Readings

11/21/06

Project: Calvert Cliffs Nuclear Power Plant
 Schnabel Contract: 06120048
 Boring No.: B-401 Depth: 243.5-244.4 ft

Consol. ID: 5

Reviewed by: CJS

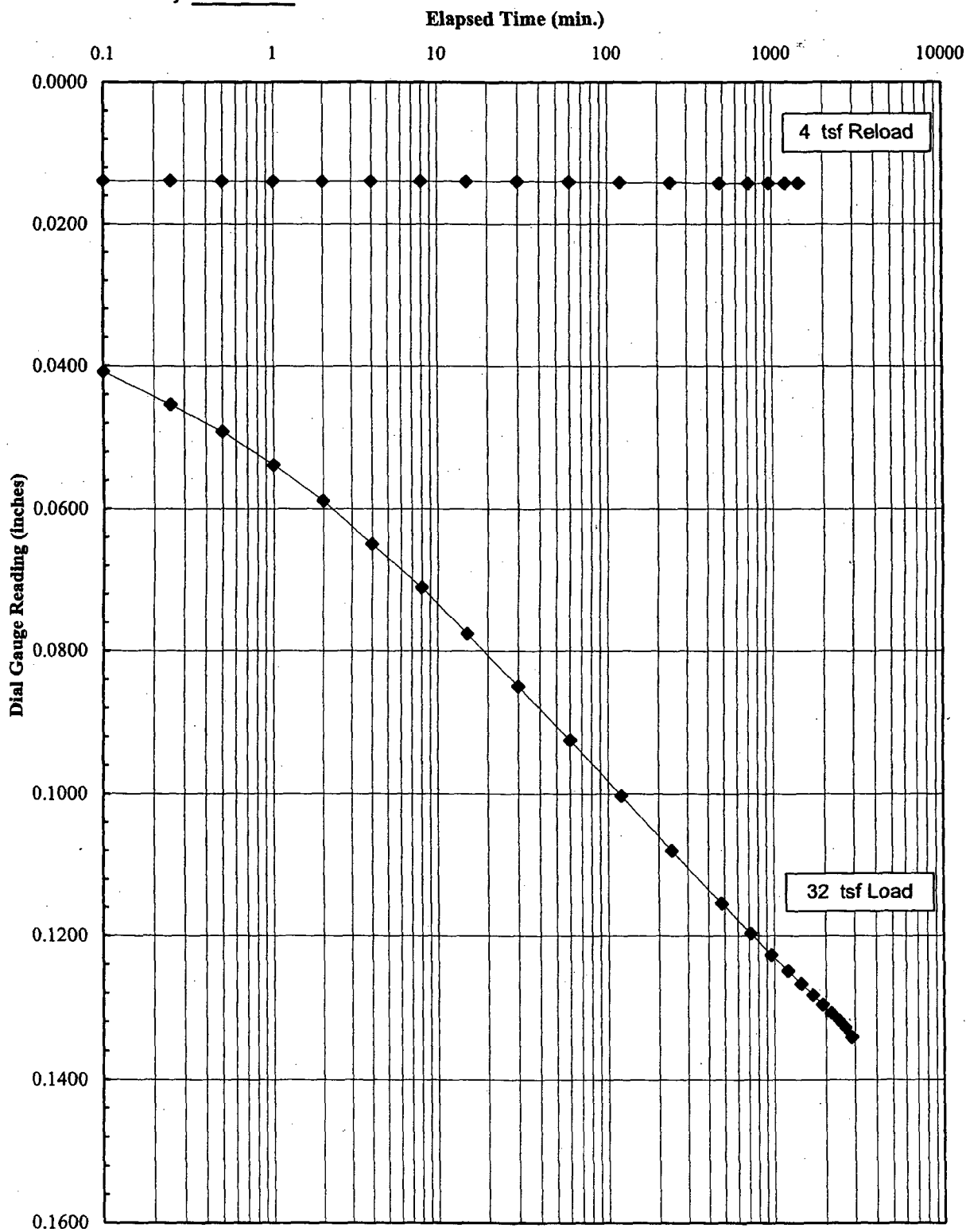
Elapsed Time (min.)	Dial Guage Readings (inches)					
	4 tsf Reload	32 tsf Load	X tsf Load	X tsf Load	X tsf Load	X tsf Load
	11/1/2006	11/4/2006	Date	Date	Date	Date
0.1	0.0139	0.0408				
0.25	0.0139	0.0454				
0.5	0.0140	0.0492				
1	0.0140	0.0539				
2	0.0140	0.0589				
4	0.0140	0.0650				
8	0.0140	0.0711				
15	0.0140	0.0776				
30	0.0140	0.0850				
60	0.0141	0.0925				
120	0.0142	0.1003				
240	0.0142	0.1080				
480	0.0143	0.1155				
720	0.0143	0.1197				
960	0.0143	0.1227				
1200	0.0143	0.1249				
1440	0.0143	0.1267				
1680		0.1283				
1920		0.1296				
2160		0.1308				
2400		0.1318				
2640		0.1328				
2880		0.1341				

Consolidation Time Curves

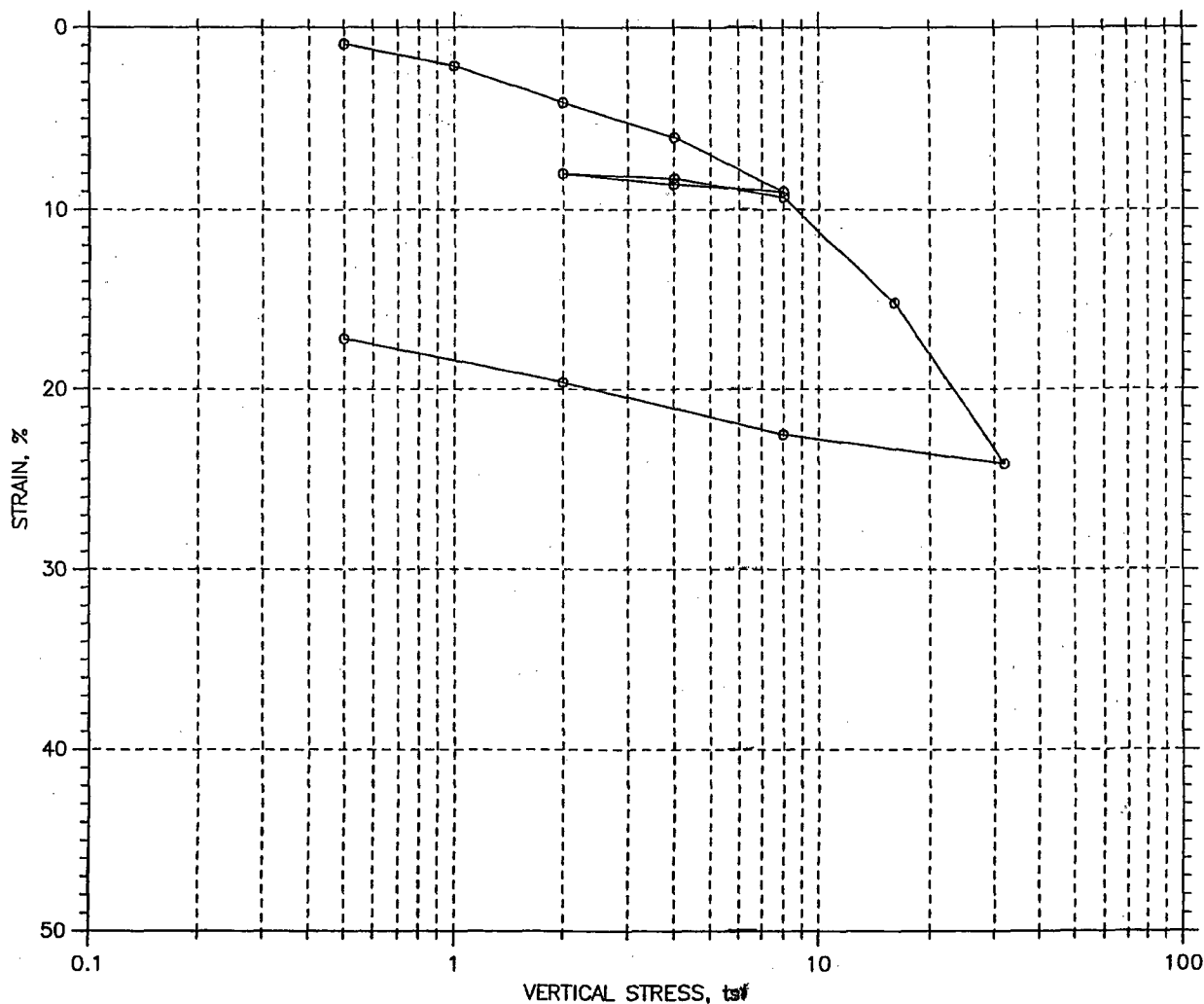
11/21/06

Project: Calvert Cliffs Nuclear Power Plant
Schnabel Contract: 06120048
Boring No.: B-401 Depth: 243.5-244.4 ft

Reviewed by: CJS



CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	38.93	29.19
Preconsolidation Pressure: 10.5 tsf				Dry Unit Weight, pcf	78.72	95.04
Compression Index: ---				Saturation, %	90.94	99.99
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.17	0.80
LL: 63	PL: 19	PI: 44	GS: 2.74			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-406	Tested By: njh	Checked By: jdt
	Sample No.: S-16	Test Date: 10/14/06	Depth: 63.5-65.5
	Test No.: C-50	Sample Type: tube	Elevation: ---
	Description: Moist, very dark gray organic clay (OH), 90% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.30, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
 Boring No.: B-406
 Sample No.: S-16
 Test No.: C-50

Location: Calvert County, MD
 Tested By: njh
 Test Date: 10/14/06
 Sample Type: tube

Project No.: GTX-6880
 Checked By: jdt
 Depth: 63.5-65.5
 Elevation: ---

Soil Description: Moist, very dark gray organic clay (OH), 90% passing #200 sieve, inundated @ 0.5 tsf
 Remarks: System G - Compression Ratio: 0.30, Recompression Ratio: 0.04

Measured Specific Gravity: 2.74
 Initial Void Ratio: 1.17
 Final Void Ratio: 0.80

Liquid Limit: 63
 Plastic Limit: 19
 Plasticity Index: 44

Initial Height: 1.00 in
 Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
	lidle	RING		1093
Wt. Container + Wet Soil, gm	54.57	357.42	347.54	140.39
Wt. Container + Dry Soil, gm	42.28	317.93	317.93	110.51
Wt. Container, gm	8.13	216.5	216.5	8.14
Wt. Dry Soil, gm	34.15	101.43	101.43	102.37
Water Content, %	35.99	38.93	29.19	29.19
Void Ratio	---	1.17	0.80	---
Degree of Saturation, %	---	90.94	99.99	---
Dry Unit Weight, pcf	---	78.721	95.04	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-406
Sample No.: S-16
Test No.: C-50

Location: Calvert County, MD
Tested By: njh
Test Date: 10/14/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 63.5-65.5
Elevation: ---

Soil Description: Moist, very dark gray organic clay (OH), 90% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: 0.30, Recompression Ratio: 0.04

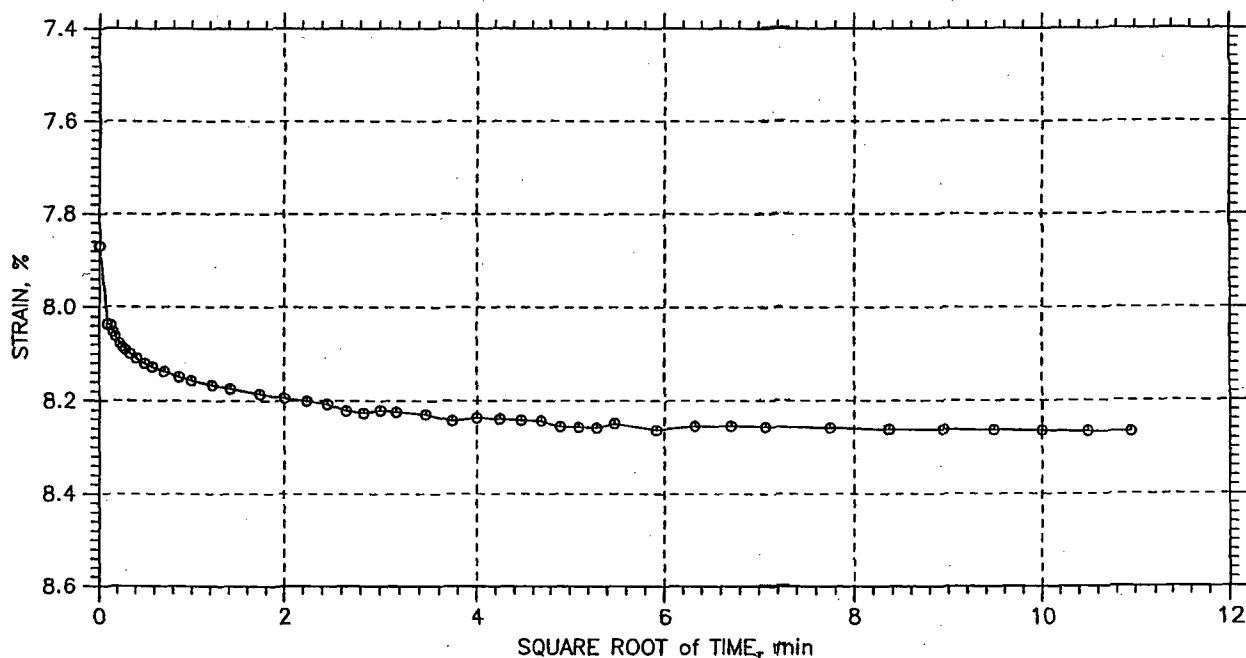
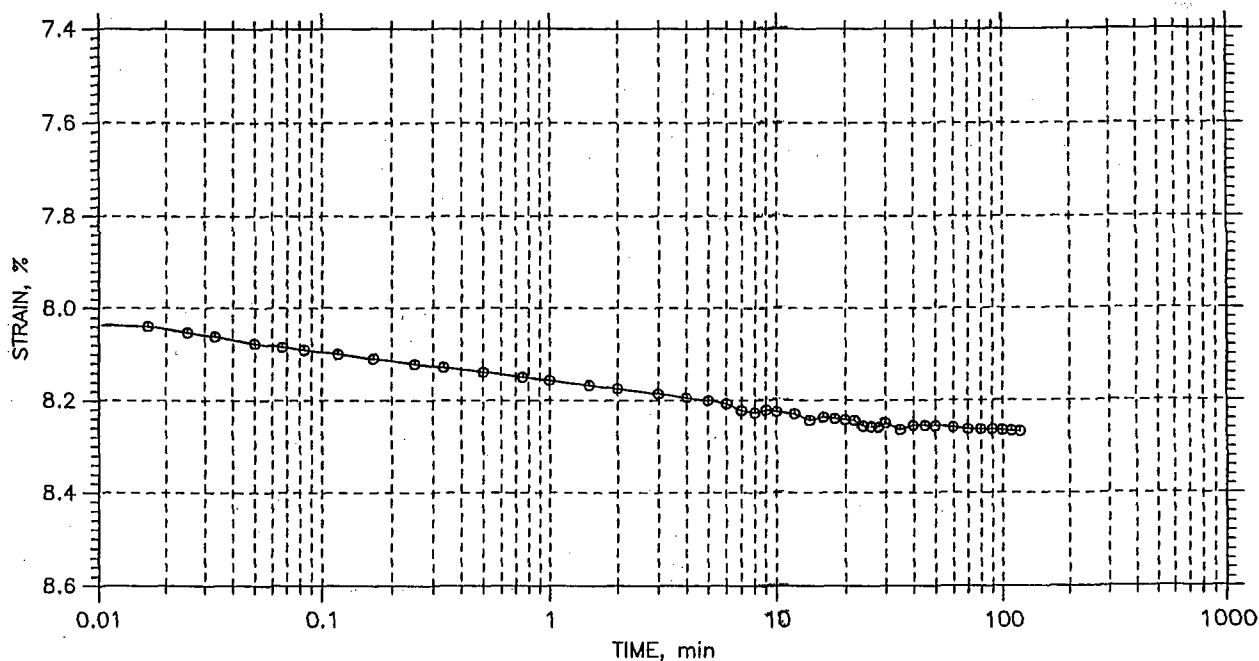
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.008888	1.154	0.89	0.0	0.0	2.69e-002	0.00e+000	2.69e-002
2	1	0.02098	1.127	2.10	1.2	0.0	6.48e-004	0.00e+000	6.48e-004
3	2	0.04106	1.084	4.11	0.1	0.0	1.09e-002	2.54e-002	1.53e-002
4	4	0.05991	1.043	5.99	0.3	0.0	2.42e-003	0.00e+000	2.42e-003
5	8	0.08987	0.978	8.99	1.6	0.0	4.49e-004	0.00e+000	4.49e-004
6	4	0.08599	0.986	8.60	0.3	0.0	2.22e-003	0.00e+000	2.22e-003
7	2	0.08009	0.999	8.01	1.8	0.0	3.76e-004	0.00e+000	3.76e-004
8	4	0.08267	0.993	8.27	0.2	0.0	4.56e-003	0.00e+000	4.56e-003
9	8	0.09308	0.971	9.31	1.5	0.0	4.69e-004	0.00e+000	4.69e-004
10	16	0.1517	0.843	15.17	7.4	11.0	8.60e-005	5.74e-005	6.88e-005
11	32	0.2415	0.648	24.15	21.1	22.9	2.52e-005	2.32e-005	2.42e-005
12	8	0.2251	0.684	22.51	3.3	0.0	1.45e-004	0.00e+000	1.45e-004
13	2	0.1962	0.747	19.62	39.6	0.0	1.29e-005	0.00e+000	1.29e-005
14	0.5	0.1717	0.800	17.17	59.8	0.0	9.16e-006	0.00e+000	9.16e-006

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



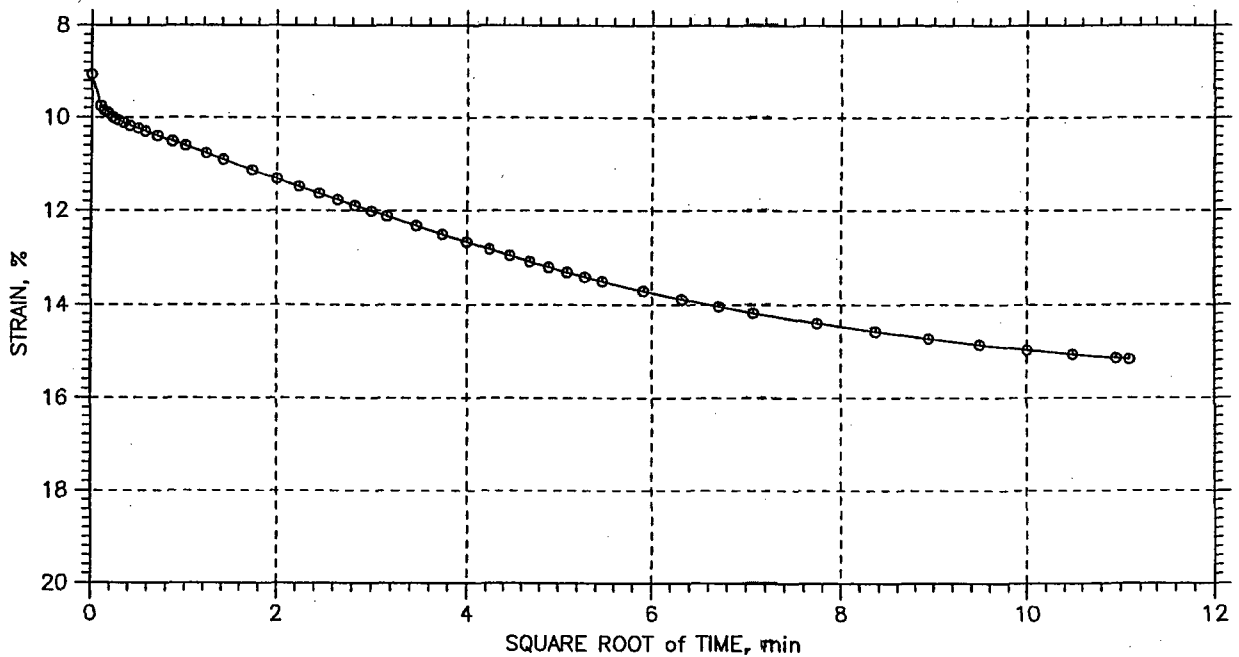
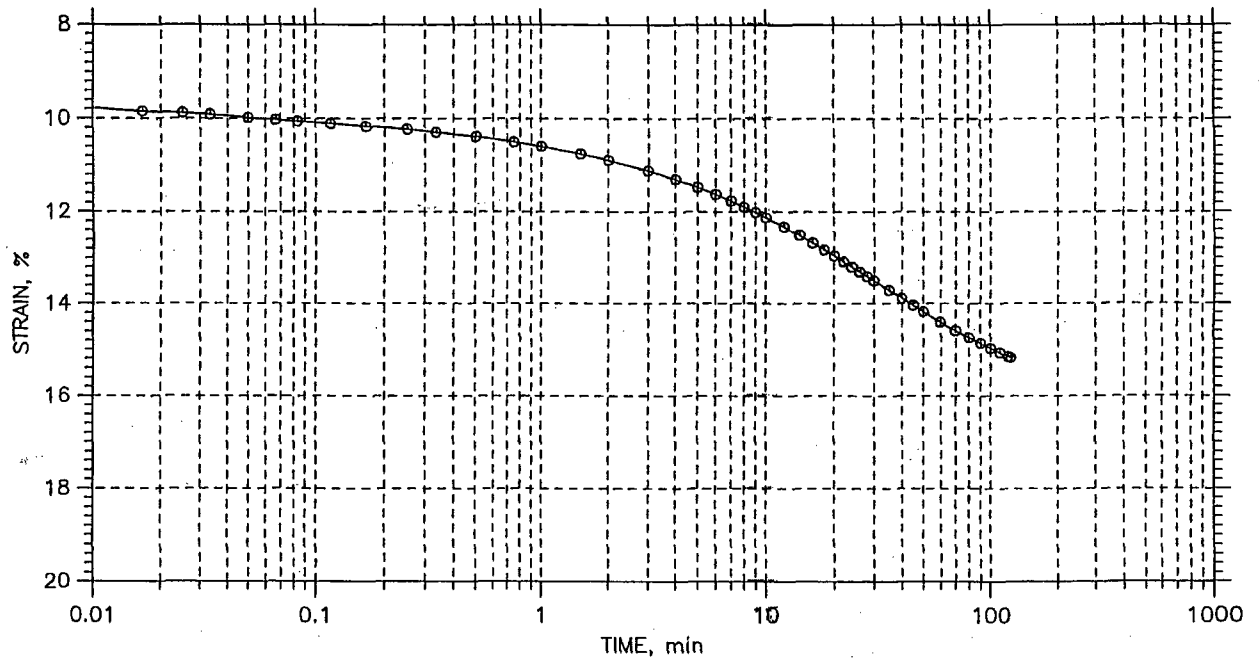
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-406	Tested By: njh	Checked By: jdt
	Sample No.: S-16	Test Date: 10/14/06	Depth: 63.5-65.5
	Test No.: C-50	Sample Type: tube	Elevation: ---
	Description: Moist, very dark gray organic clay (OH), 90% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.30, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA

TIME CURVES

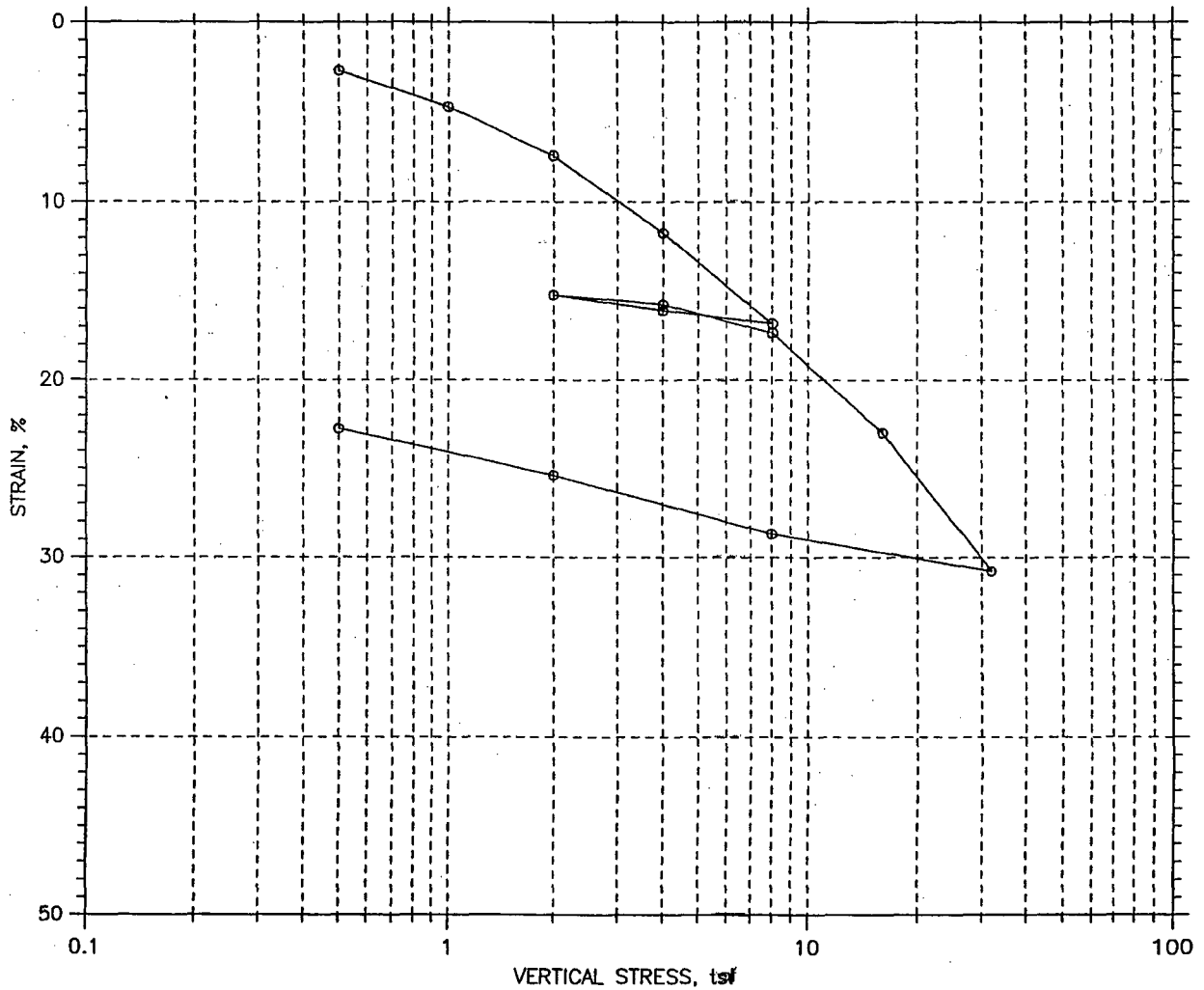
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-406	Tested By: njh	Checked By: jdt
	Sample No.: S-16	Test Date: 10/14/06	Depth: 63.5-65.5
	Test No.: C-50	Sample Type: tube	Elevation: ---
	Description: Moist, very dark gray organic clay (OH), 90% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.30, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	54.52	35.05
Preconsolidation Pressure: 4.9 tsf				Dry Unit Weight, pcf	66.49	86.1
Compression Index: ---				Saturation, %	96.61	99.99
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.51	0.94
LL: 61	PL: 19	PI: 42	GS: 2.67			

GeoTesting express a subsidiary of Geacomp Corporation	Project: Calvert Cliffs Nuclear PP		Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-411		Tested By: md	Checked By: jdt
	Sample No.: S-8		Test Date: 10/17/06	Depth: 23.5-25.5
	Test No.: C-51		Sample Type: tube	Elevation: ---
	Description: Moist, dark gray organic clay (OH), 95% passing #200 sieve, inundated @ 0.5 tsf			
	Remarks: System C - Compression Ratio: 0.26, Recompression Ratio: 0.05			

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
 Boring No.: B-411
 Sample No.: S-8
 Test No.: C-51

Location: Calvert County, MD
 Tested By: md
 Test Date: 10/17/06
 Sample Type: tube

Project No.: GTX-6880
 Checked By: jdt
 Depth: 23.5-25.5
 Elevation: ---

Soil Description: Moist, dark gray organic clay (OH), 95% passing #200 sieve, inundated @ 0.5 tsf
 Remarks: System C - Compression Ratio: 0.26, Recompression Ratio: 0.05

Measured Specific Gravity: 2.67
 Initial Void Ratio: 1.51
 Final Void Ratio: 0.94

Liquid Limit: 61
 Plastic Limit: 19
 Plasticity Index: 42

Initial Height: 1.00 in
 Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
	956	RING		2316
Wt. Container + Wet Soil, gm	129.04	349.3	332.62	128.24
Wt. Container + Dry Soil, gm	87.42	302.59	302.59	97.05
Wt. Container, gm	8.04	216.91	216.91	8.07
Wt. Dry Soil, gm	79.38	85.678	85.678	88.98
Water Content, %	52.43	54.52	35.05	35.05
Void Ratio	---	1.51	0.94	---
Degree of Saturation, %	---	96.61	99.99	---
Dry Unit Weight, pcf	---	66.493	86.098	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-411
Sample No.: S-8
Test No.: C-51

Location: Calvert County, MD
Tested By: md
Test Date: 10/17/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 23.5-25.5
Elevation: ---

Soil Description: Moist, dark gray organic clay (OH), 95% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System C - Compression Ratio: 0.26, Recompression Ratio: 0.05

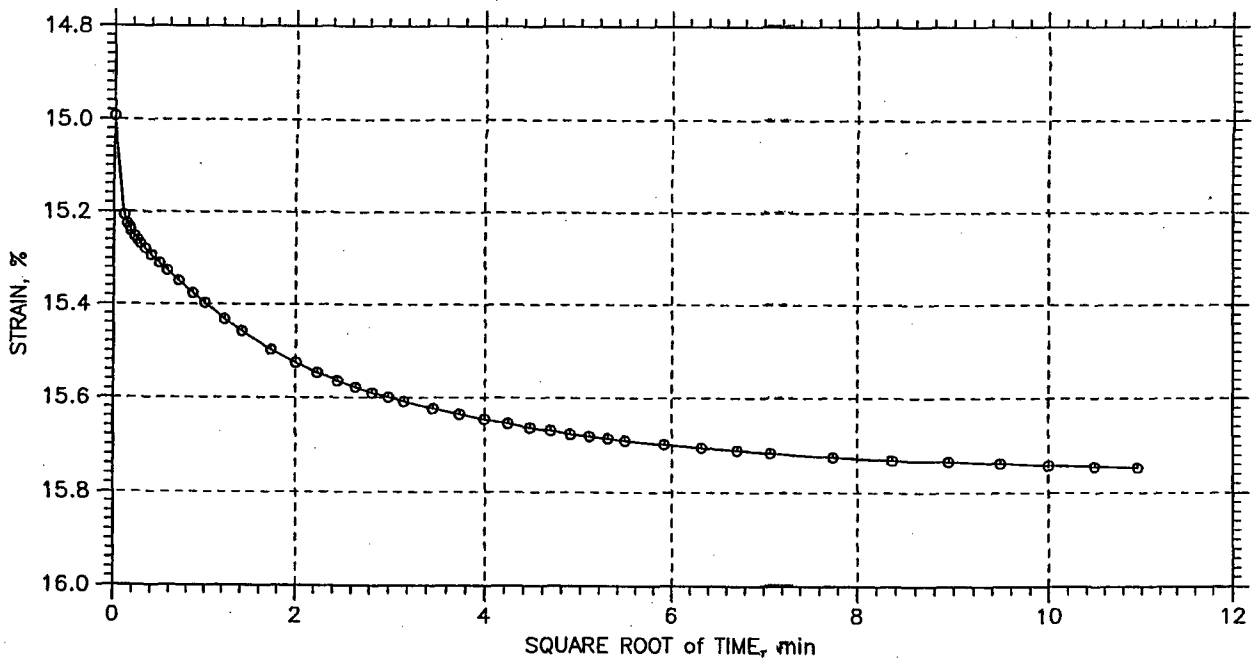
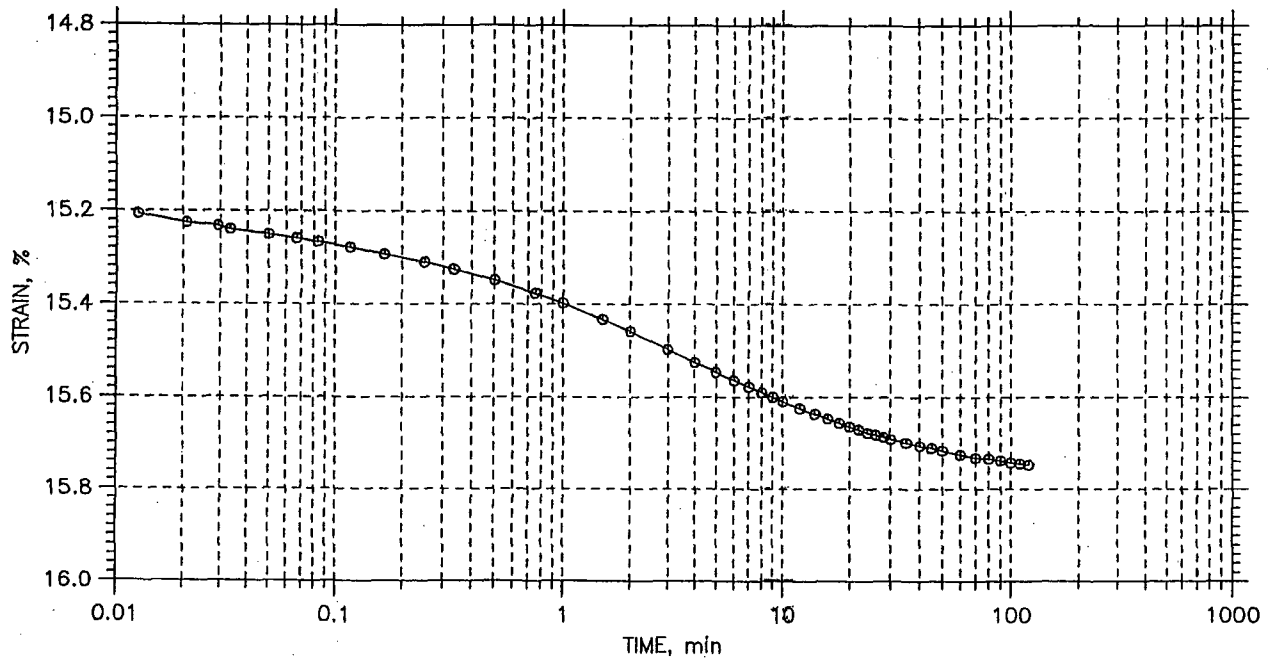
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Sq.Rt. min	Fitting Log min	Coefficient of Consolidation		
							Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.02716	1.439	2.72	2.0	0.0	4.00e-004	0.00e+000	4.00e-004
2	1	0.04719	1.388	4.72	2.1	2.3	3.64e-004	3.37e-004	3.50e-004
3	2	0.07409	1.321	7.41	1.1	1.2	6.72e-004	5.84e-004	6.25e-004
4	4	0.1172	1.213	11.72	1.7	0.0	3.91e-004	0.00e+000	3.91e-004
5	8	0.1681	1.085	16.81	3.0	3.0	2.00e-004	2.04e-004	2.02e-004
6	4	0.1609	1.103	16.09	0.9	0.0	6.24e-004	0.00e+000	6.24e-004
7	2	0.1523	1.125	15.23	4.1	0.0	1.41e-004	0.00e+000	1.41e-004
8	4	0.1575	1.112	15.75	0.9	0.9	6.37e-004	6.64e-004	6.50e-004
9	8	0.1733	1.072	17.33	2.6	0.0	2.18e-004	0.00e+000	2.18e-004
10	16	0.2299	0.930	22.99	18.7	0.0	2.80e-005	0.00e+000	2.80e-005
11	32	0.3076	0.736	30.76	42.1	0.0	1.04e-005	0.00e+000	1.04e-005
12	8	0.2867	0.788	28.67	5.6	0.0	7.30e-005	0.00e+000	7.30e-005
13	2	0.2539	0.870	25.39	51.3	0.0	8.54e-006	0.00e+000	8.54e-006
14	0.5	0.2277	0.936	22.77	62.0	0.0	7.64e-006	0.00e+000	7.64e-006

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



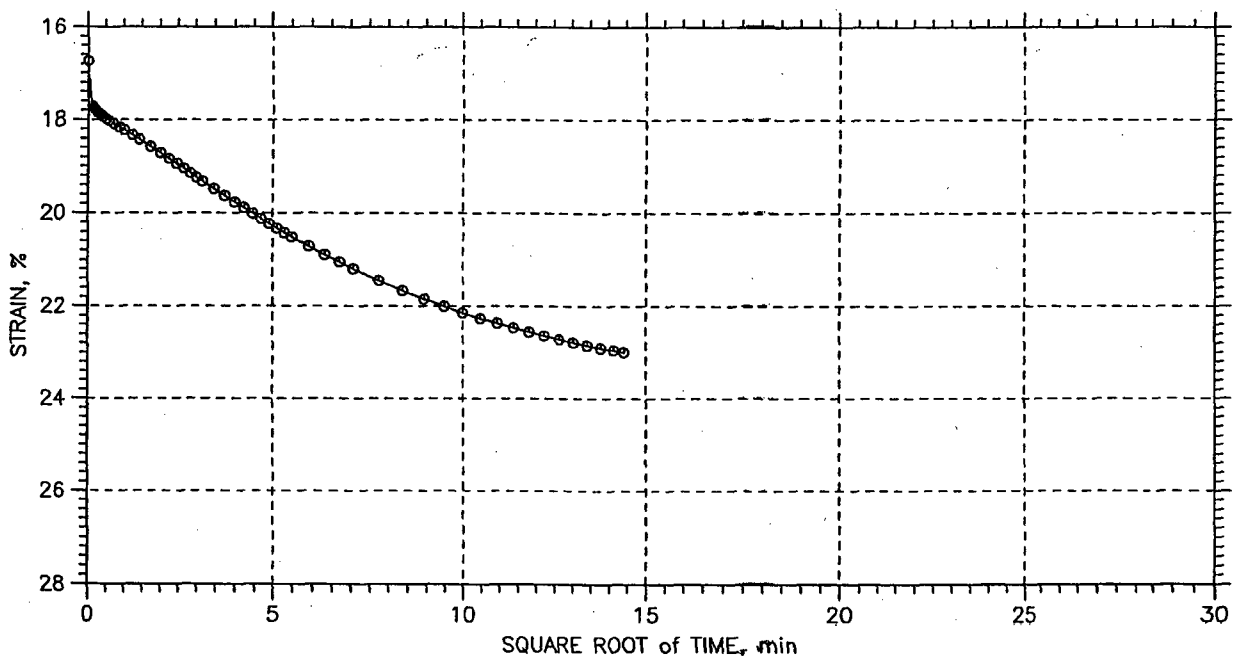
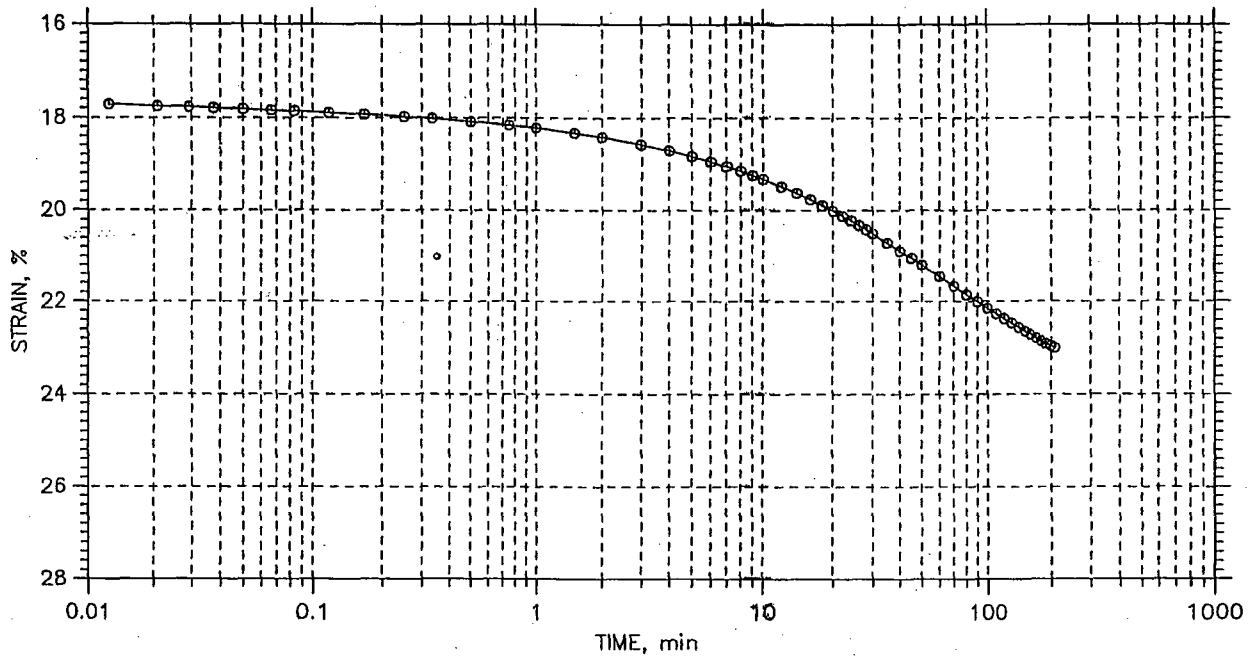
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-411	Tested By: md	Checked By: jdt
	Sample No.: S-8	Test Date: 10/17/06	Depth: 23.5-25.5
	Test No.: C-51	Sample Type: tube	Elevation: ---
	Description: Moist, dark gray organic clay (OH), 95% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.26, Recompression Ratio: 0.05		

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 10 of 14

Stress: 16. tsf

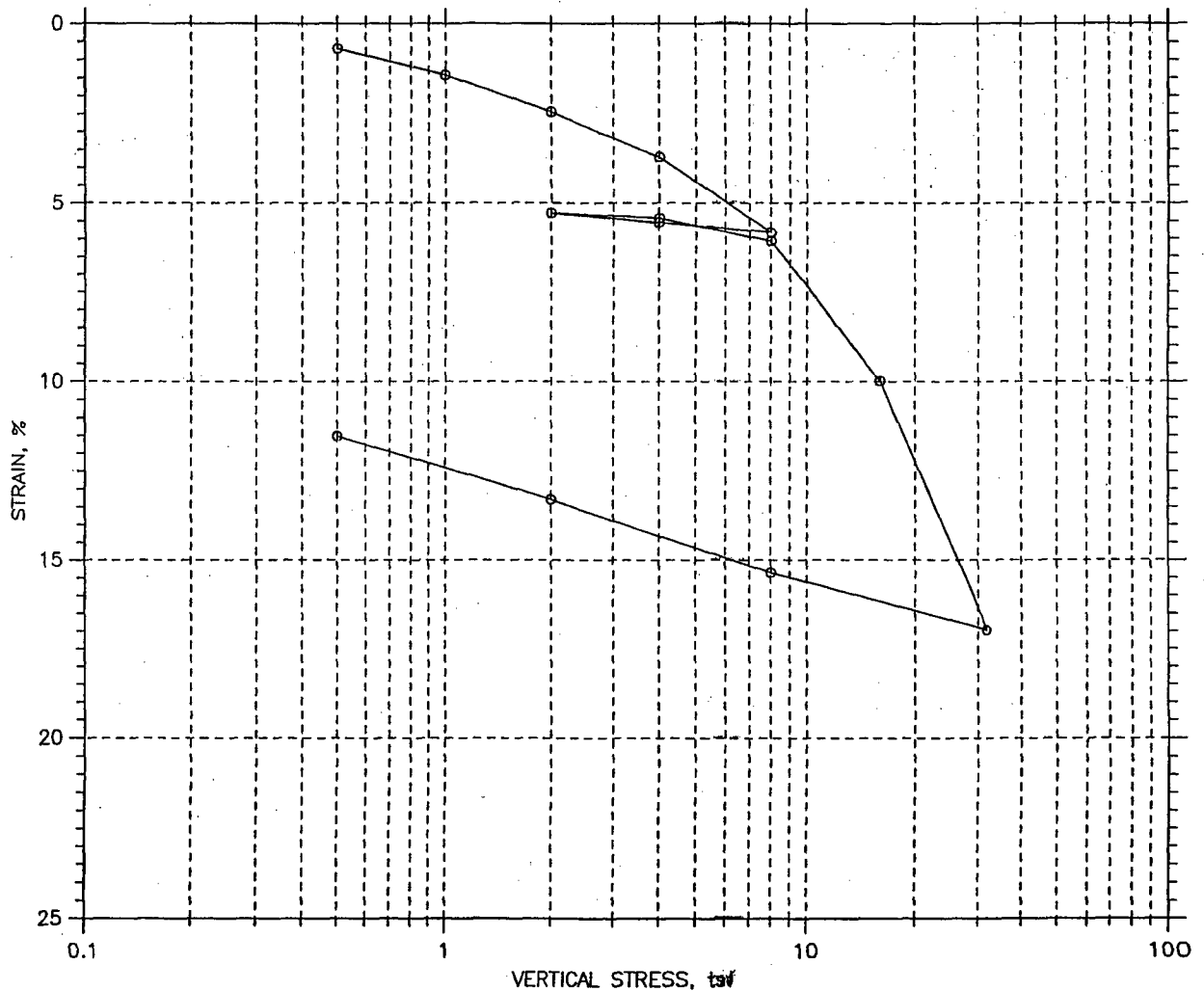


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Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
Boring No.: B-411	Tested By: md	Checked By: jdt
Sample No.: S-8	Test Date: 10/17/06	Depth: 23.5-25.5
Test No.: C-51	Sample Type: tube	Elevation: ---
Description: Moist, dark gray organic clay (OH), 95% passing #200 sieve, inundated @ 0.5 tsf		
Remarks: System C - Compression Ratio: 0.26, Recompression Ratio: 0.05		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	37.37	32.51
Preconsolidation Pressure: 10.5 tsf				Dry Unit Weight, pcf	79.89	90.29
Compression Index: ---				Saturation, %	90.01	100.00
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.13	0.89
LL: 59	PL: 16	PI: 43	GS: 2.73			

GeoTesting express a subsidiary of Geoscomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-413	Tested By: md	Checked By: jdt
	Sample No.: S-17	Test Date: 09/27/06	Depth: 73-75
	Test No.: C-31	Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray clay (CH), 98% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.24, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-413
Sample No.: S-17
Test No.: C-31

Location: Calvert County, MD
Tested By: md
Test Date: 09/27/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 73-75
Elevation: ---

Soil Description: Moist, dark greenish gray clay (CH), 98% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System C - Compression Ratio: 0.24, Recompression Ratio: 0.03

Measured Specific Gravity: 2.73
Initial Void Ratio: 1.13
Final Void Ratio: 0.89

Liquid Limit: 59
Plastic Limit: 16
Plasticity Index: 43

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
	Tube-4-4	RING		chase
Wt. Container + Wet Soil, gm	146.83	353.31	353.31	146.91
Wt. Container + Dry Soil, gm	111.76	319.84	319.84	112.91
Wt. Container, gm	8	216.91	216.91	8.33
Wt. Dry Soil, gm	103.76	102.93	102.93	104.58
Water Content, %	33.80	37.37	32.51	32.51
Void Ratio	---	1.13	0.89	---
Degree of Saturation, %	---	98.01	100.00	---
Dry Unit Weight, pcf	---	79.886	90.29	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-413
Sample No.: S-17
Test No.: C-31

Location: Calvert County, MD
Tested By: md
Test Date: 09/27/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 73-75
Elevation: ---

Soil Description: Moist, dark greenish gray clay (CH), 98% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System C - Compression Ratio: 0.24, Recompression Ratio: 0.03

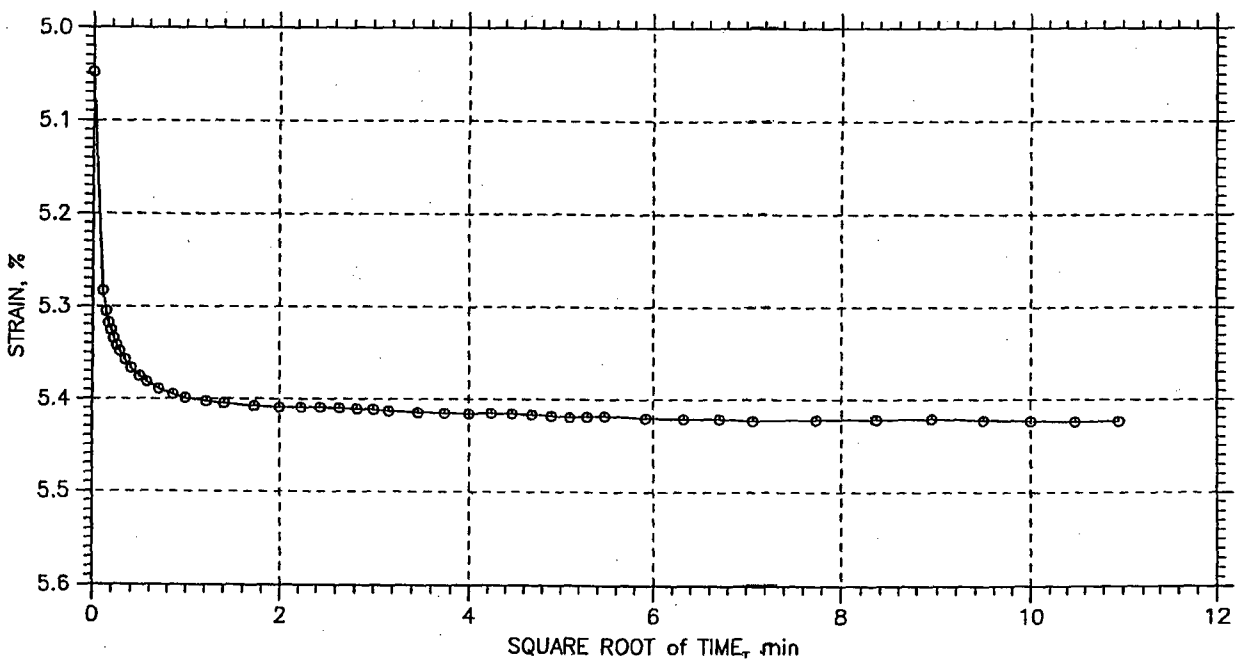
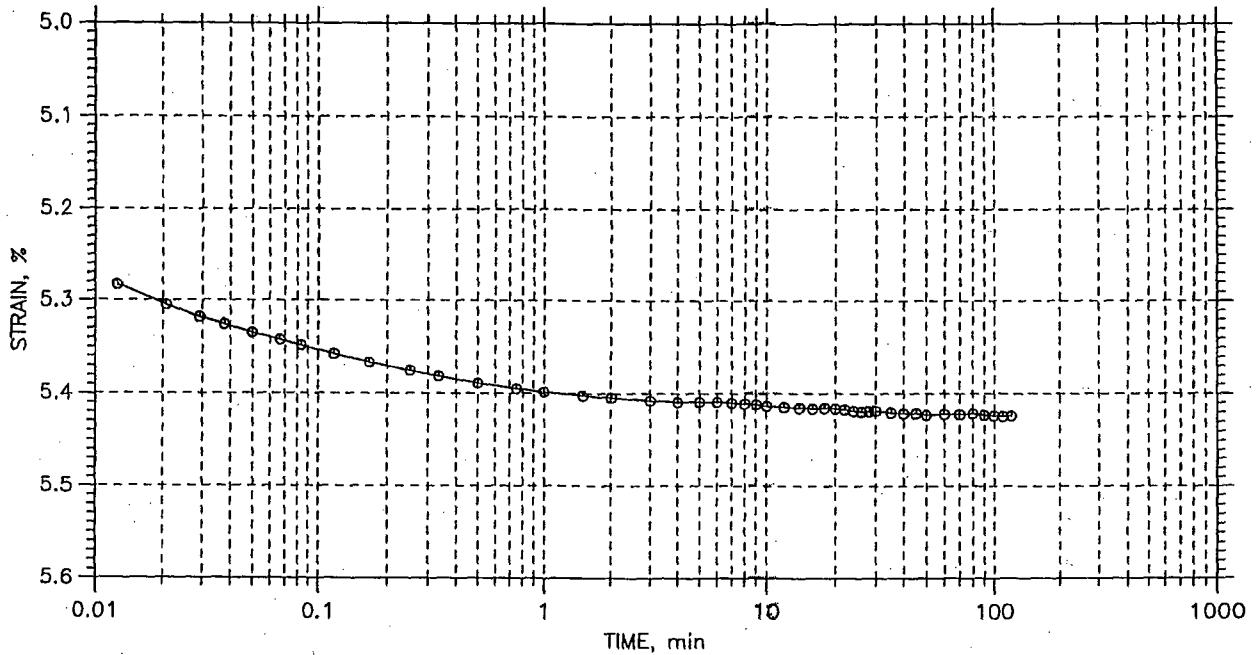
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.006919	1.119	0.69	0.0	0.0	3.81e-002	0.00e+000	3.81e-002
2	1	0.0143	1.103	1.43	0.1	0.0	8.10e-003	3.90e-002	1.34e-002
3	2	0.02449	1.081	2.45	0.1	0.0	1.51e-002	4.38e-002	2.25e-002
4	4	0.0372	1.054	3.72	0.0	0.0	3.27e-002	4.73e-002	3.87e-002
5	8	0.05819	1.009	5.82	0.0	0.0	2.06e-002	5.01e-002	2.92e-002
6	4	0.05549	1.015	5.55	0.0	0.0	1.02e-001	0.00e+000	1.02e-001
7	2	0.05281	1.021	5.28	0.0	0.0	2.04e-002	2.01e+000	4.03e-002
8	4	0.05424	1.018	5.42	0.0	0.0	8.78e-002	0.00e+000	8.78e-002
9	8	0.06062	1.004	6.06	0.0	0.0	3.12e-002	0.00e+000	3.12e-002
10	16	0.09985	0.920	9.99	0.2	0.1	3.32e-003	1.08e-002	5.08e-003
11	32	0.1697	0.771	16.97	3.1	0.0	1.97e-004	0.00e+000	1.97e-004
12	8	0.1535	0.806	15.35	0.2	0.0	2.62e-003	4.64e-002	4.95e-003
13	2	0.1329	0.850	13.29	4.8	0.0	1.27e-004	0.00e+000	1.27e-004
14	0.5	0.1152	0.888	11.52	13.4	0.0	4.72e-005	0.00e+000	4.72e-005

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



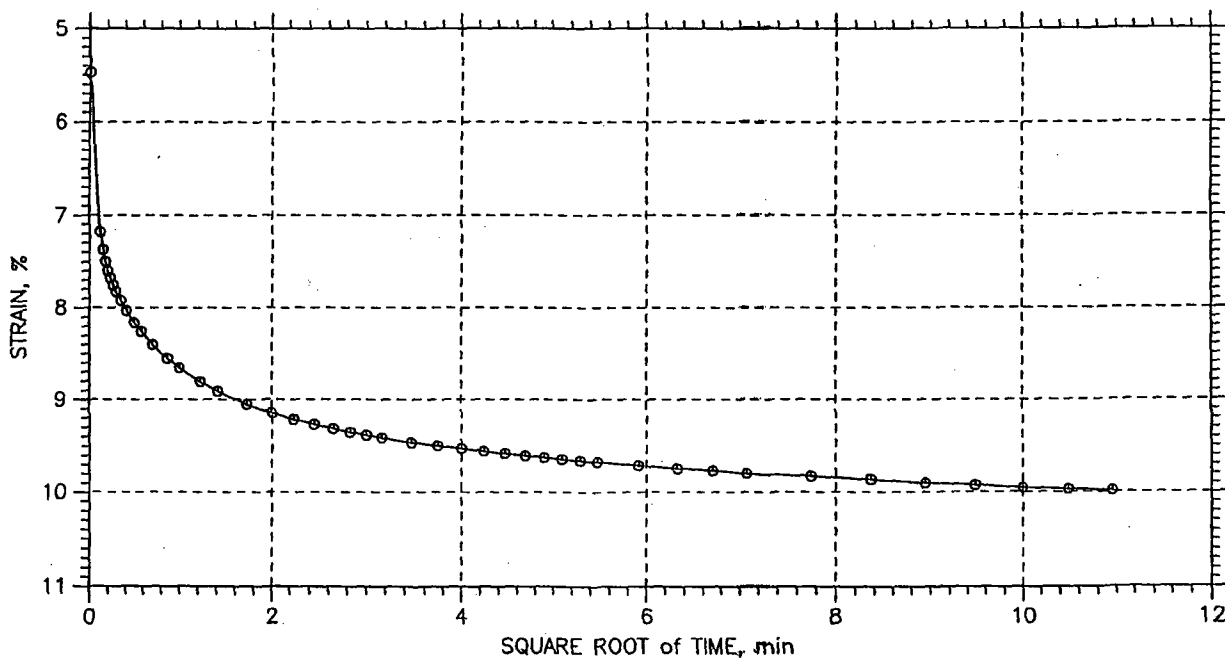
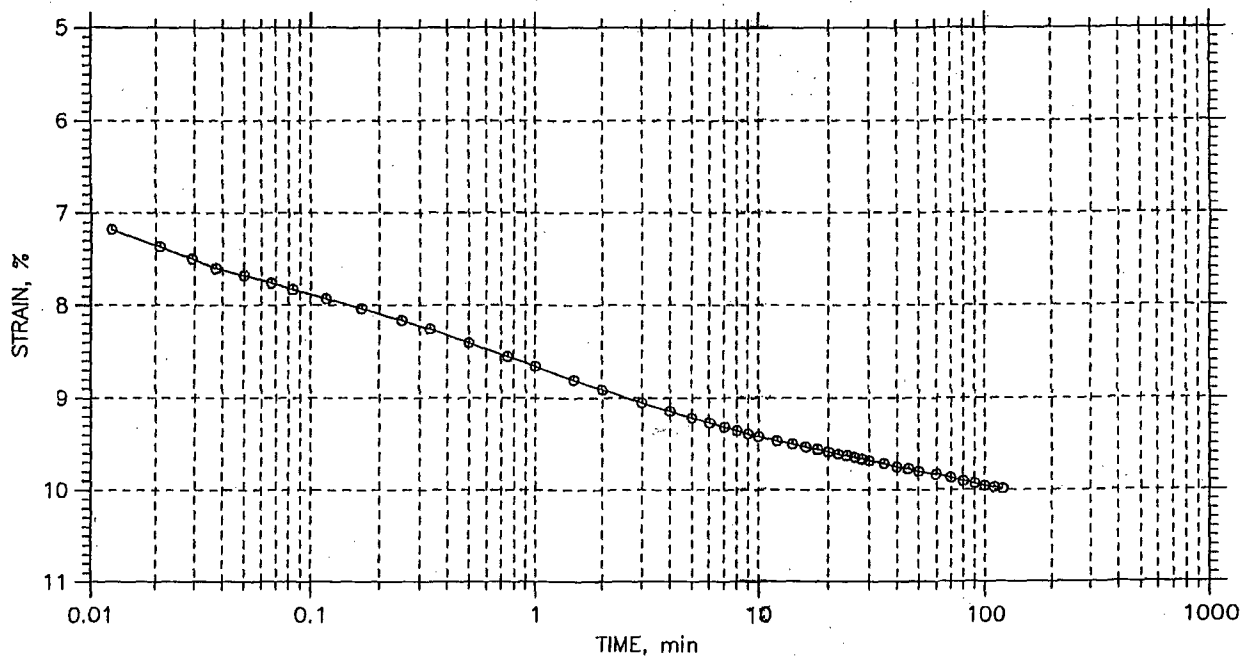
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-413	Tested By: md	Checked By: jdt
	Sample No.: S-17	Test Date: 09/27/06	Depth: 73-75
	Test No.: C-31	Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray clay (CH), 98% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.24, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

TIME CURVES

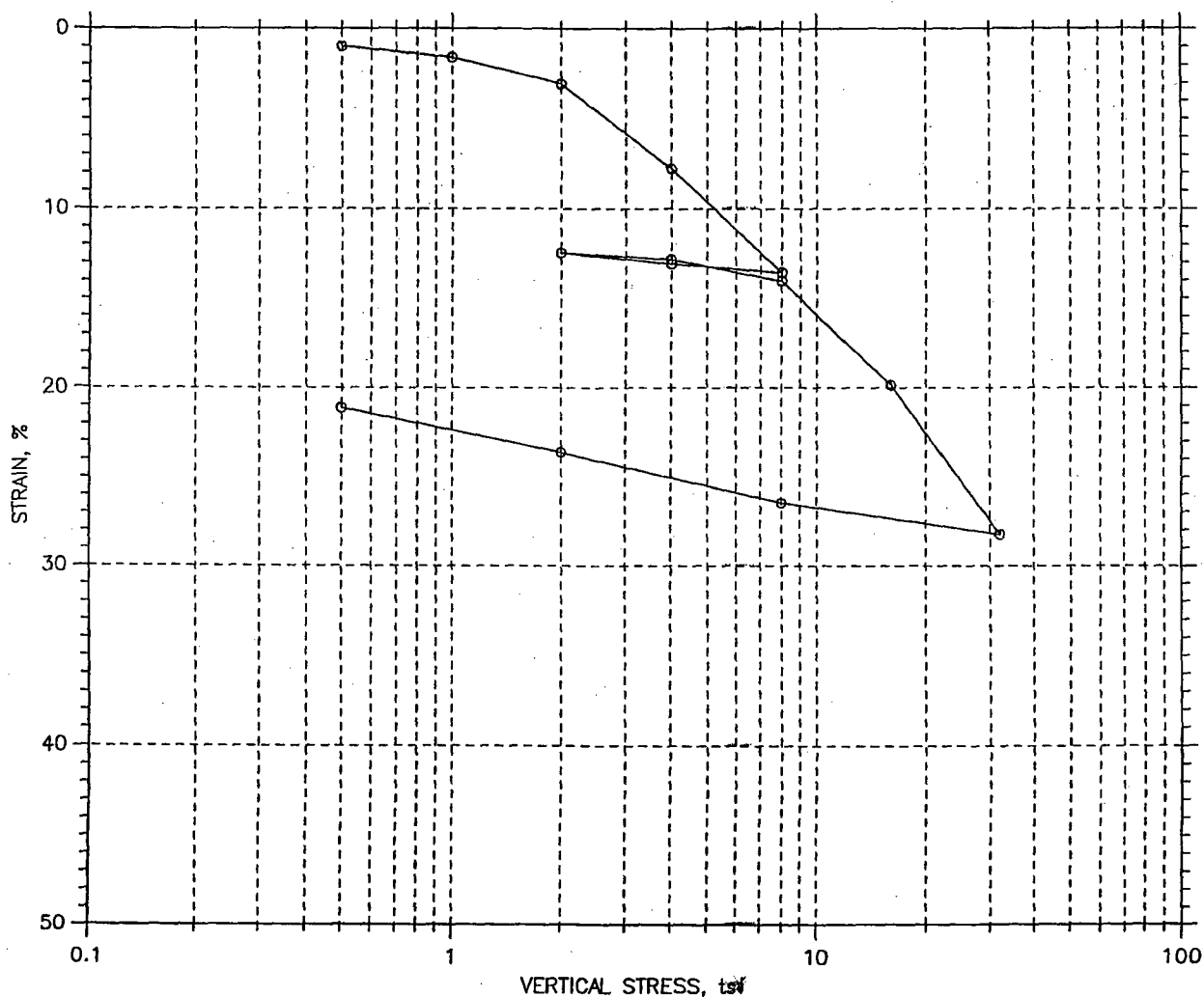
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-413	Tested By: md	Checked By: jdt
	Sample No.: S-17	Test Date: 09/27/06	Depth: 73-75
	Test No.: C-31	Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray clay (CH), 98% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.24, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	41.44	32.84
Preconsolidation Pressure: 4 tsf				Dry Unit Weight, pcf	71.55	90.72
Compression Index: ---				Saturation, %	80.82	99.99
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.43	0.91
LL: 51	PL: 15	PI: 36	GS: 2.78			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-414	Tested By: md	Checked By: jdt
	Sample No.: S-17	Test Date: 09/26/06	Depth: 68-70
	Test No.: C-30	Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray clay (CH), 97% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.28, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-414
Sample No.: S-17
Test No.: C-30

Location: Calvert County, MD
Tested By: md
Test Date: 09/26/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 68-70
Elevation: ---

Soil Description: Moist, dark greenish gray clay (CH), 97% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: 0.28, Recompression Ratio: 0.04

Measured Specific Gravity: 2.78
Initial Void Ratio: 1.43
Final Void Ratio: 0.91

Liquid Limit: 51
Plastic Limit: 15
Plasticity Index: 36

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimming	Specimen+Ring	Specimen+Ring	Trimming
B-107		RING		2020
Wt. Container + Wet Soil, gm	122.75	346.86	338.93	133.08
Wt. Container + Dry Soil, gm	91.73	308.65	308.65	102.2
Wt. Container, gm	8.09	216.46	216.46	8.17
Wt. Dry Soil, gm	83.64	92.193	92.193	94.03
Water Content, %	37.09	41.84	32.84	32.84
Void Ratio	---	1.43	0.91	---
Degree of Saturation, %	---	80.82	99.99	---
Dry Unit Weight, pcf	---	71.55	90.72	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-414
Sample No.: S-17
Test No.: C-30

Location: Calvert County, MD
Tested By: md
Test Date: 09/26/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 68-70
Elevation: ---

Soil Description: Moist, dark greenish gray clay (CH), 97% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: 0.28, Recompression Ratio: 0.04

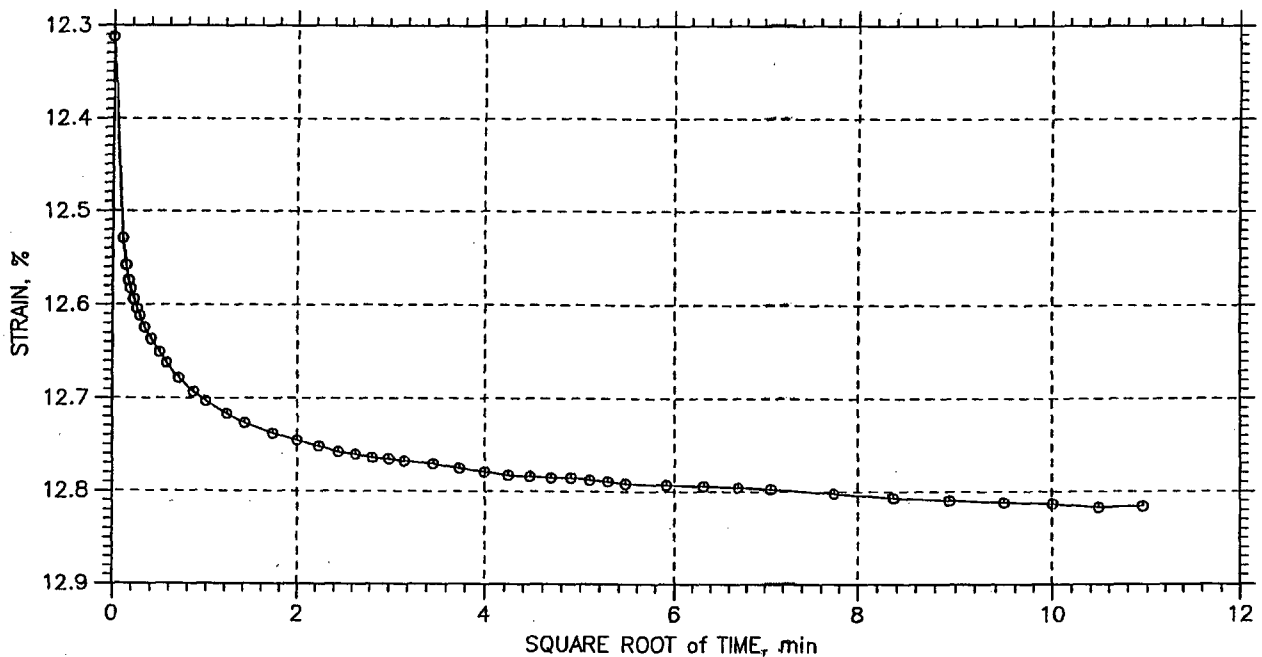
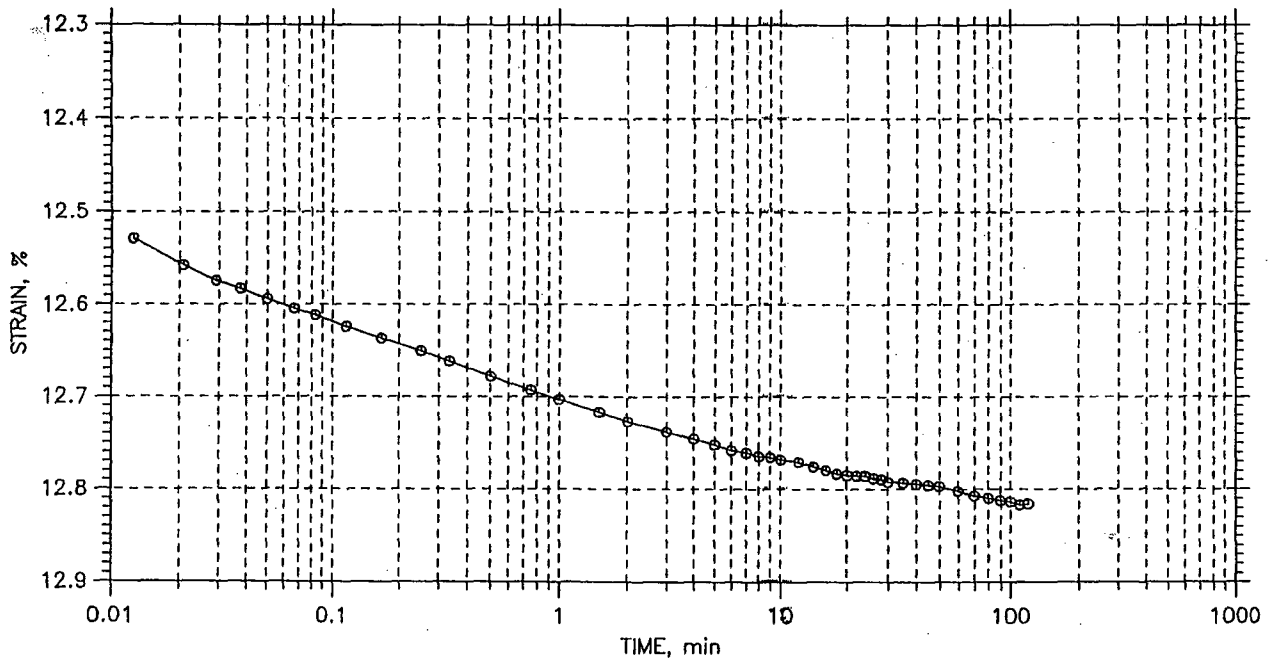
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.009877	1.402	0.99	0.0	0.0	3.62e-002	0.00e+000	3.62e-002
2	1	0.01616	1.386	1.62	0.1	0.0	1.21e-002	3.28e-002	1.77e-002
3	2	0.03051	1.352	3.05	0.1	0.0	7.60e-003	3.20e-002	1.23e-002
4	4	0.07763	1.237	7.76	0.1	0.0	7.46e-003	1.75e-002	1.05e-002
5	8	0.1354	1.097	13.54	0.2	0.0	3.34e-003	2.97e-002	6.00e-003
6	4	0.1306	1.109	13.06	0.1	0.0	6.00e-003	0.00e+000	6.00e-003
7	2	0.1245	1.124	12.45	1.6	0.8	3.85e-004	8.10e-004	5.22e-004
8	4	0.1282	1.115	12.82	0.1	0.0	6.08e-003	0.00e+000	6.08e-003
9	8	0.1402	1.086	14.02	0.6	0.0	1.01e-003	0.00e+000	1.01e-003
10	16	0.1985	0.944	19.85	4.1	0.0	1.39e-004	0.00e+000	1.39e-004
11	32	0.2824	0.741	28.24	23.4	0.0	2.03e-005	0.00e+000	2.03e-005
12	8	0.2646	0.784	26.46	6.1	0.0	7.08e-005	0.00e+000	7.08e-005
13	2	0.236	0.853	23.60	39.7	0.0	1.16e-005	0.00e+000	1.16e-005
14	0.5	0.2113	0.913	21.13	57.5	0.0	8.62e-006	0.00e+000	8.62e-006

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



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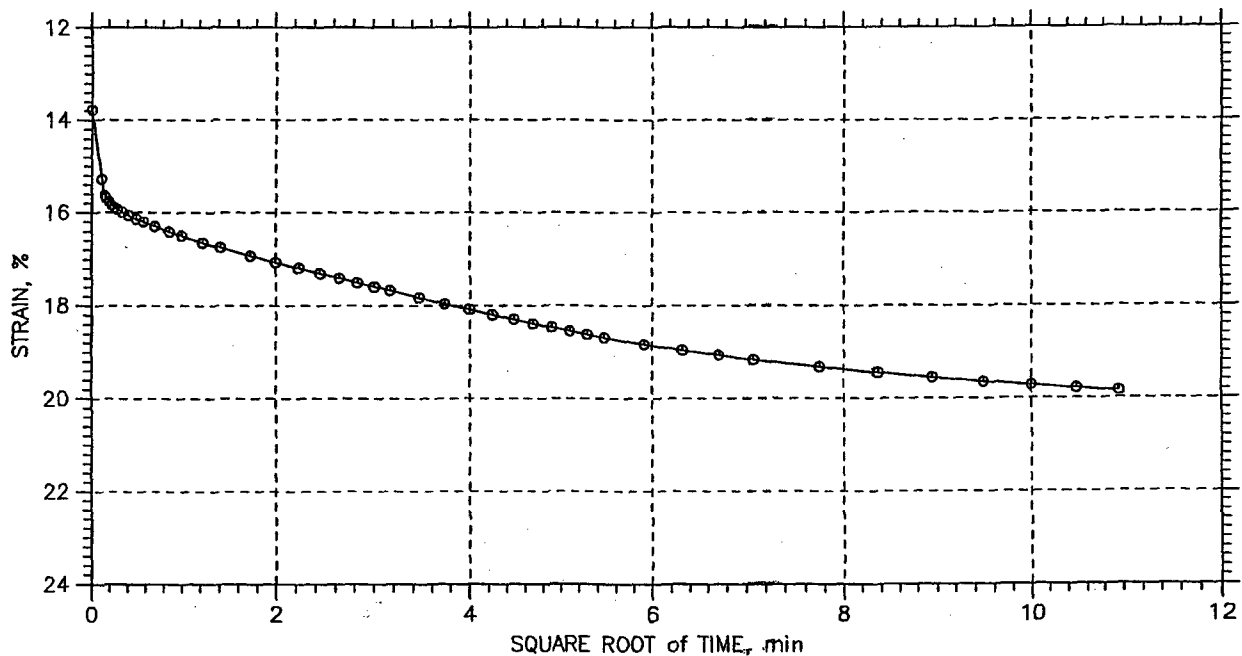
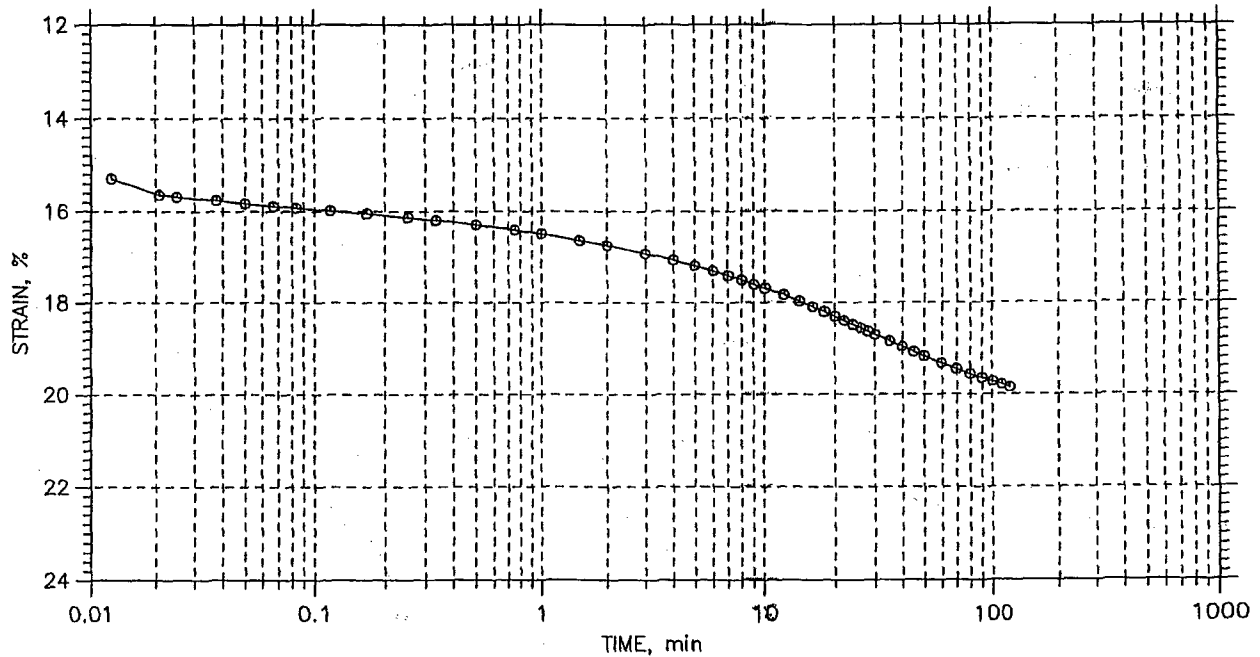
Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
Boring No.: B-414	Tested By: md	Checked By: jdt
Sample No.: S-17	Test Date: 09/26/06	Depth: 68-70
Test No.: C-30	Sample Type: tube	Elevation: ---
Description: Moist, dark greenish gray clay (CH), 97% passing #200 sieve, inundated @ 0.5 tsf		
Remarks: System G - Compression Ratio: 0.28, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA

TIME CURVES

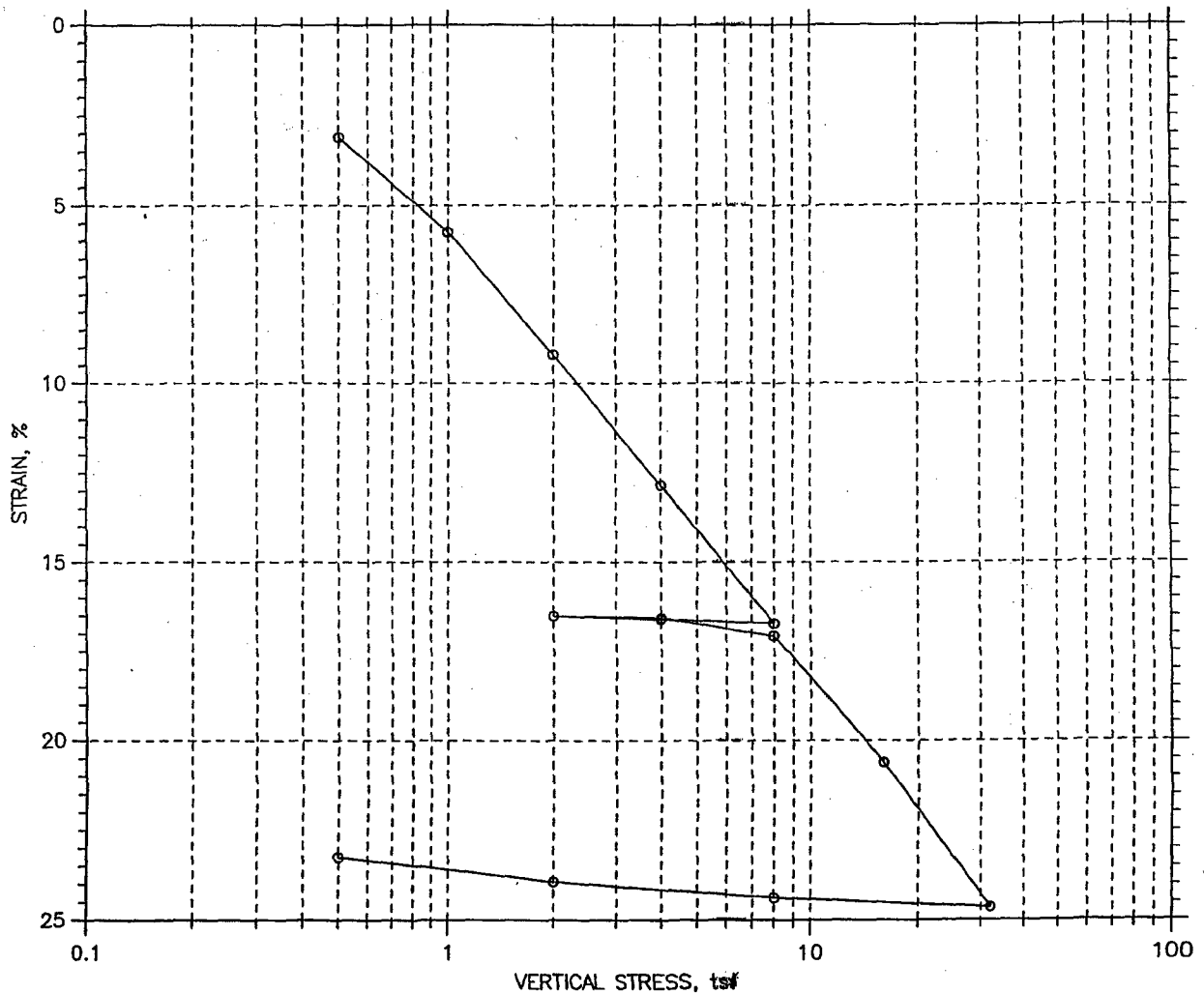
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-414	Tested By: md	Checked By: jdt
	Sample No.: S-17	Test Date: 09/26/06	Depth: 68-70
	Test No.: C-30	Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray clay (CH), 97% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.28, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	29.52	25.84
Preconsolidation Pressure: 1.1 tsf				Dry Unit Weight, pcf	76.12	99.17
Compression Index: ---				Saturation, %	64.66	97.17
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.26	0.73
LL: 49	PL: 11	PI: 38	GS: 2.75			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-420	Tested By: md	Checked By: jdt
	Sample No.: S-16	Test Date: 09/09/06	Depth: 63.5-65.5'
	Test No.: C-7	Sample Type: tube	Elevation: ---
	Description: Moist, olive gray clayey sand (SC), 19% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.13, Recompression Ratio: <0.01		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-420
Sample No.: S-16
Test No.: C-7

Location: Calvert County, MD
Tested By: md
Test Date: 09/09/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 63.5-65.5'
Elevation: ---

Soil Description: Moist, olive gray clayey sand (SC), 19% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System C - Compression Ratio: 0.13, Recompression Ratio: <0.01

Measured Specific Gravity: 2.75
Initial Void Ratio: 1.26
Final Void Ratio: 0.73

Liquid Limit: 49
Plastic Limit: 11
Plasticity Index: 38

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
	1527	RING		1515
Wt. Container + Wet Soil, gm	127.81	342.64	339.03	131.22
Wt. Container + Dry Soil, gm	98.72	313.69	313.69	106.01
Wt. Container, gm	8.45	215.61	215.61	8.43
Wt. Dry Soil, gm	90.27	98.081	98.081	97.58
Water Content, %	32.23	29.52	25.84	25.84
Void Ratio	---	1.26	0.73	---
Degree of Saturation, %	---	64.66	97.17	---
Dry Unit Weight, pcf	---	76.119	99.168	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-420
Sample No.: S-16
Test No.: C-7

Location: Calvert County, MD
Tested By: md
Test Date: 09/09/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 63.5-65.5'
Elevation: ---

Soil Description: Moist, olive gray clayey sand (SC), 19% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System C - Compression Ratio: 0.13, Recompression Ratio: <0.01

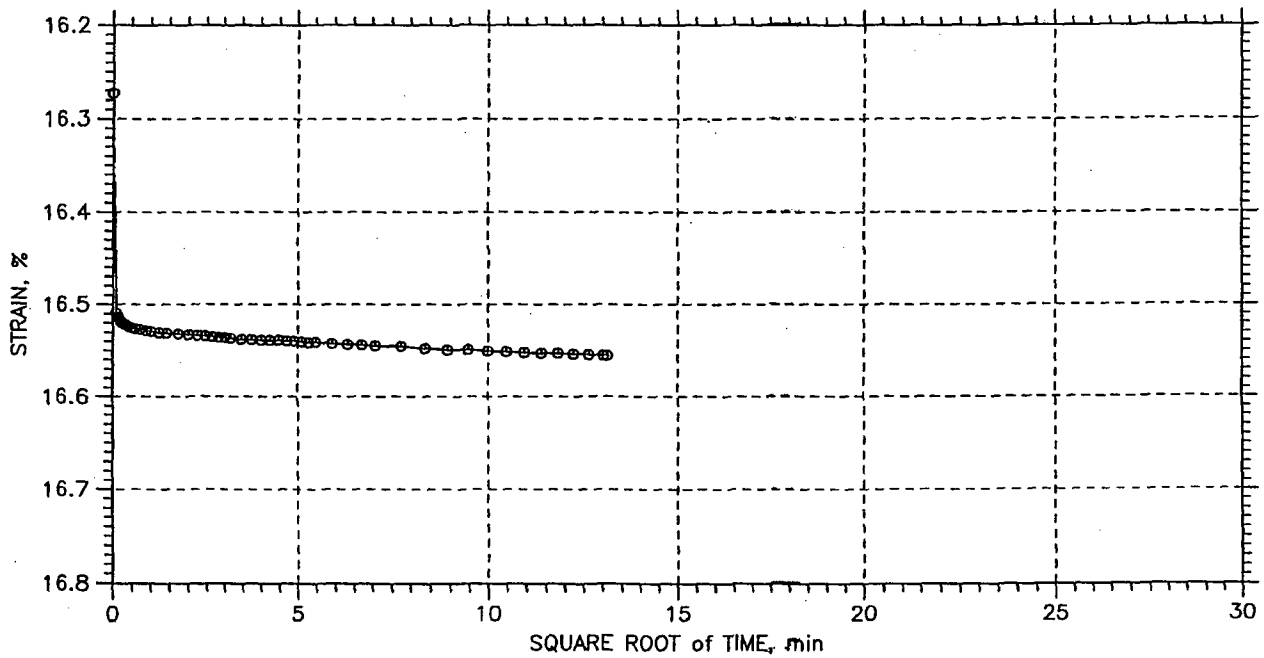
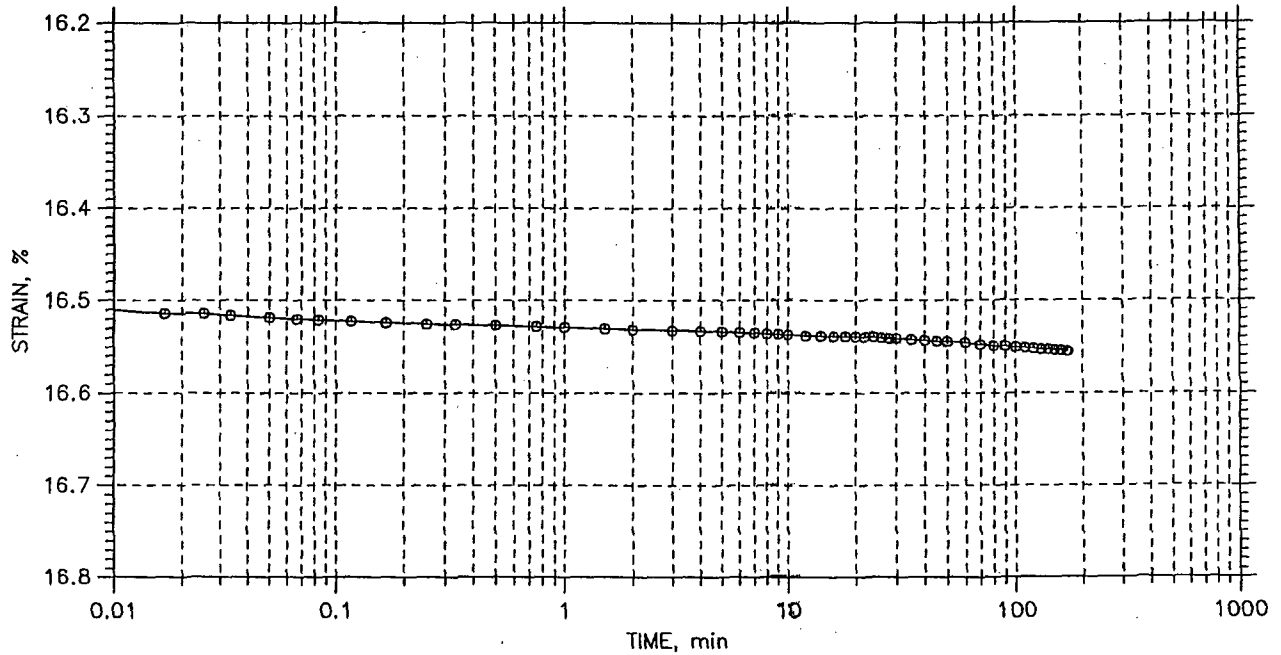
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	Log min	Coefficient of Consolidation		
							Sq.Rt. in^2/sec	Log in^2/sec	Ave. in^2/sec
1	0.5	0.03098	1.186	3.10	0.0	0.0	1.83e-002	1.65e-002	1.74e-002
2	1	0.05749	1.126	5.75	0.1	0.0	1.46e-002	1.66e-002	1.55e-002
3	2	0.09196	1.048	9.20	0.0	0.0	1.73e-002	1.86e-002	1.79e-002
4	4	0.1284	0.966	12.84	0.0	0.0	1.44e-002	2.59e-002	1.85e-002
5	8	0.1671	0.879	16.71	0.0	0.0	1.87e-002	3.00e-002	2.30e-002
6	4	0.166	0.881	16.60	0.0	0.0	1.40e-001	0.00e+000	1.40e-001
7	2	0.1651	0.883	16.51	0.0	0.0	1.08e-001	0.00e+000	1.08e-001
8	4	0.1656	0.882	16.56	0.0	0.0	1.04e-001	0.00e+000	1.04e-001
9	8	0.1706	0.871	17.06	0.1	0.0	6.06e-003	0.00e+000	6.06e-003
10	16	0.2062	0.790	20.62	0.0	0.0	3.37e-002	4.10e-002	3.70e-002
11	32	0.2464	0.700	24.64	0.0	0.0	3.08e-002	3.66e-002	3.34e-002
12	8	0.2436	0.706	24.36	0.0	0.0	5.10e-002	0.00e+000	5.10e-002
13	2	0.2393	0.716	23.93	0.0	0.0	6.80e-002	0.00e+000	6.80e-002
14	0.5	0.2324	0.731	23.24	0.3	0.1	1.52e-003	3.93e-003	2.19e-003

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



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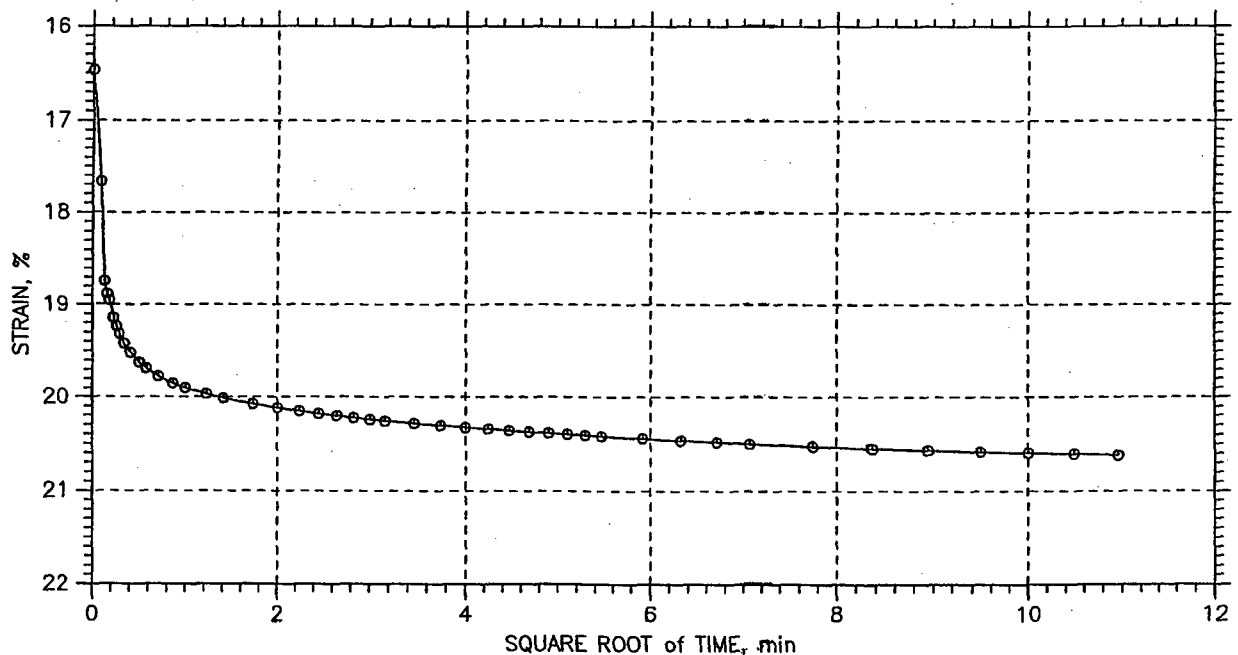
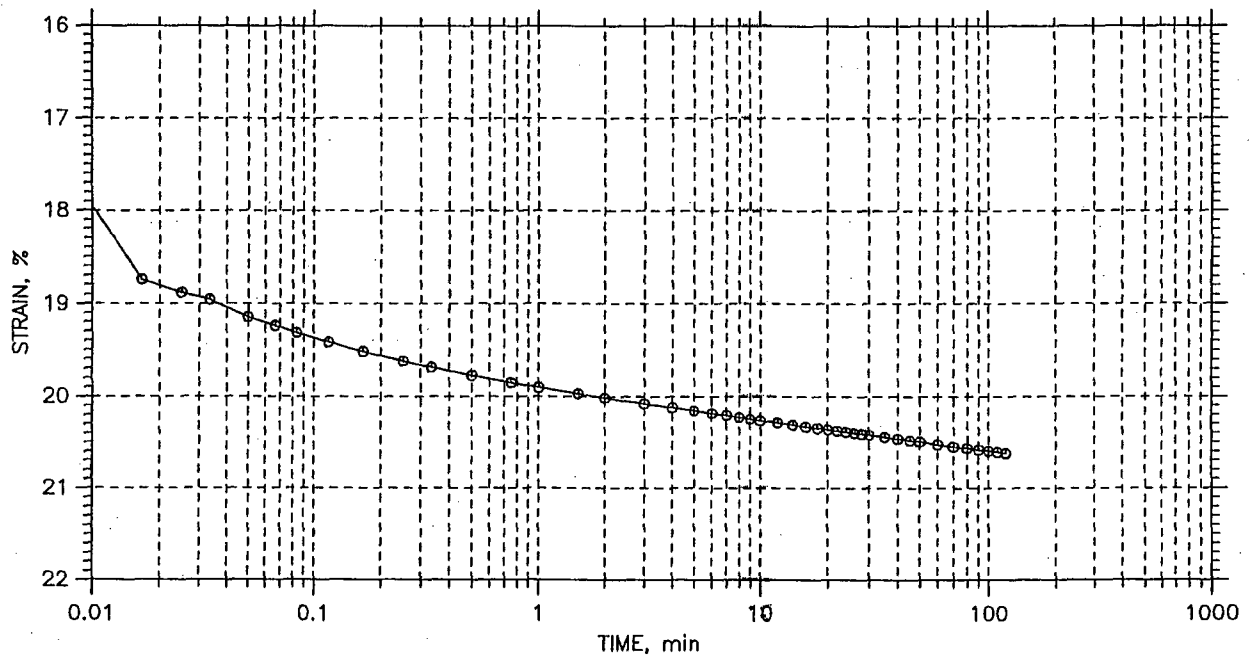
Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
Boring No.: B-420	Tested By: md	Checked By: jdt
Sample No.: S-16	Test Date: 09/09/06	Depth: 63.5-65.5'
Test No.: C-7	Sample Type: tube	Elevation: ---
Description: Moist, olive gray clayey sand (SC), 19% passing #200 sieve, inundated @ 0.5 tsf		
Remarks: System C - Compression Ratio: 0.13, Recompression Ratio: <0.01		

CONSOLIDATION TEST DATA

TIME CURVES

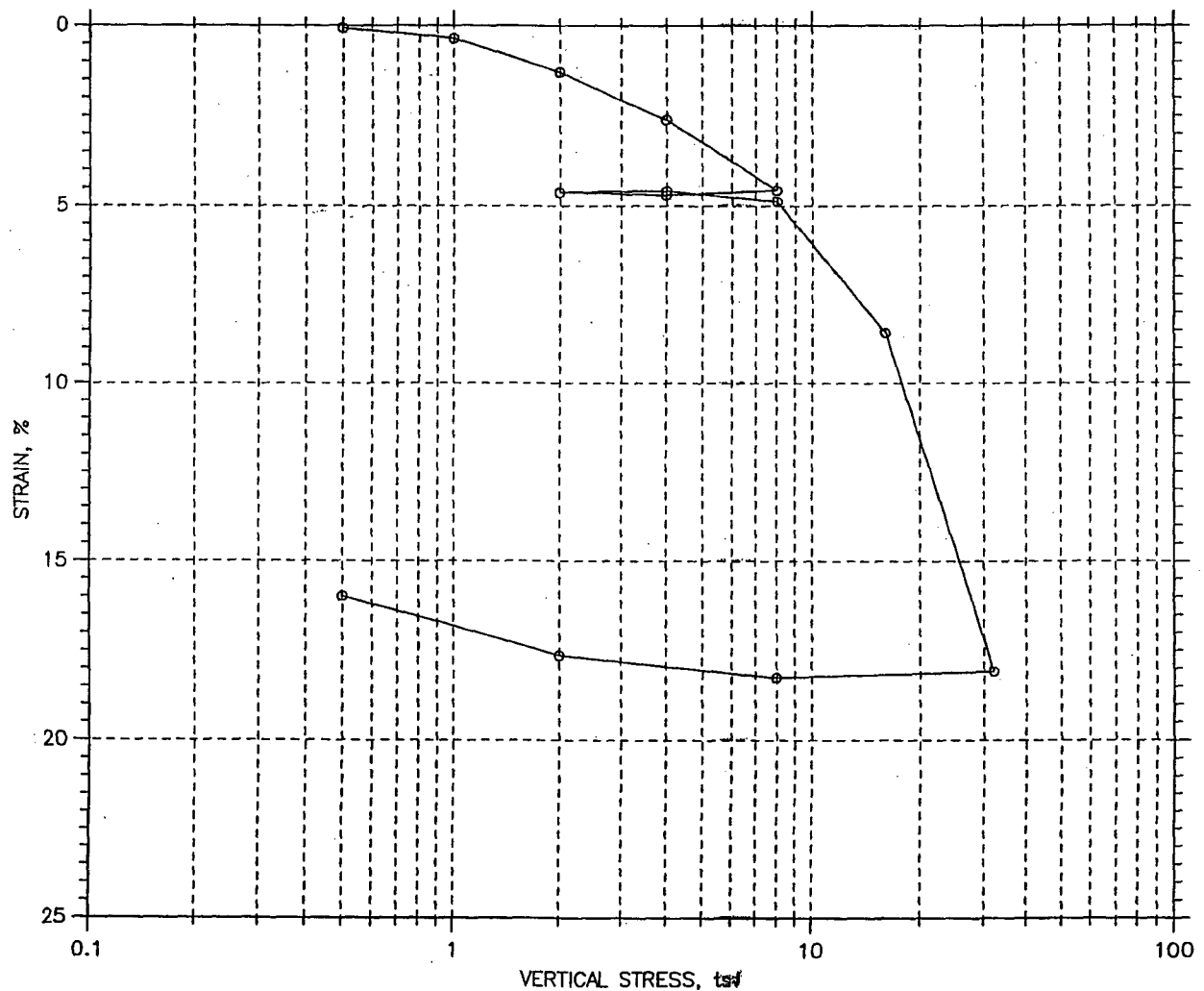
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-420	Tested By: md	Checked By: jdt
	Sample No.: S-16	Test Date: 09/09/06	Depth: 63.5-65.5'
	Test No.: C-7	Sample Type: tube	Elevation: ---
	Description: Moist, olive gray clayey sand (SC), 19% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.13, Recompression Ratio: <0.01		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test
Overburden Pressure: ---				46.72	39.20
Preconsolidation Pressure: 11.5 tsf				68.5	81.54
Compression Index: ---				86.37	99.19
Diameter: 2.5 in	Height: 1 in			1.46	1.07
LL: 74	PL: 18	PI: 56	GS: 2.70		

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-423	Tested By: md	Checked By: jdt
	Sample No.: S-35	Test Date: 09/08/06	Depth: 158.5-160.1
	Test No.: C-5	Sample Type: tube	Elevation: ---
	Description: Moist, olive gray organic clay (OH), 88% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System P - Compression Ratio: 0.31, Recompaction Ratio: 0.01		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-423
Sample No.: S-35
Test No.: C-5

Location: Calvert County, MD
Tested By: md
Test Date: 09/08/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 158.5-160.1
Elevation: ---

Soil Description: Moist, olive gray organic clay (OH), 88% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System P - Compression Ratio: 0.31, Recompression Ratio: 0.01

Measured Specific Gravity: 2.70
Initial Void Ratio: 1.46
Final Void Ratio: 1.07

Liquid Limit: 74
Plastic Limit: 18
Plasticity Index: 56

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
	968	RING		click 5
Wt. Container + Wet Soil, gm	123.99	238.65	232.01	130.25
Wt. Container + Dry Soil, gm	87.1	197.41	197.41	95.89
Wt. Container, gm	8.11	109.14	109.14	8.24
Wt. Dry Soil, gm	78.99	88.268	88.268	87.65
Water Content, %	46.70	46.72	39.20	39.20
Void Ratio	---	1.46	1.07	---
Degree of Saturation, %	---	85.37	99.19	---
Dry Unit Weight, pcf	---	68.503	81.543	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-423
Sample No.: S-35
Test No.: C-5

Location: Calvert County, MD
Tested By: md
Test Date: 09/08/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 158.5-160.1
Elevation: ---

Soil Description: Moist, olive gray organic clay (OH), 88% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System P - Compression Ratio: 0.31, Recompression Ratio: 0.01

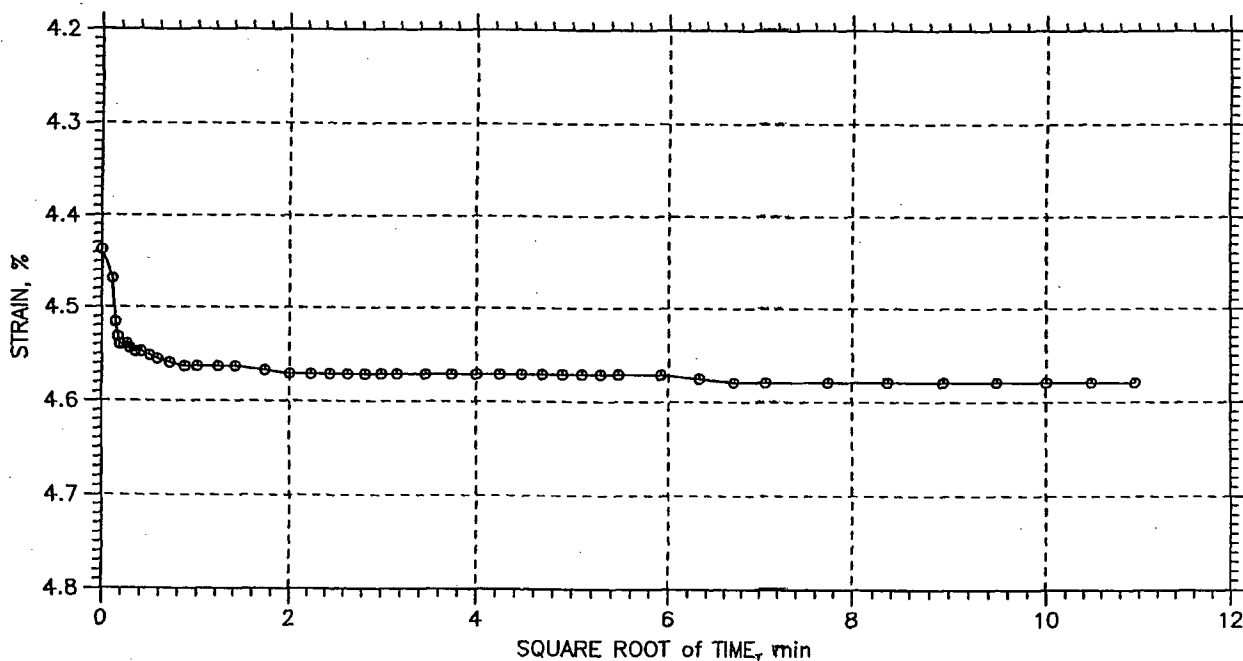
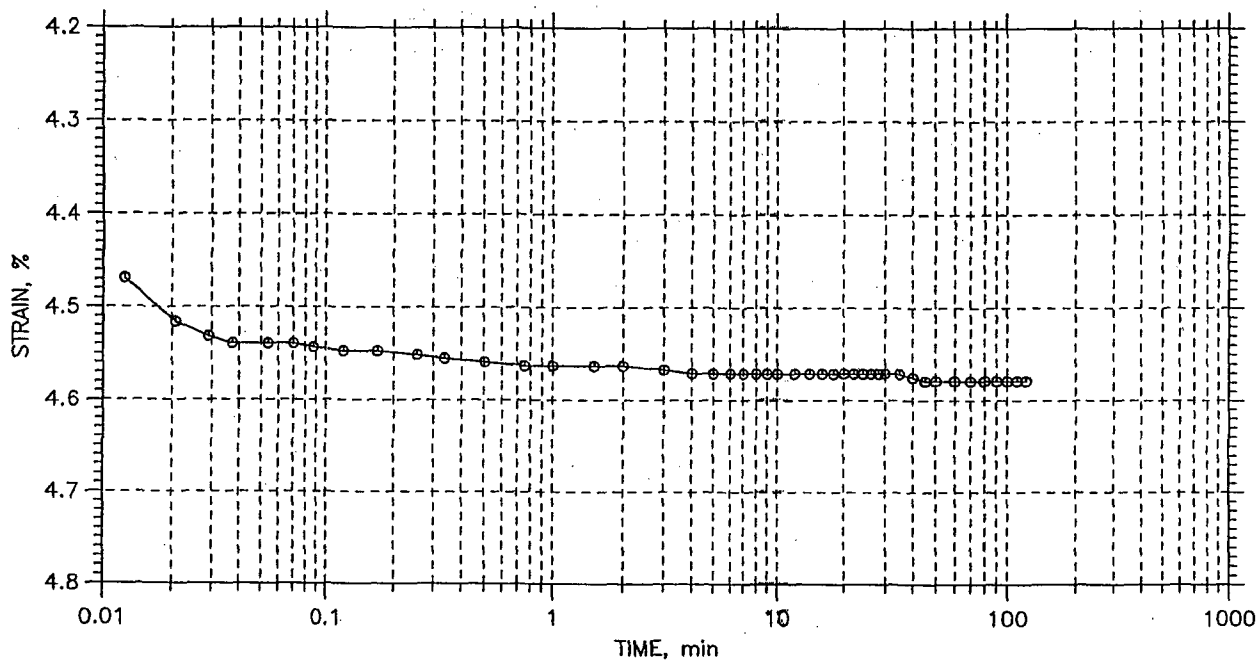
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq. Rt. min	Log min	Sq. Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.0006671	1.459	0.07	0.0	0.0	2.07e-002	0.00e+000	2.07e-002
2	1	0.003658	1.452	0.37	0.4	0.0	1.84e-003	0.00e+000	1.84e-003
3	2	0.01287	1.429	1.29	0.1	0.1	9.77e-003	1.58e-002	1.21e-002
4	4	0.0261	1.396	2.61	0.1	0.0	1.30e-002	2.19e-002	1.63e-002
5	8	0.04559	1.348	4.56	0.1	0.0	7.65e-003	2.01e-002	1.11e-002
6	4	0.04689	1.345	4.69	0.0	0.0	5.34e-002	0.00e+000	5.34e-002
7	2	0.04618	1.347	4.62	0.0	0.0	1.81e-002	0.00e+000	1.81e-002
8	4	0.04579	1.348	4.58	0.0	0.0	4.42e-002	0.00e+000	4.42e-002
9	8	0.04866	1.341	4.87	0.9	0.0	8.63e-004	0.00e+000	8.63e-004
10	16	0.08555	1.250	8.56	0.8	0.1	9.18e-004	6.92e-003	1.62e-003
11	32	0.1807	1.016	18.07	1.4	0.8	4.36e-004	8.18e-004	5.69e-004
12	8	0.1825	1.012	18.25	0.2	0.0	3.55e-003	0.00e+000	3.55e-003
13	2	0.1763	1.027	17.63	3.8	3.9	1.44e-004	1.43e-004	1.44e-004
14	0.5	0.1599	1.067	15.99	6.1	5.0	9.39e-005	1.14e-004	1.03e-004

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



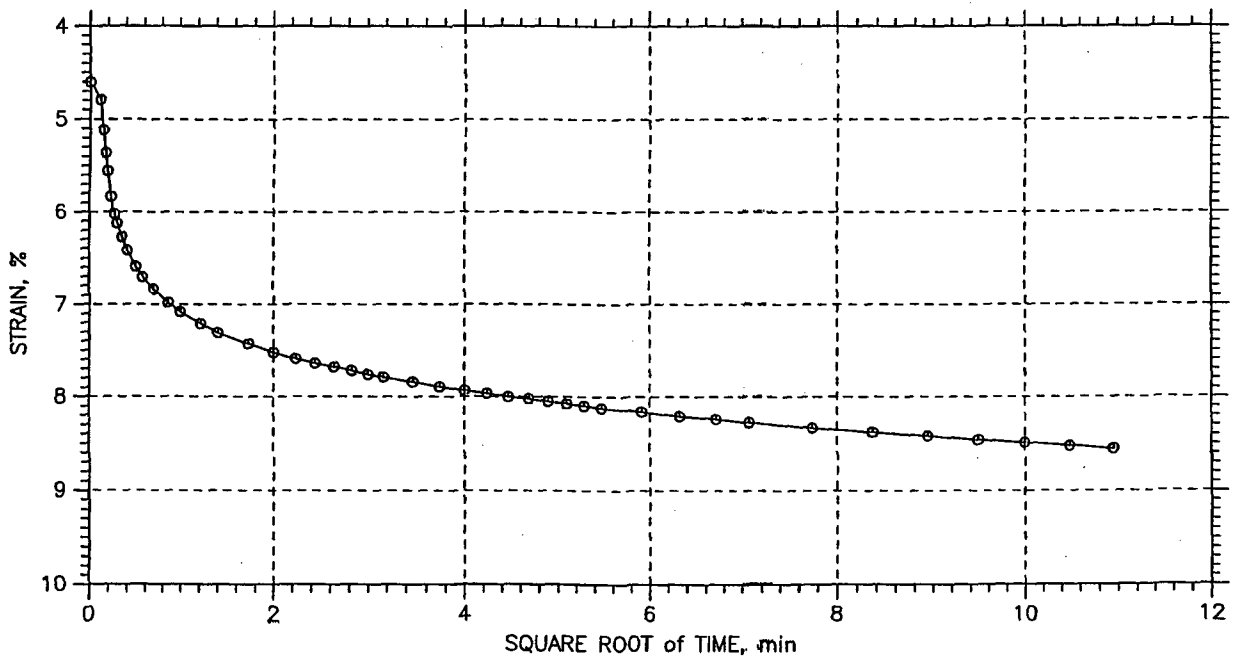
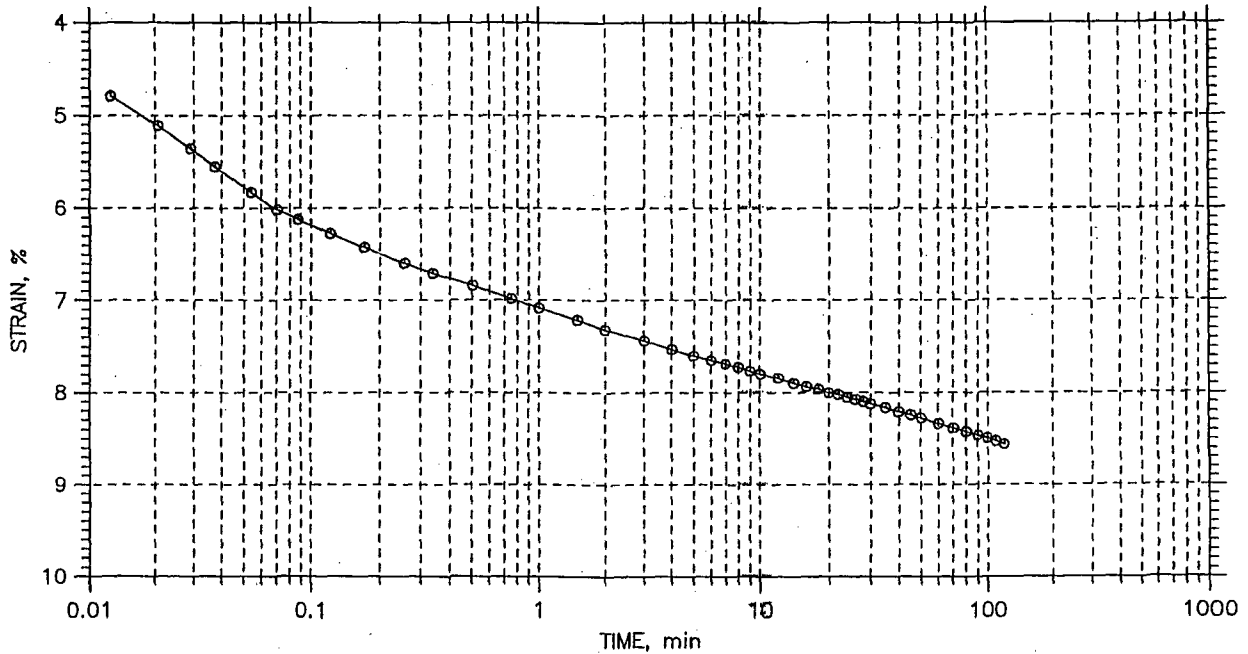
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-423	Tested By: md	Checked By: jdt
	Sample No.: S-35	Test Date: 09/08/06	Depth: 158.5-160.1
	Test No.: C-5	Sample Type: tube	Elevation: ---
	Description: Moist, olive gray organic clay (OH), 88% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System P - Compression Ratio: 0.31, Recompression Ratio: 0.01		

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 10 of 14

Stress: 16. tsf

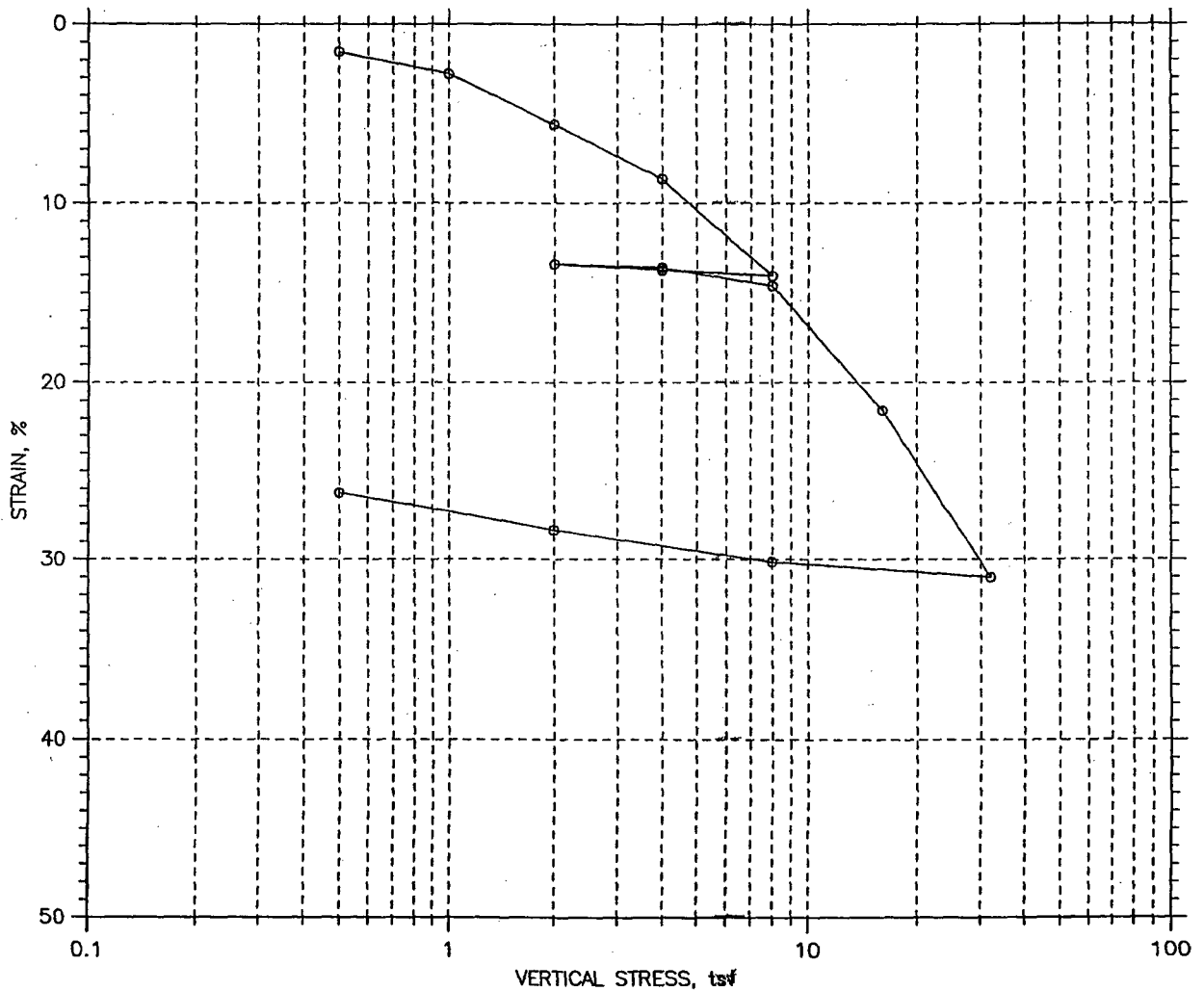


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Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
Boring No.: B-423	Tested By: md	Checked By: jdt
Sample No.: S-35	Test Date: 09/08/06	Depth: 158.5-160.1
Test No.: C-5	Sample Type: tube	Elevation: ---
Description: Moist, olive gray organic clay (OH), 88% passing #200 sieve, inundated @ 0.5 tsf		
Remarks: System P - Compression Ratio: 0.31, Recompression Ratio: 0.01		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	53.19	37.97
Preconsolidation Pressure: 7 tsf				Dry Unit Weight, pcf	60.59	82.14
Compression Index: ---				Saturation, %	81.82	100.00
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.71	1.00
LL: 64	PL: 34	PI: 30	GS: 2.63			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-423	Tested By: md	Checked By: jdt
	Sample No.: S-39	Test Date: 09/14/06	Depth: 178.5-179.8
	Test No.: C-11	Sample Type: tube	Elevation: ---
	Description: Moist, olive silty sand (SM), 46% passing #200 sieve, inundated at 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.31, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
 Boring No.: B-423
 Sample No.: S-39
 Test No.: C-11

Location: Calvert County, MD
 Tested By: md
 Test Date: 09/14/06
 Sample Type: tube

Project No.: GTX-6880
 Checked By: jdt
 Depth: 178.5-179.8
 Elevation: ---

Soil Description: Moist, olive silty sand (SM), 46% passing #200 sieve, inundated at 0.5 tsf
 Remarks: System C - Compression Ratio: 0.31, Recompression Ratio: 0.03

Measured Specific Gravity: 2.63
 Initial Void Ratio: 1.71
 Final Void Ratio: 1.00

Liquid Limit: 64
 Plastic Limit: 34
 Plasticity Index: 30

Initial Height: 1.00 in
 Specimen Diameter: 2.50 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID	1547	RING		1524
Wt. Container + Wet Soil, gm	239.77	336.55	324.67	121.65
Wt. Container + Dry Soil, gm	169.71	295.02	295.02	90.56
Wt. Container, gm	8.28	216.55	216.95	8.69
Wt. Dry Soil, gm	161.43	78.072	78.072	81.87
Water Content, %	43.40	53.19	37.97	37.97
Void Ratio	---	1.71	1.00	---
Degree of Saturation, %	---	81.82	100.00	---
Dry Unit Weight, pcf	---	60.59	82.144	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-423
Sample No.: S-39
Test No.: C-11

Location: Calvert County, MD
Tested By: md
Test Date: 09/14/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 178.5-179.8
Elevation: ---

Soil Description: Moist, olive silty sand (SM), 46% passing #200 sieve, inundated at 0.5 tsf
Remarks: System C - Compression Ratio: 0.31, Recompression Ratio: 0.03

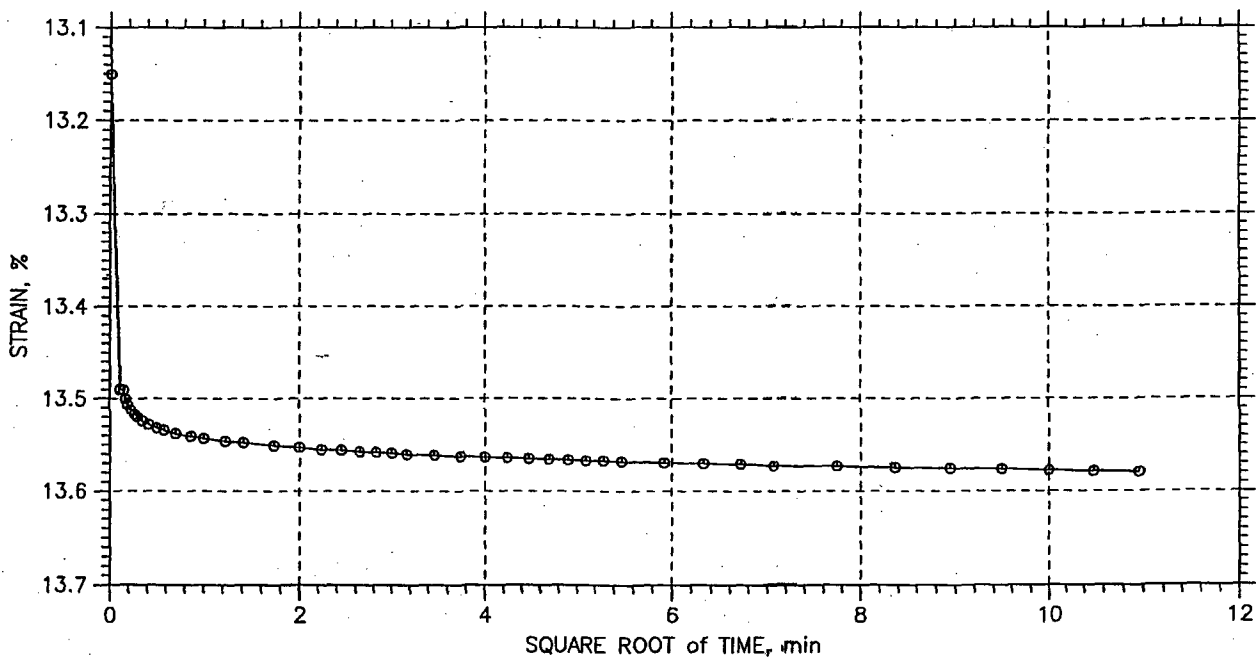
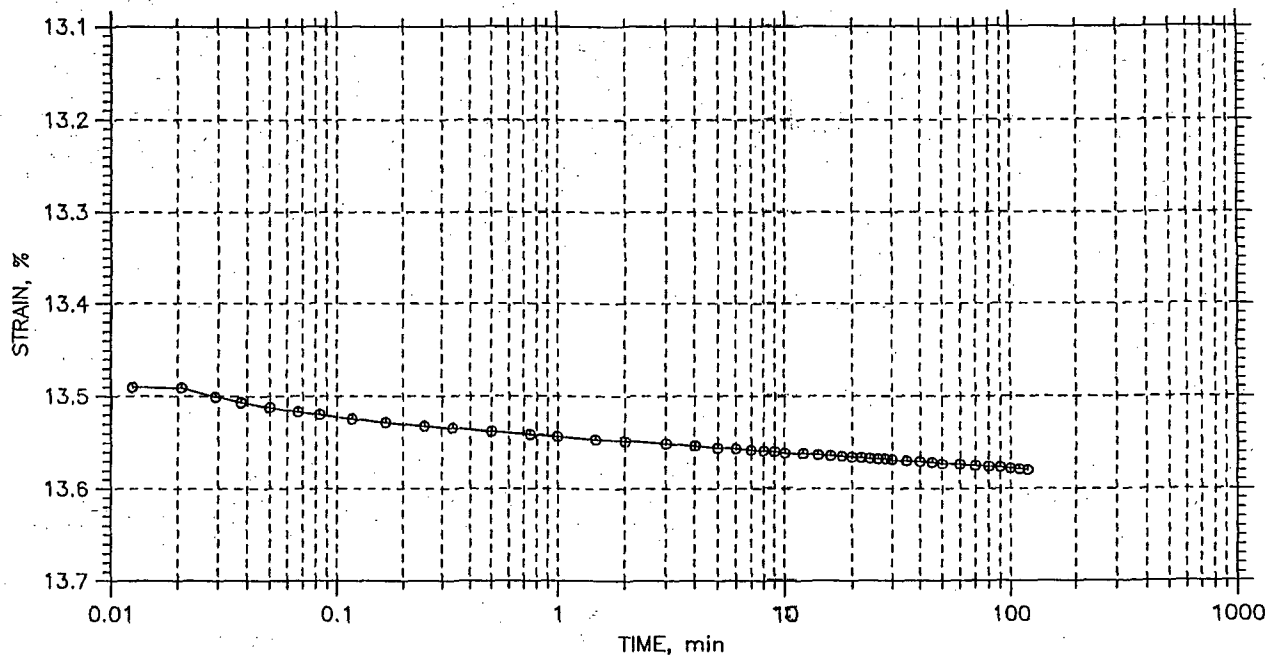
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq. Rt. min	Log min	Sq. Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.0157	1.667	1.57	0.0	0.0	2.58e-002	0.00e+000	2.58e-002
2	1	0.02806	1.634	2.81	0.0	0.0	1.67e-002	2.76e-002	2.08e-002
3	2	0.05614	1.558	5.61	0.0	0.0	2.16e-002	2.65e-002	2.38e-002
4	4	0.08646	1.475	8.65	0.1	0.0	7.10e-003	3.11e-002	1.16e-002
5	8	0.1402	1.330	14.02	0.1	0.0	9.80e-003	3.13e-002	1.49e-002
6	4	0.1372	1.338	13.72	0.0	0.0	9.60e-002	0.00e+000	9.60e-002
7	2	0.1338	1.347	13.38	0.0	0.0	7.95e-002	0.00e+000	7.95e-002
8	4	0.1358	1.342	13.58	0.0	0.0	1.03e-001	0.00e+000	1.03e-001
9	8	0.1458	1.315	14.58	0.8	0.0	7.86e-004	0.00e+000	7.86e-004
10	16	0.2159	1.125	21.59	0.2	0.0	2.85e-003	2.14e-002	5.03e-003
11	32	0.31	0.870	31.00	0.9	0.6	5.24e-004	7.24e-004	6.08e-004
12	8	0.3012	0.893	30.12	0.0	0.0	3.41e-002	0.00e+000	3.41e-002
13	2	0.2833	0.942	28.33	1.2	0.0	3.48e-004	0.00e+000	3.48e-004
14	0.5	0.2624	0.999	26.24	6.1	6.4	7.18e-005	6.83e-005	7.00e-005

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



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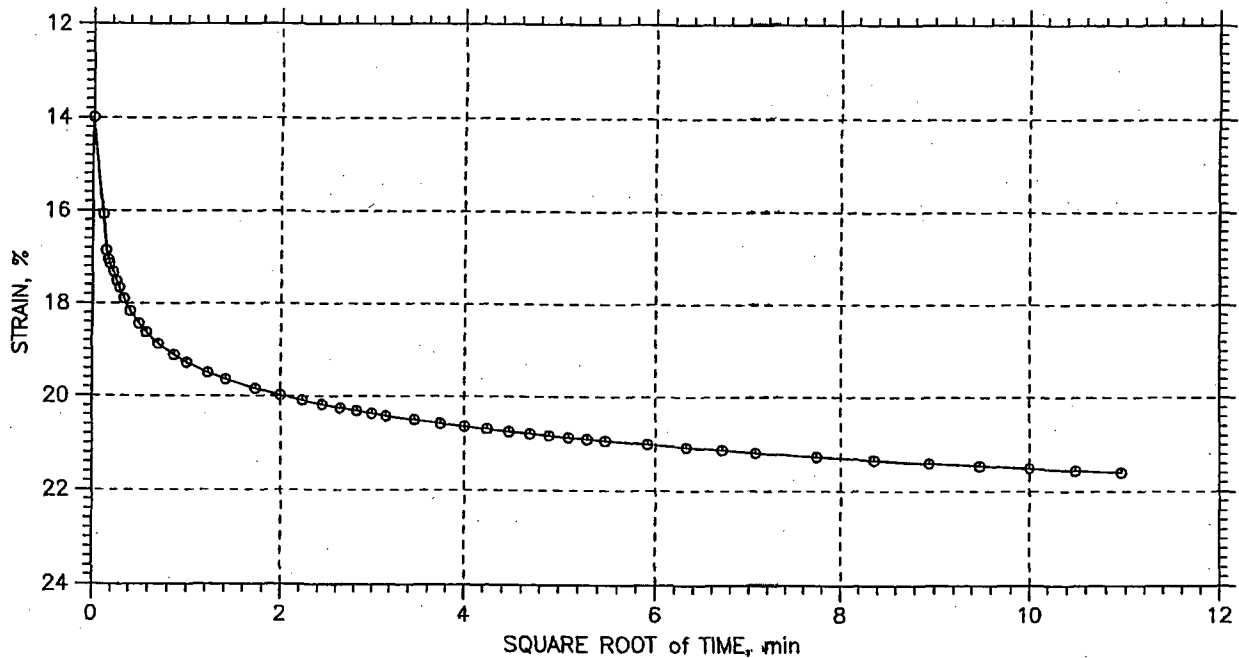
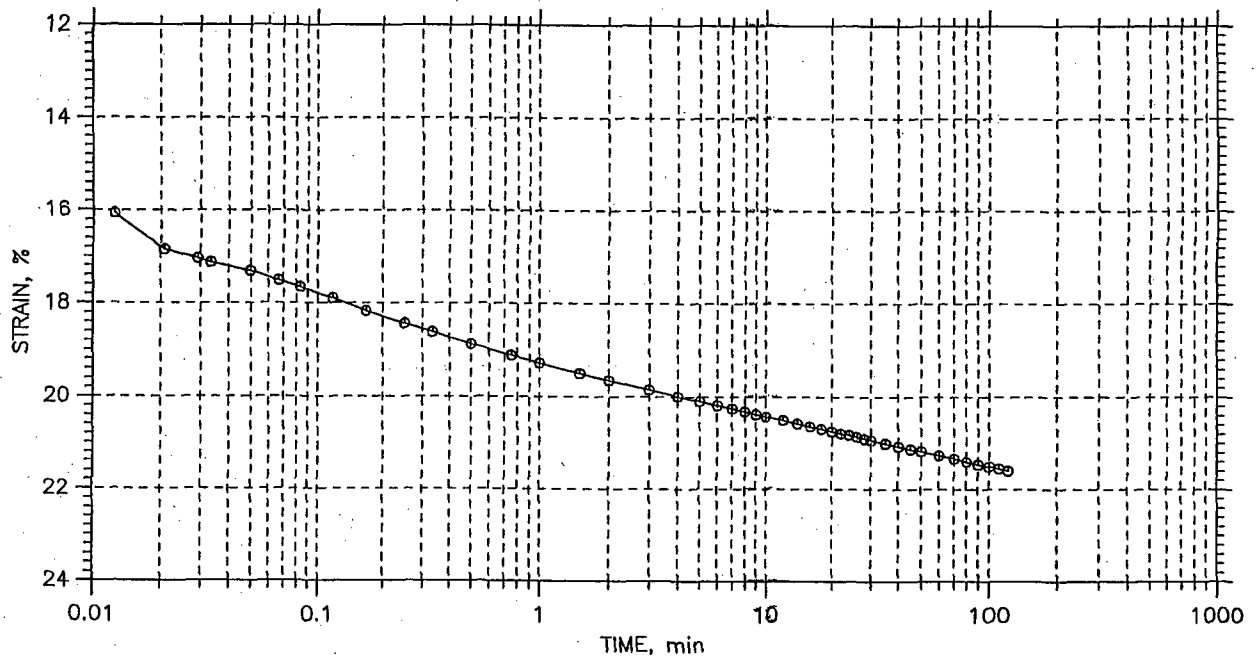
Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
Boring No.: B-423	Tested By: md	Checked By: jdt
Sample No.: S-39	Test Date: 09/14/08	Depth: 178.5-179.8
Test No.: C-11	Sample Type: tube	Elevation: ---
Description: Moist, olive silty sand (SM), 46% passing #200 sieve, inundated at 0.5 tsf		
Remarks: System C - Compression Ratio: 0.31, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

TIME CURVES

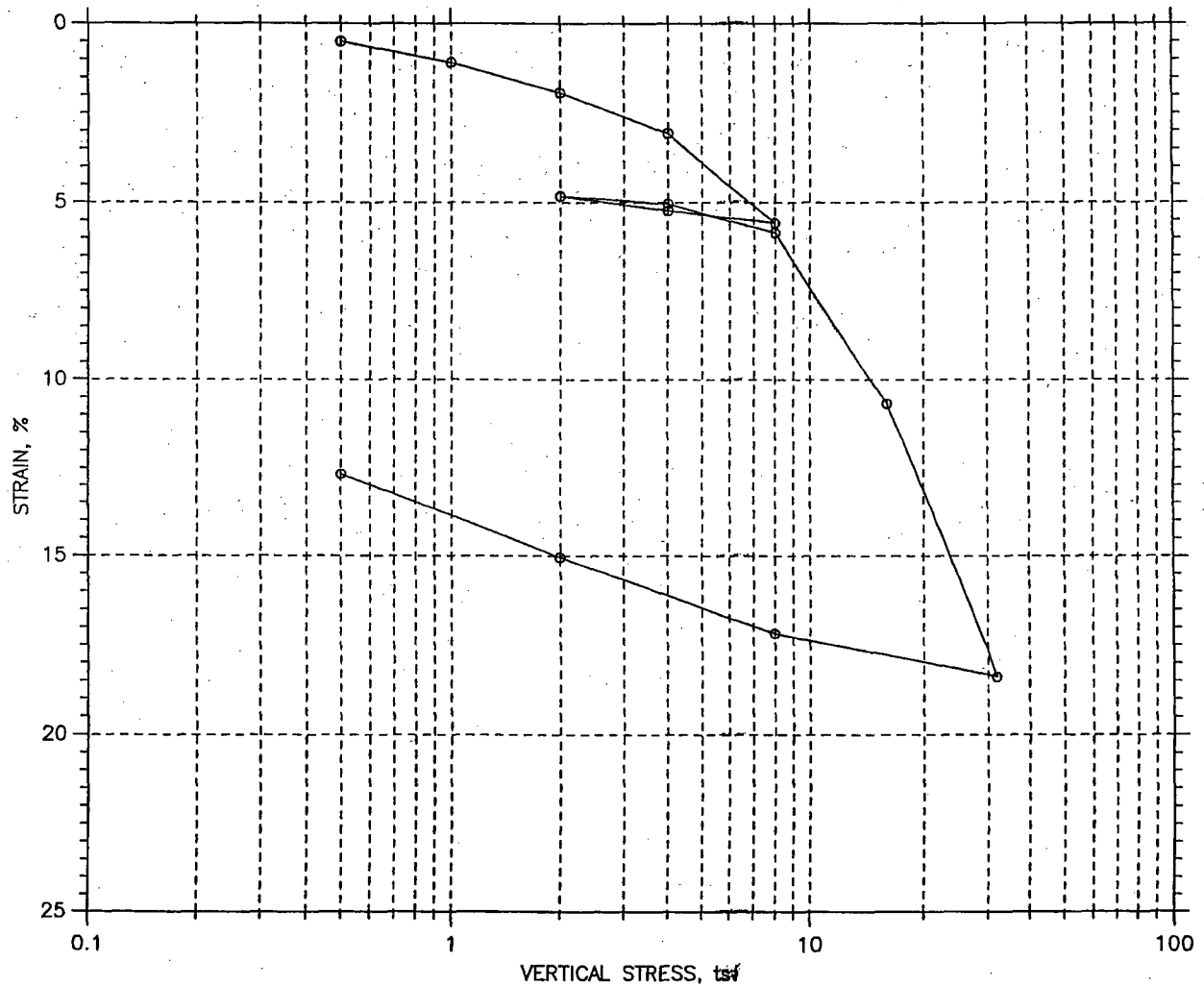
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-423	Tested By: md	Checked By: jdt
	Sample No.: S-39	Test Date: 09/14/08	Depth: 178.5-179.8
	Test No.: C-11	Sample Type: tube	Elevation: ---
	Description: Moist, olive silty sand (SM), 46% passing #200 sieve, inundated at 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.31, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	36.49	27.97
Preconsolidation Pressure: 8.7 tsf				Dry Unit Weight, pcf	84.55	96.84
Compression Index: ---				Saturation, %	97.72	99.99
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.02	0.77
LL: 56	PL: 18	PI: 38	GS: 2.74			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-427	Tested By: md	Checked By: jdt
	Sample No.: S-16	Test Date: 09/25/06	Depth: 63.5-65.5
	Test No.: C-29A	Sample Type: tube	Elevation: ---
	Description: Moist, black sandy organic clay (OH), 61% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.26, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-427
Sample No.: S-16
Test No.: C-29A

Location: Calvert County, MD
Tested By: md
Test Date: 09/25/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 63.5-65.5
Elevation: ---

Soil Description: Moist, black sandy organic clay (OH), 61% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System C - Compression Ratio: 0.26, Recompression Ratio: 0.03

Measured Specific Gravity: 2.74
Initial Void Ratio: 1.02
Final Void Ratio: 0.77

Liquid Limit: 56
Plastic Limit: 18
Plasticity Index: 38

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimming	Specimen+Ring	Specimen+Ring	Trimming
	2023	RING		henry 05
Wt. Container + Wet Soil, gm	213.54	355.6	356.32	149.06
Wt. Container + Dry Soil, gm	162.74	325.85	325.85	118.26
Wt. Container, gm	8.17	216.9	216.9	8.14
Wt. Dry Soil, gm	154.57	108.95	108.95	110.12
Water Content, %	32.87	35.49	27.97	27.97
Void Ratio	---	1.02	0.77	---
Degree of Saturation, %	---	97.72	99.99	---
Dry Unit Weight, pcf	---	84.853	96.836	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-427
Sample No.: S-16
Test No.: C-29A

Location: Calvert County, MD
Tested By: md
Test Date: 09/25/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 63.5-65.5
Elevation: ---

Soil Description: Moist, black sandy organic clay (OH), 61% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System C - Compression Ratio: 0.26, Recompression Ratio: 0.03

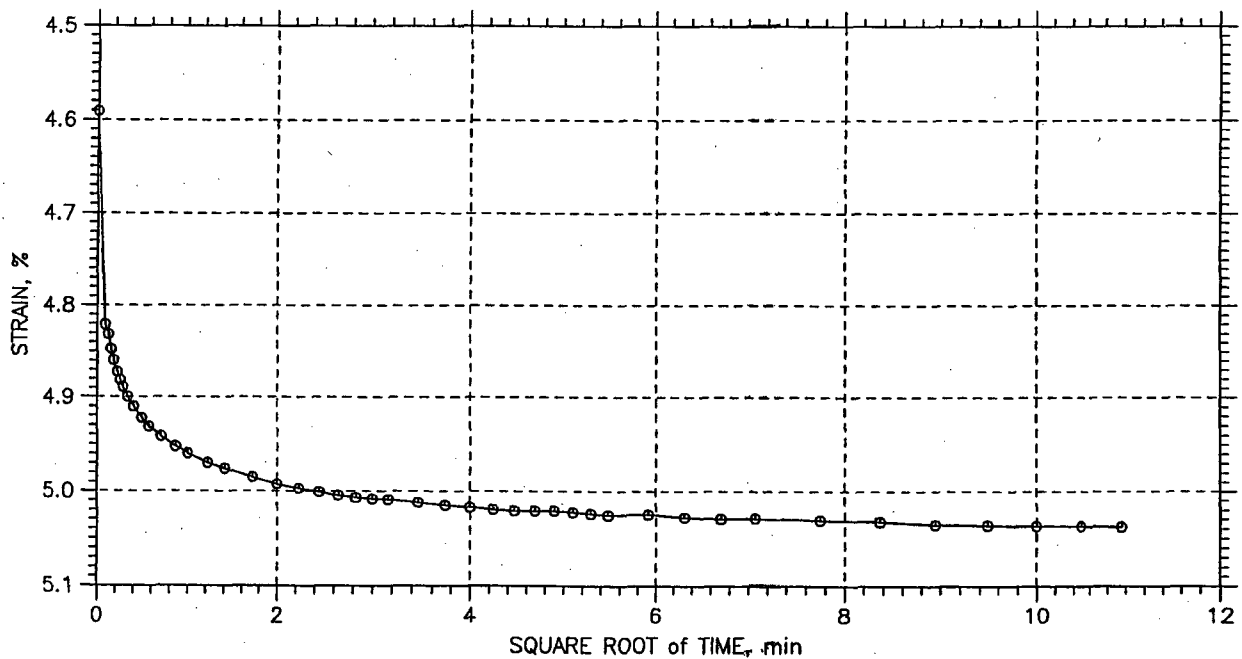
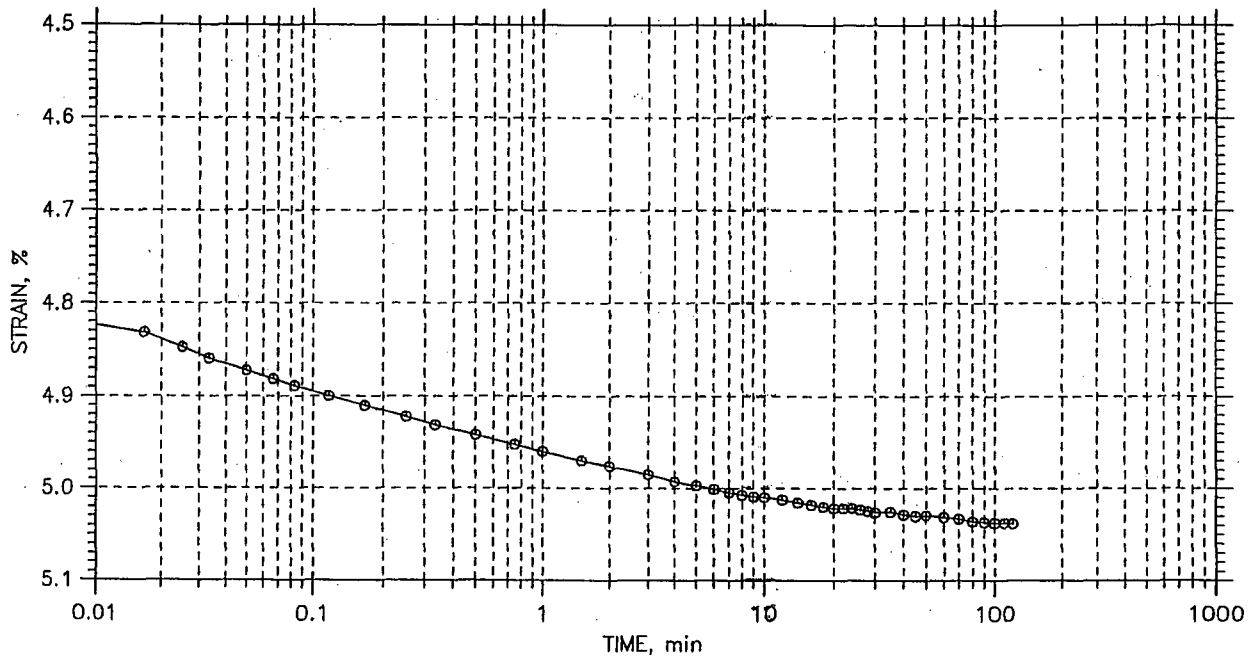
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Sq.Rt. min	Fitting Log min	Coefficient of Consolidation		
							Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.005058	1.013	0.51	0.0	0.0	4.20e-002	3.46e-002	3.79e-002
2	1	0.011	1.001	1.10	0.2	0.0	4.14e-003	3.43e-002	7.39e-003
3	2	0.01927	0.984	1.93	0.2	0.0	4.03e-003	4.88e-002	7.44e-003
4	4	0.03073	0.961	3.07	0.2	0.0	3.86e-003	4.08e-002	7.06e-003
5	8	0.05571	0.910	5.57	0.9	0.0	8.76e-004	0.00e+000	8.76e-004
6	4	0.05225	0.917	5.23	0.0	0.0	1.36e-001	0.00e+000	1.36e-001
7	2	0.04824	0.925	4.82	0.4	0.0	1.78e-003	0.00e+000	1.78e-003
8	4	0.05038	0.921	5.04	0.0	0.0	2.20e-002	0.00e+000	2.20e-002
9	8	0.05851	0.905	5.85	0.3	0.0	2.45e-003	0.00e+000	2.45e-003
10	16	0.1068	0.807	10.68	2.9	3.2	2.40e-004	2.16e-004	2.28e-004
11	32	0.1838	0.651	18.38	7.0	8.9	8.53e-005	6.77e-005	7.55e-005
12	8	0.1717	0.676	17.17	0.1	0.0	1.07e-002	4.89e-002	1.75e-002
13	2	0.1504	0.719	15.04	6.8	0.0	8.54e-005	0.00e+000	8.54e-005
14	0.5	0.1268	0.766	12.68	39.8	0.0	1.53e-005	0.00e+000	1.53e-005

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



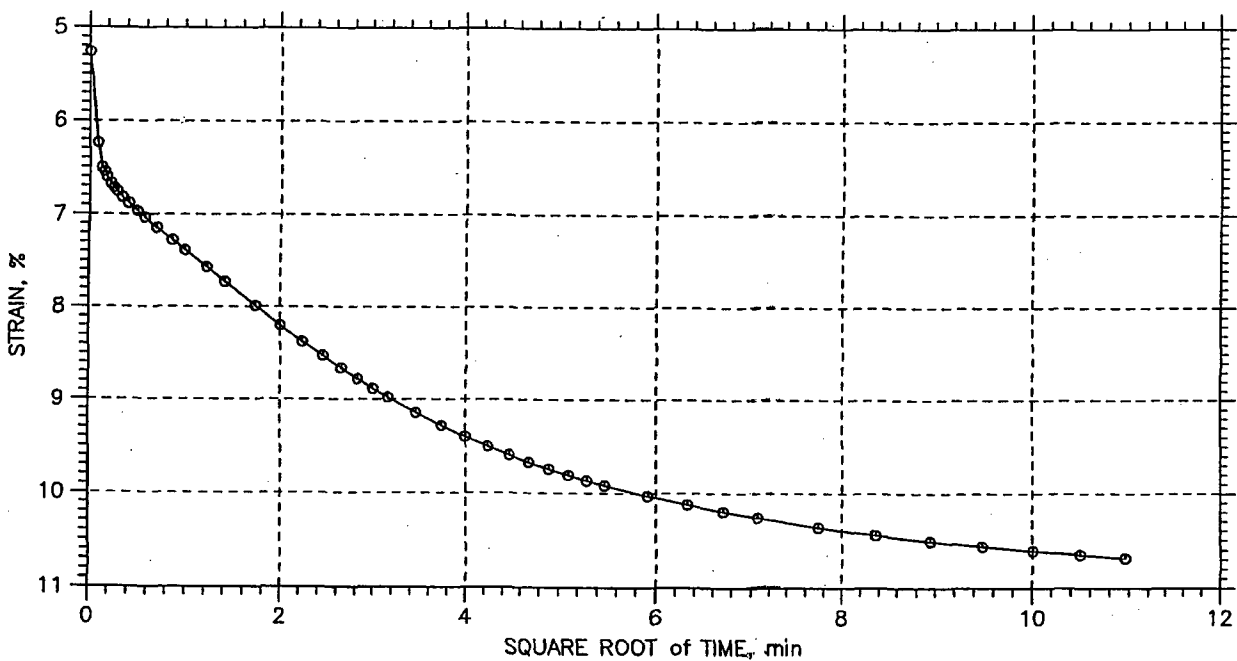
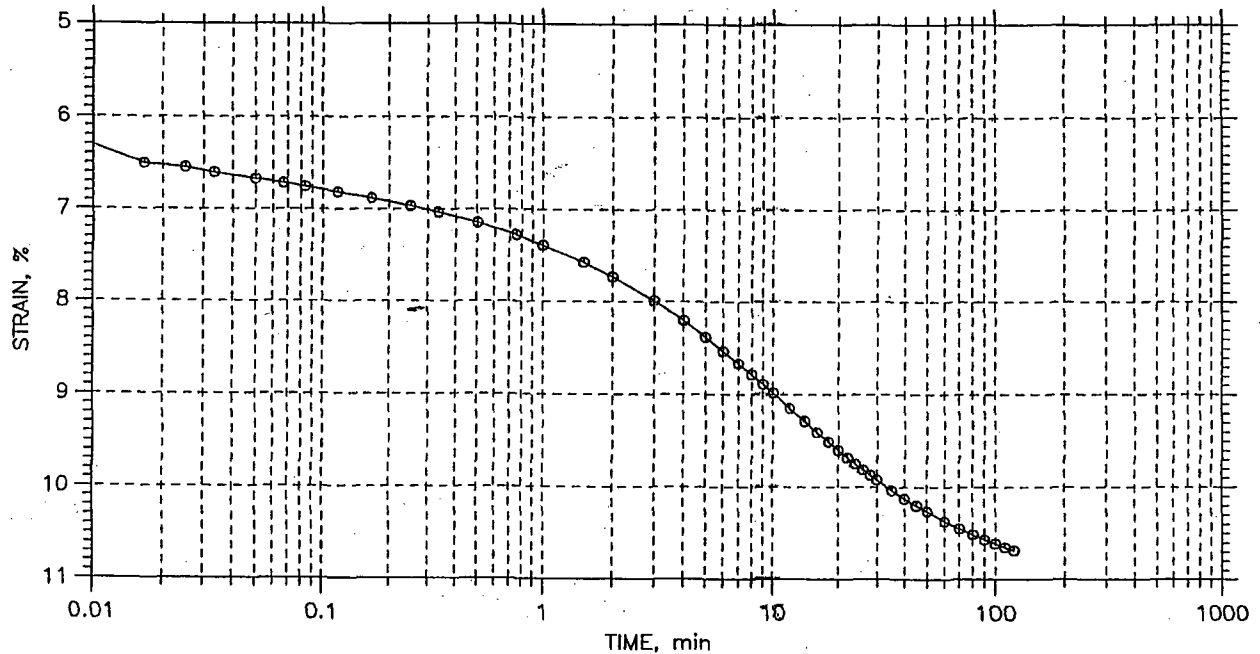
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-427	Tested By: md	Checked By: jdt
	Sample No.: S-16	Test Date: 09/25/06	Depth: 63.5-65.5
	Test No.: C-29A	Sample Type: tube	Elevation: ---
	Description: Moist, black sandy organic clay (OH), 61% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.26, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

TIME CURVES

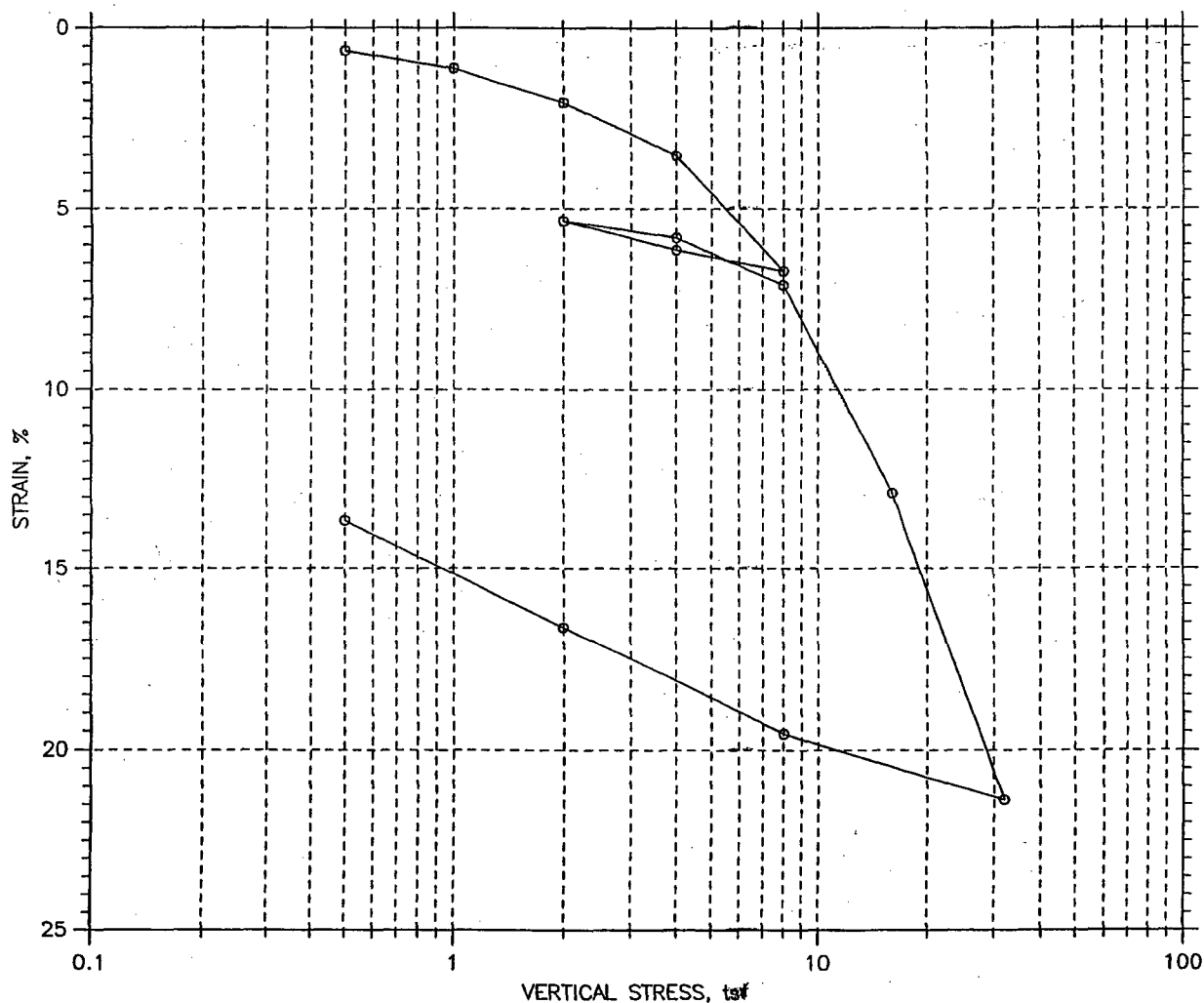
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-427	Tested By: md	Checked By: jdt
	Sample No.: S-16	Test Date: 09/25/06	Depth: 63.5-65.5
	Test No.: C-29A	Sample Type: tube	Elevation: ---
	Description: Moist, black sandy organic clay (OH), 61% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.26, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	35.88	26.32
Preconsolidation Pressure: 8.3 tsf				Dry Unit Weight, pcf	86.36	100.
Compression Index: ---				Saturation, %	99.13	100.00
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.00	0.73
LL: 61	PL: 14	PI: 47	GS: 2.77			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-433	Tested By: md	Checked By: jdt
	Sample No.: S-11	Test Date: 09/23/06	Depth: 38.5-40.5
	Test No.: C-27	Sample Type: tube	Elevation: ---
	Description: Moist, very dark gray clay (CH), 91% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.28, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
 Boring No.: B-433
 Sample No.: B-11
 Test No.: C-27

Location: Calvert County, MD
 Tested By: md
 Test Date: 09/23/06
 Sample Type: tube

Project No.: GTX-6880
 Checked By: jdt
 Depth: 38.5-40.5
 Elevation: ---

Soil Description: Moist, very dark gray clay (CH), 91% passing #200 sieve, inundated @ 0.5 tsf
 Remarks: System C - Compression Ratio: 0.28, Recompression Ratio: 0.04

Measured Specific Gravity: 2.77
 Initial Void Ratio: 1.00
 Final Void Ratio: 0.73

Liquid Limit: 61
 Plastic Limit: 14
 Plasticity Index: 47

Initial Height: 1.00 in
 Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
	2008	RING		2154
Wt. Container + Wet Soil, gm	182.63	368.09	357.46	147.6
Wt. Container + Dry Soil, gm	139.37	328.17	328.17	118.54
Wt. Container, gm	8.16	216.9	216.9	8.14
Wt. Dry Soil, gm	131.21	111.27	111.27	110.4
Water Content, %	32.97	35.88	26.32	26.32
Void Ratio	---	1.00	0.73	---
Degree of Saturation, %	---	99.13	100.00	---
Dry Unit Weight, pcf	---	86.355	100.01	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-433
Sample No.: S-11
Test No.: C-27

Location: Calvert County, MD
Tested By: md
Test Date: 09/23/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 38.5-40.5
Elevation: ---

Soil Description: Moist, very dark gray clay (CH), 91% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System C - Compression Ratio: 0.28, Recompression Ratio: 0.04

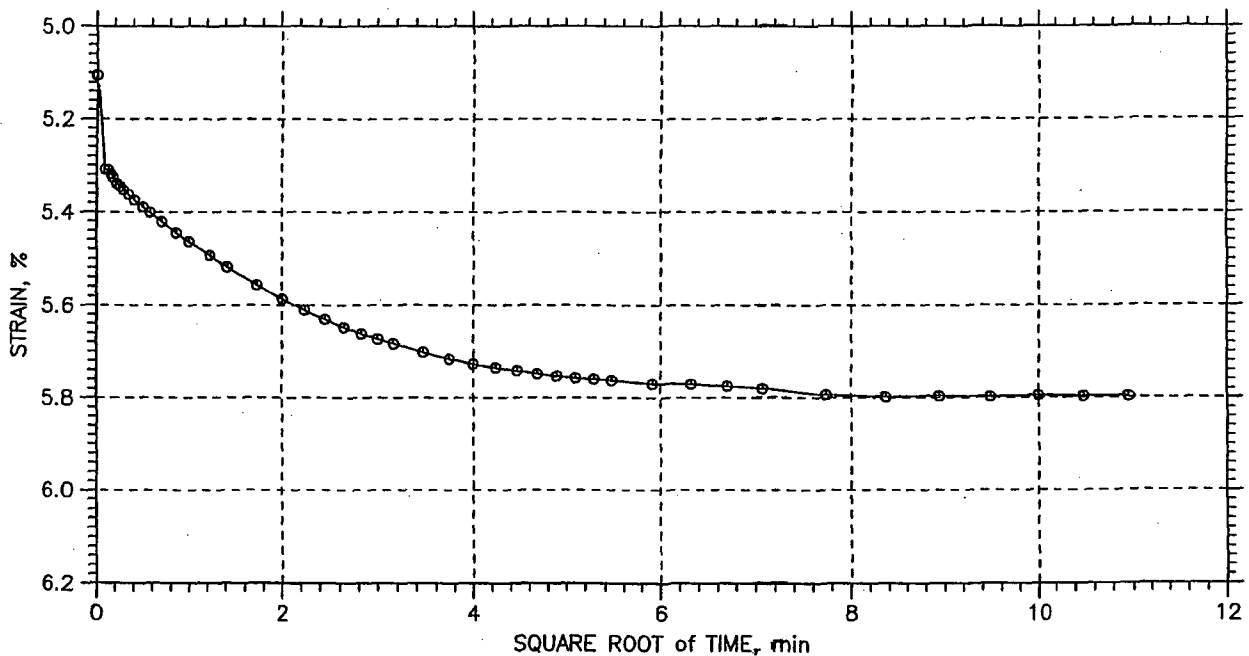
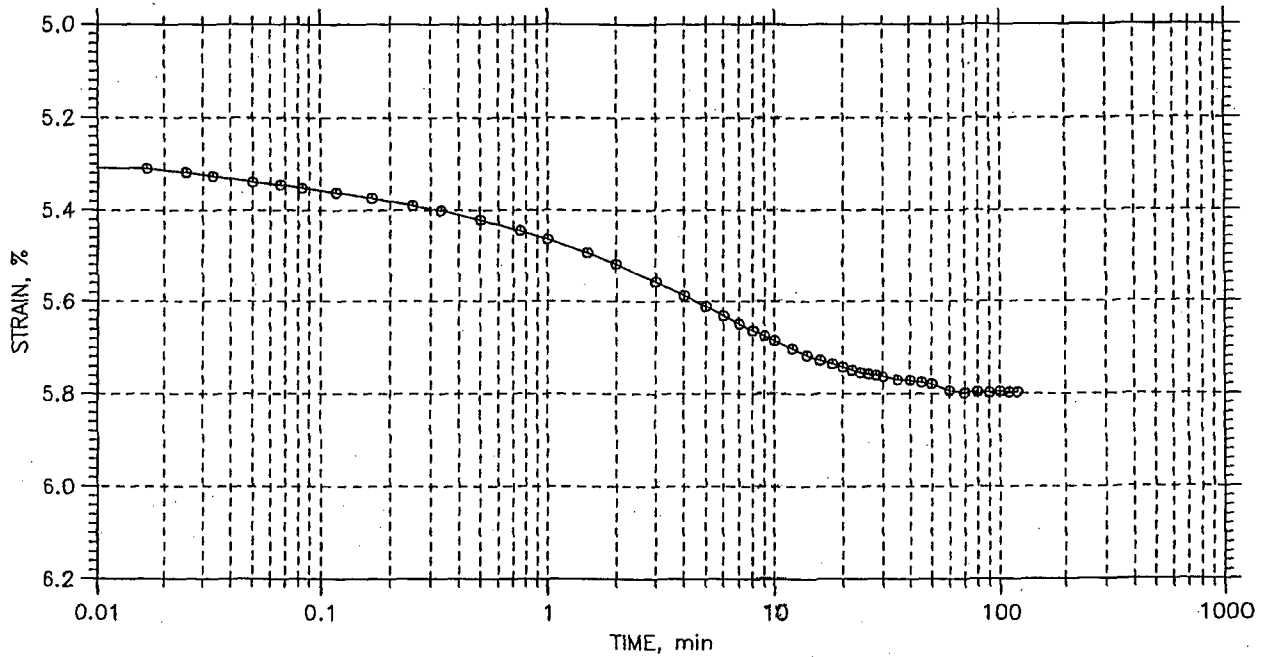
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting Sq.Rt. min	Log min	Coefficient of Consolidation		
							Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.006276	0.990	0.63	0.0	0.0	4.12e-002	0.00e+000	4.12e-002
2	1	0.01117	0.980	1.12	0.6	0.0	1.30e-003	0.00e+000	1.30e-003
3	2	0.02049	0.961	2.05	0.9	0.0	9.03e-004	0.00e+000	9.03e-004
4	4	0.0352	0.932	3.52	1.1	0.0	6.93e-004	0.00e+000	6.93e-004
5	8	0.06713	0.868	6.71	2.9	3.9	2.54e-004	1.89e-004	2.16e-004
6	4	0.06138	0.880	6.14	0.9	0.0	7.92e-004	0.00e+000	7.92e-004
7	2	0.05338	0.896	5.34	4.5	4.1	1.64e-004	1.78e-004	1.71e-004
8	4	0.05797	0.886	5.80	1.2	0.0	6.24e-004	0.00e+000	6.24e-004
9	8	0.07104	0.860	7.10	1.9	1.9	3.80e-004	3.75e-004	3.77e-004
10	16	0.1289	0.744	12.89	8.3	10.5	8.03e-005	6.35e-005	7.09e-005
11	32	0.2137	0.575	21.37	16.4	17.0	3.44e-005	3.33e-005	3.39e-005
12	8	0.1956	0.611	19.56	0.9	0.0	6.01e-004	0.00e+000	6.01e-004
13	2	0.1664	0.669	16.64	16.6	0.0	3.31e-005	0.00e+000	3.31e-005
14	0.5	0.1365	0.729	13.65	57.8	0.0	1.02e-005	0.00e+000	1.02e-005

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



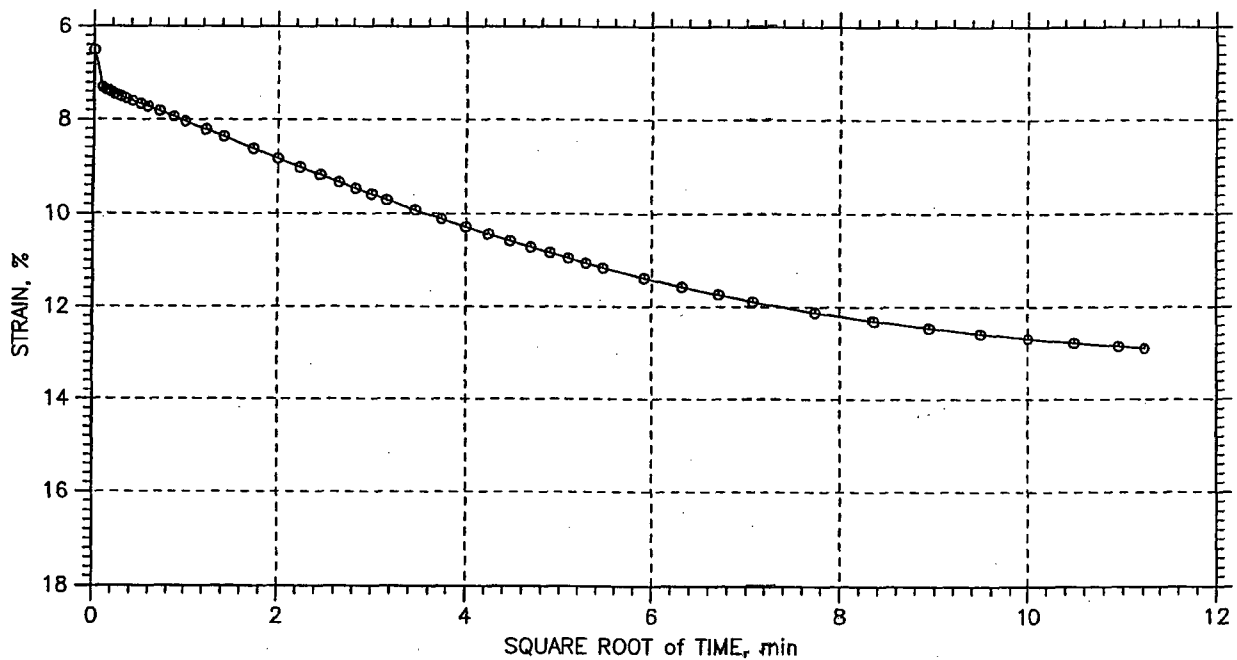
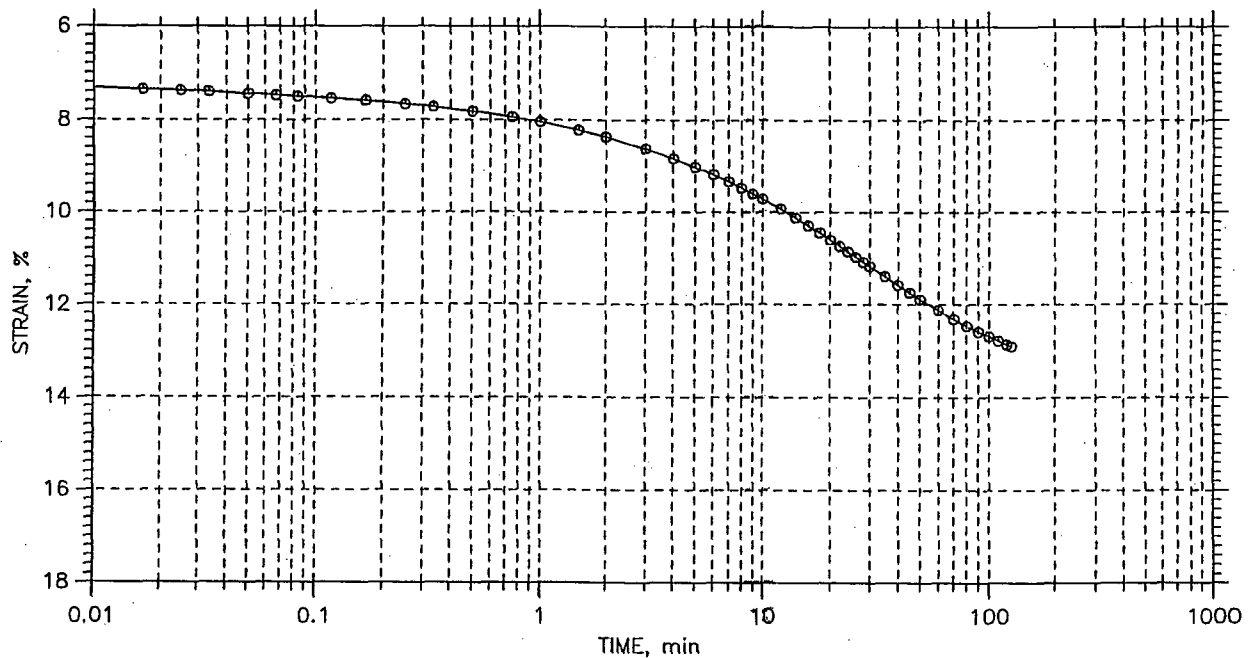
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-433	Tested By: md	Checked By: jdt
	Sample No.: S-11	Test Date: 09/23/08	Depth: 38.5-40.5
	Test No.: C-27	Sample Type: tube	Elevation: ---
	Description: Moist, very dark gray clay (CH), 91% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.28, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA

TIME CURVES

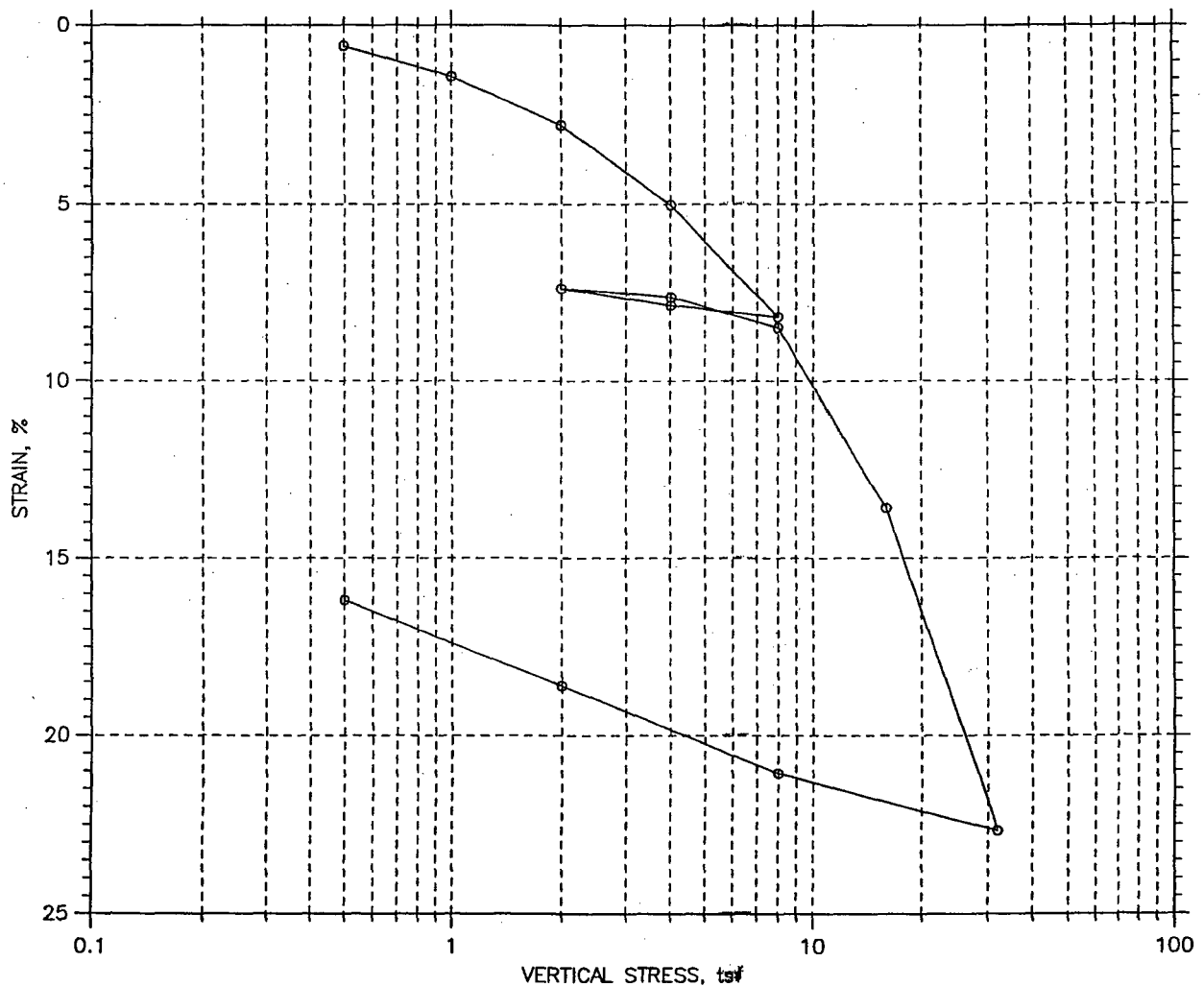
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-433	Tested By: md	Checked By: jdt
	Sample No.: S-11	Test Date: 09/23/08	Depth: 38.5-40.5
	Test No.: C-27	Sample Type: tube	Elevation: ---
	Description: Moist, very dark gray clay (CH), 91% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.28, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	42.17	30.34
Preconsolidation Pressure: 10 tsf				Dry Unit Weight, pcf	77.02	91.89
Compression Index: ---				Saturation, %	97.04	99.99
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.16	0.81
LL: 64	PL: 23	PI: 41	GS: 2.66			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-433	Tested By: md	Checked By: jdt
	Sample No.: S-13	Test Date: 09/23/06	Depth: 48.5-50.5
	Test No.: C-28	Sample Type: tube	Elevation: ---
	Description: Moist, black clay (CH), 95% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.31, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-433
Sample No.: S-13
Test No.: C-28

Location: Calvert County, MD
Tested By: md
Test Date: 09/23/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 48.5-50.5
Elevation: ---

Soil Description: Moist, black clay (CH), 95% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: 0.31, Recompression Ratio: 0.03

Measured Specific Gravity: 2.66
Initial Void Ratio: 1.16
Final Void Ratio: 0.81

Liquid Limit: 64
Plastic Limit: 23
Plasticity Index: 41

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID	Danvers	RING		2145
Wt. Container + Wet Soil, gm	235.63	357.56	345.82	140.87
Wt. Container + Dry Soil, gm	175.05	315.71	315.71	109.98
Wt. Container, gm	8.29	216.46	216.46	8.17
Wt. Dry Soil, gm	166.76	99.247	99.247	101.81
Water Content, %	36.33	42.17	30.34	30.34
Void Ratio	---	1.16	0.81	---
Degree of Saturation, %	---	97.04	99.99	---
Dry Unit Weight, pcf	---	77.024	91.89	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-433
Sample No.: S-13
Test No.: C-28

Location: Calvert County, MD
Tested By: md
Test Date: 09/23/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 48.5-50.5
Elevation: ---

Soil Description: Moist, black clay (CH), 95% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: 0.31, Recompression Ratio: 0.03

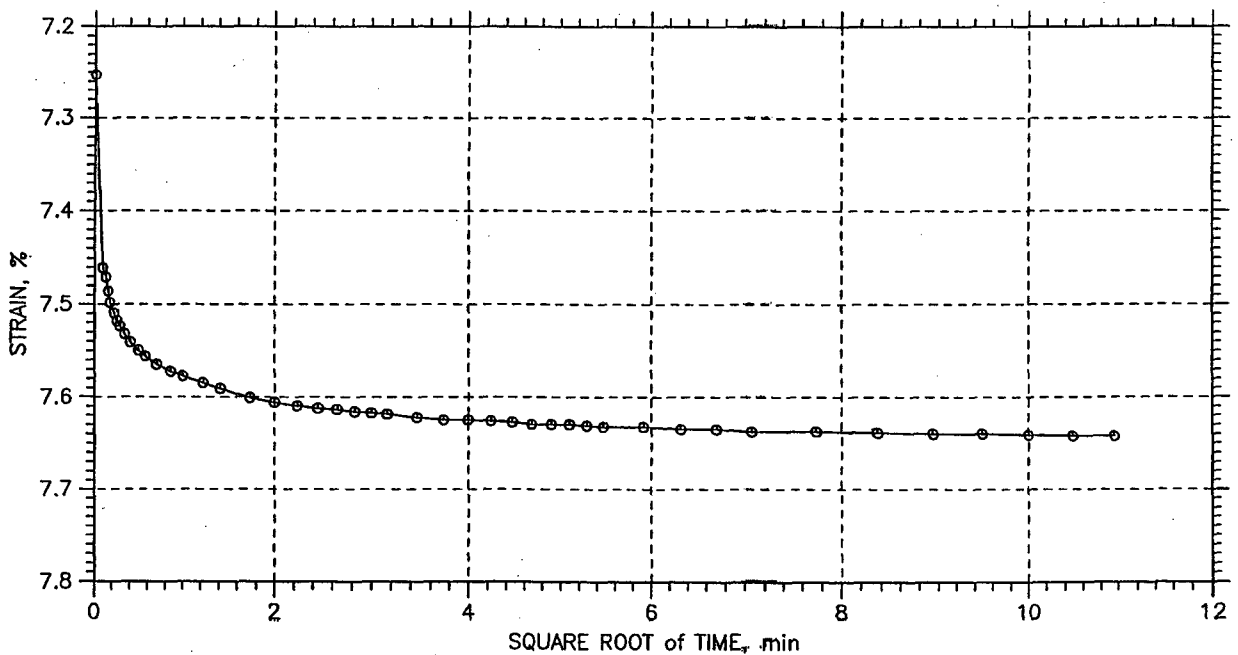
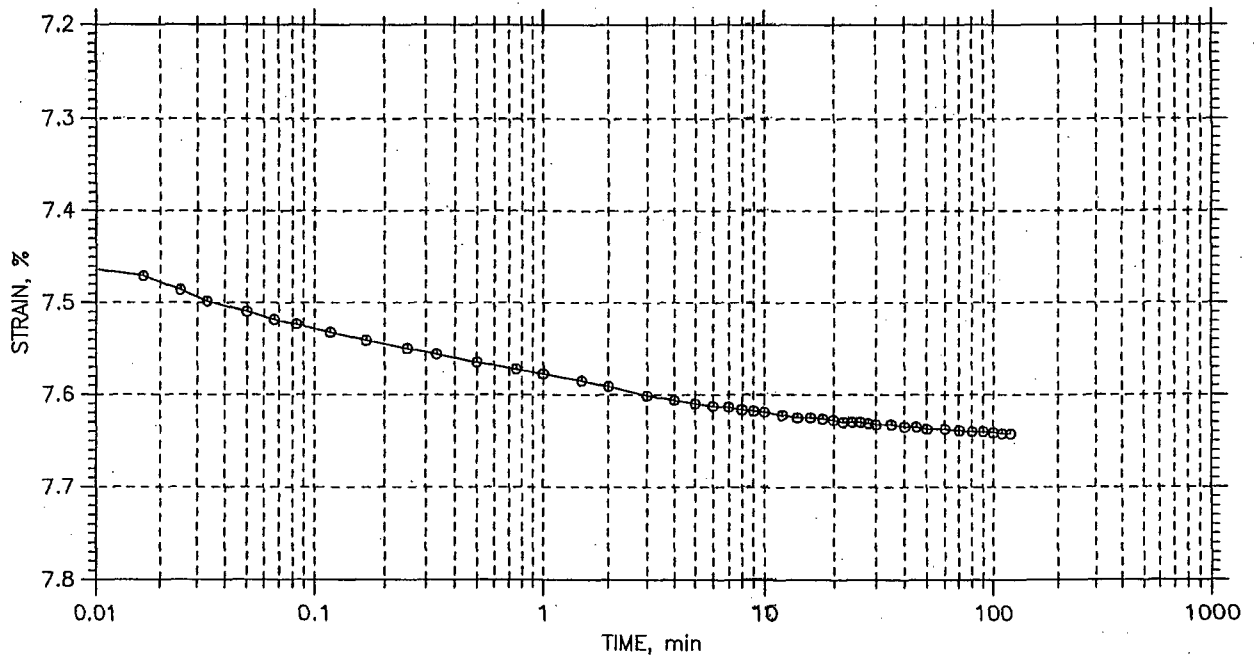
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Sq.Rt. min	Fitting Log min	Coefficient of Consolidation		
							Sq.Rt. in^2/sec	Log in^2/sec	Ave. in^2/sec
1	0.5	0.005771	1.143	0.58	0.0	0.0	4.25e-002	0.00e+000	4.25e-002
2	1	0.01427	1.125	1.43	0.1	0.0	1.52e-002	2.56e-002	1.91e-002
3	2	0.02778	1.096	2.78	0.0	0.0	2.70e-002	3.53e-002	3.06e-002
4	4	0.05014	1.048	5.01	0.1	0.0	7.60e-003	3.65e-002	1.26e-002
5	8	0.08201	0.979	8.20	0.4	0.0	1.68e-003	0.00e+000	1.68e-003
6	4	0.07871	0.986	7.87	0.1	0.0	1.21e-002	5.98e-001	2.37e-002
7	2	0.07393	0.997	7.39	0.3	0.0	2.26e-003	0.00e+000	2.26e-003
8	4	0.07642	0.991	7.64	0.0	0.0	2.74e-002	0.00e+000	2.74e-002
9	8	0.08501	0.973	8.50	0.4	0.0	1.81e-003	0.00e+000	1.81e-003
10	16	0.1358	0.863	13.58	2.8	0.0	2.33e-004	0.00e+000	2.33e-004
11	32	0.2267	0.667	22.67	11.7	12.8	4.73e-005	4.31e-005	4.51e-005
12	8	0.2107	0.702	21.07	0.9	0.0	5.71e-004	0.00e+000	5.71e-004
13	2	0.1861	0.755	18.61	13.9	0.0	3.79e-005	0.00e+000	3.79e-005
14	0.5	0.1618	0.807	16.18	51.3	0.0	1.09e-005	0.00e+000	1.09e-005

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



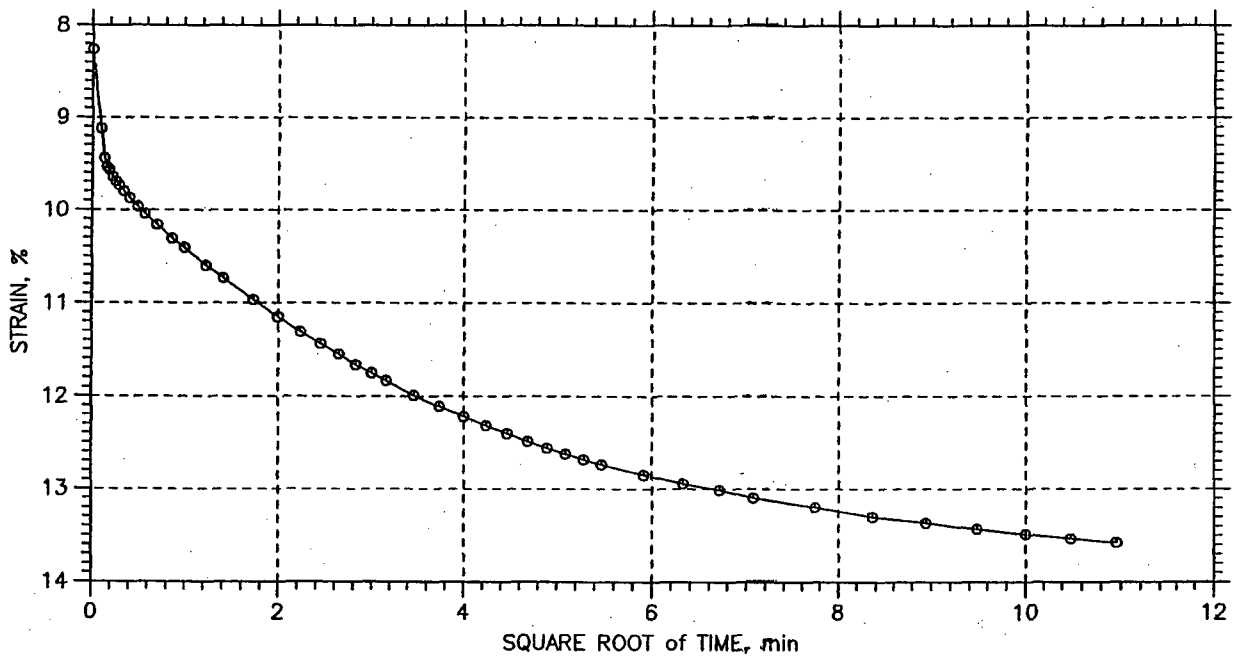
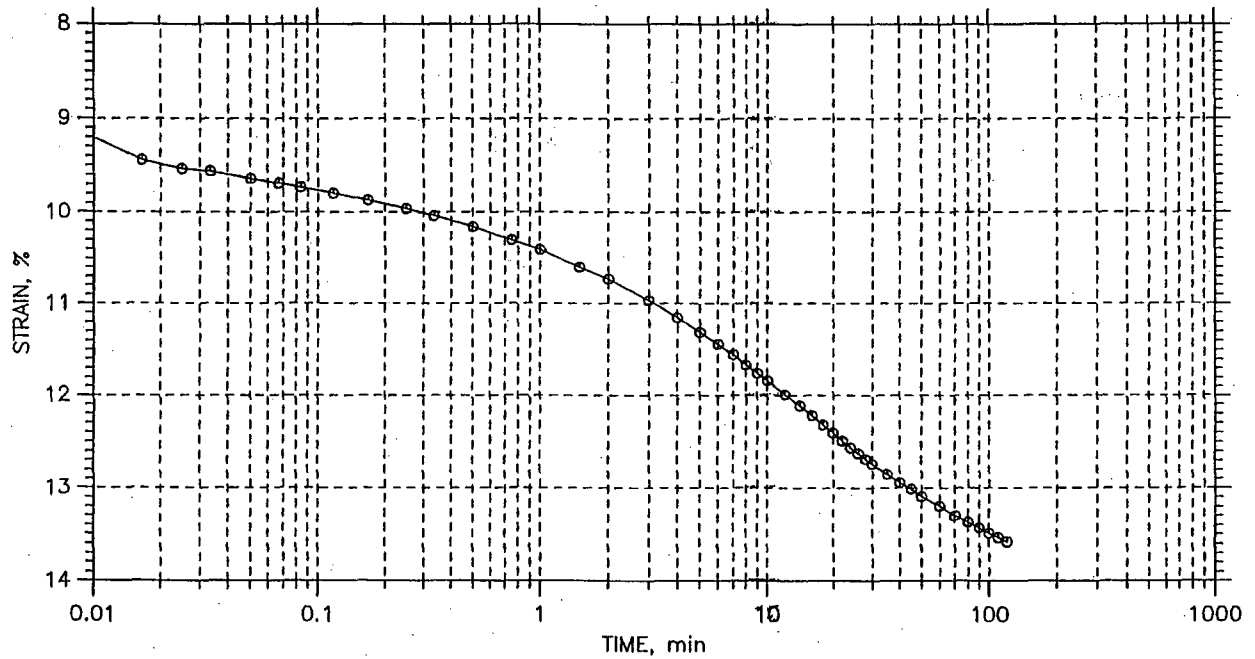
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-433	Tested By: md	Checked By: jdt
	Sample No.: S-13	Test Date: 09/23/08	Depth: 48.5-50.5
	Test No.: C-28	Sample Type: tube	Elevation: ---
	Description: Moist, black clay (CH), 95% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.31, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

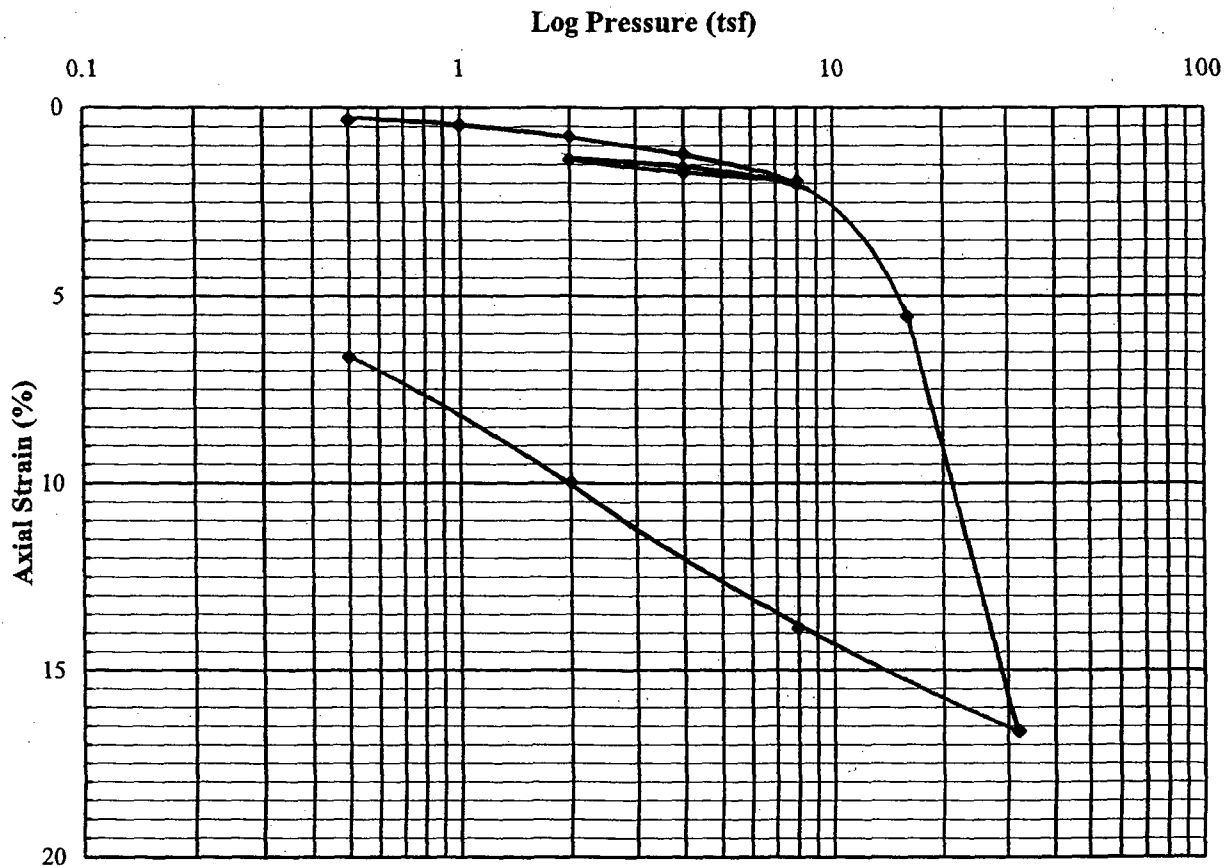
TIME CURVES

Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-433	Tested By: md	Checked By: jdt
	Sample No.: S-13	Test Date: 09/23/06	Depth: 48.5-50.5
	Test No.: C-28	Sample Type: tube	Elevation: ---
	Description: Moist, black clay (CH), 95% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.31, Recompression Ratio: 0.03		



REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/07

Probable Preconsolidation Pressure (Pp), tsf: 14.0				Recompression Ratio (C_{er}): 0.010	
Type of Specimen: Tube Sample				Compression Ratio (C_{ec}): 0.368	
Description: FAT CLAY (CH) - gray					
LL: 56	PI: 32	Gs: 2.84	P_o' (tsf): 2.50	Water Content, %	Initial 37.6 Final 33.6
% < No. 200: 94.9	Test Method: ASTM D2435 Method A			Void Ratio	1.09 0.95
Test Condition: Inundated @ 1 tsf				Saturation, %	98 100
				Dry Unit Weight, pcf	84.7 90.7
Remarks: Coefficient of Consolidation, C _v , equals 202 and 27 ft ² /yr at average pressures of 3 and 12 tsf (square root of time method).				Project: Calvert Cliffs Nuclear Power Plant	
Average Water Content of Trimmings, %: 35.5				Location: Calvert County, MD	
				Boring: B-434	Schnabel No.: 06120048
				Depth: 53.5-55.5 ft	Elevation: 51.7 to 49.7
				Date: 11/21/2006	Reviewed by: CJS
Consolidation Test Report					

Consolidation Test Data Sheet

Consolidometer ID: 1

11/21/06

Test Method: ASTM D2435 Method A

Test Condition: Inundated @ 1 tsf

REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/2007

Schnabel Contract: 06120048

Project: Calvert Cliffs Nuclear Power Plant

Initial Height of Specimen (H_o), in.: 0.7505

Height of Solids (H_s), in.: 0.3590

Boring No.: B-434

Depth: 53.5-55.5 ft

Seating Press. (tsf): 0.05

Initial Dial Gauge Reading (D_o), in.: -0.0005

Reviewed by: CJS

Pressure, P (tsf)	Time Readings Required	Date Load Applied	Time Load Applied	Load Applied By	A	B	C	D	Vertical Strain ⁵ , ϵ_i (%)	Void Ratio ⁶ , e_i
					Final ¹ Dial Reading, D_f $\times 10^{-4}$ in.	Apparatus Correction ² , D_{ci} $\times 10^{-4}$ in.	Cumulative Change in Height ³ , ΔH_i in.	Height of Voids ⁴ , H_{vi} in.		
0.5		11/2/2006	9:00	DWC	27	8	0.0024	0.3892	0.32	1.084
1		11/3/2006	9:00	DWC	43	13	0.0035	0.3881	0.47	1.081
2		11/4/2006	9:00	CJS	69	17	0.0057	0.3859	0.76	1.075
4		11/6/2006	9:00	DWC	111	25	0.0091	0.3825	1.21	1.065
8		11/7/2006	9:00	DWC	180	39	0.0146	0.3770	1.95	1.050
4		11/8/2006	9:00	DWC	148	25	0.0128	0.3788	1.71	1.055
2		11/9/2006	9:00	DWC	116	17	0.0104	0.3812	1.39	1.062
4		11/10/2006	9:00	DWC	139	25	0.0119	0.3797	1.59	1.058
8		11/11/2006	9:00	DWC	186	39	0.0152	0.3764	2.03	1.048
16		11/13/2006	9:00	DWC	460	48	0.0417	0.3499	5.56	0.975
32		11/14/2006	9:00	DWC	1300	56	0.1249	0.2667	16.64	0.743
8		11/15/2006	9:00	CJS	1075	39	0.1041	0.2875	13.87	0.801
2		11/16/2006	9:00	DWC	761	17	0.0749	0.3167	9.98	0.882
0.5		11/17/2006	9:00	DWC	500	8	0.0497	0.3419	6.62	0.952

- Notes:
- 1 "Final" based on test method; 24 hrs for Method A, end of primary for Method B.
 - 2 Correction value, for the current pressure, from the consolidometer's calibration curve.
 - 3 $\Delta H = D_f - D_o - D_{ci} = \text{Col. A} - D_o - \text{Col. B}$
 - 4 $H_{vi} = (H_o - H_s) - \Delta H$
 - 5 $\epsilon_i = (\Delta H / H_o) \times 100 = (\text{Col. C} / H_o) \times 100$
 - 6 $e_i = H_{vi} / H_s = \text{Col. D} / H_s$

Consol 8/2006 Rev. 1



Load Time Readings

11/21/06

Project: Calvert Cliffs Nuclear Power Plant
 Schnabel Contract: 06120048
 Boring No.: B-434 Depth: 53.5-55.5 ft

Consol. ID: 1

Reviewed by: CJS

Elapsed Time (min.)	Dial Guage Readings (inches)					
	4 tsf	16 tsf	X tsf	X tsf	X tsf	X tsf
	Reload	Load	Load	Load	Load	Load
	11/10/2006	11/13/2006	Date	Date	Date	Date
0.1	0.0123	0.0216				
0.25	0.0124	0.0223				
0.5	0.0126	0.0231				
1	0.0129	0.0243				
2	0.0131	0.0259				
4	0.0132	0.0280				
8	0.0133	0.0307				
15	0.0134	0.0332				
30	0.0135	0.0361				
60	0.0136	0.0381				
120	0.0137	0.0402				
240	0.0138	0.0419				
480	0.0138	0.0436				
720	0.0138	0.0447				
960	0.0138	0.0452				
1200	0.0138	0.0459				
1440	0.0139	0.0460				
1680						
1920						
2160						
2400						
2640						
2880						

Consolidation Time Curves

11/21/06

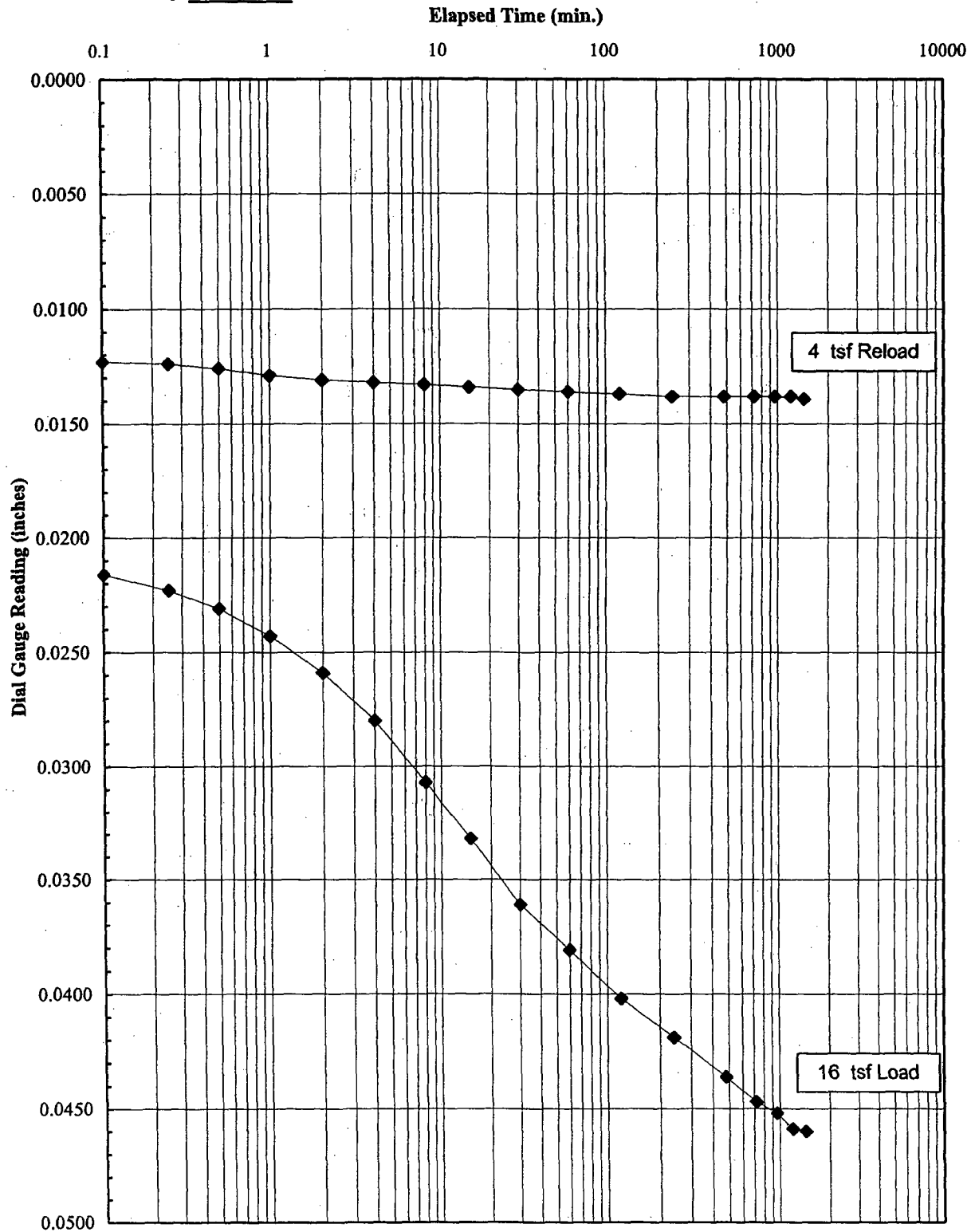
Project: Calvert Cliffs Nuclear Power Plant

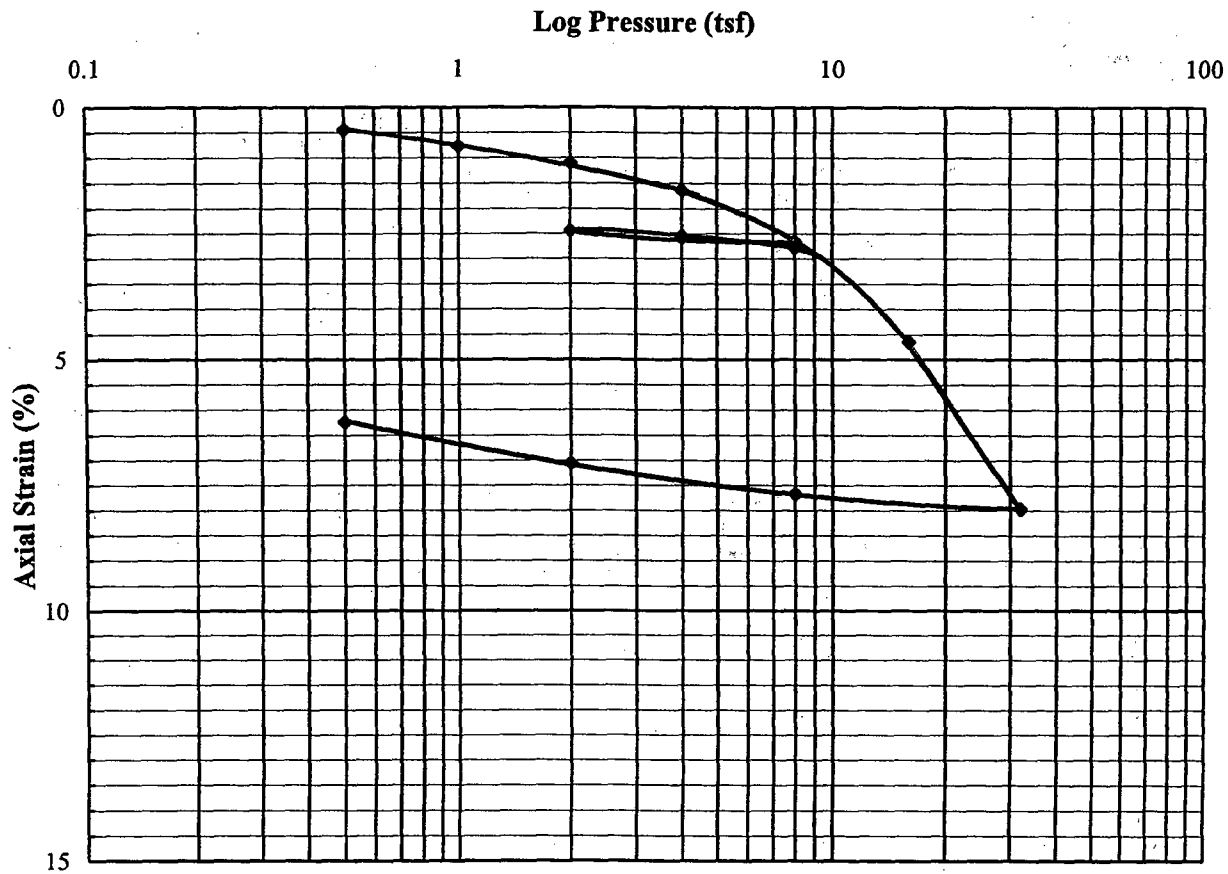
Schnabel Contract: 06120048

Boring No.: B-434

Depth: 53.5-55.5 ft

Reviewed by: CJS





REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/07

Probable Preconsolidation Pressure (Pp), tsf: 11.8				Recompression Ratio (C_{er}): 0.004		
Type of Specimen: Tube Sample				Compression Ratio (C_{ec}): 0.111		
Description: Fine SILTY SAND (SM) - dark gray						
				Initial Final		
				Water Content, %		
				Void Ratio		
				Saturation, %		
				Dry Unit Weight, pcf		
LL: —	PI: NP	Gs: 2.72	P_a' (tsf): 2.75			
% < No. 200: 36.9		Test Method: ASTM D2435 Method A				
Test Condition: Inundated @ 0.5 tsf						
Remarks: Coefficient of Consolidation, C _v , equals 2023 ft ² /yr at an average pressure of 12 tsf (square root of time method).				Project: Calvert Cliffs Nuclear Power Plant		
Average Water Content of Trimmings, %: 22.9				Location: Calvert County, MD		
				Boring: B-434		
				Schnabel No.: 06120048		
				Depth: 63.5-64.3 ft		
				Elevation: 41.7 to 40.9		
				Date: 12/4/2006		
				Reviewed by: CJS		
Consolidation Test Report						

Consolidation Test Data Sheet

Consolidometer ID: 2

12/4/06

REVISED FORM FOR
NCR NO. 25237-NCR-028
2/12/2007

Schnabel Contract: 06120048

Project: Calvert Cliffs Nuclear Power Plant

Test Method: ASTM D2435 Method A

Test Condition: Inundated @ 0.5 tsf

Initial Height of Specimen (H_o), in.: 0.7514

Boring No.: B-434

Height of Solids (H_s), in.: 0.4381

Depth: 63.5-64.3 ft

Seating Press. (tsf): 0.05

Initial Dial Gauge Reading (D_o), in.: 0.0000

Reviewed by: CJS

Pressure, P (tsf)	Time Readings Required	Date Load Applied	Time Load Applied	Load Applied By	A	B	C	D	Vertical Strain ⁵ , ϵ_i (%)	Void Ratio ⁶ , e_i
					Final ¹ Dial Reading, D_{fi} $\times 10^{-4}$ in.	Apparatus Correction ² , D_{ci} $\times 10^{-4}$ in.	Cumulative Change in Height ³ , ΔH_i in.	Height of Voids ⁴ , H_{vi} in.		
0.5		11/9/2006	9:05	DWC	45	11	0.0034	0.3099	0.45	0.707
1		11/10/2006	9:05	DWC	73	15	0.0058	0.3075	0.77	0.702
2		11/11/2006	9:05	DWC	104	21	0.0083	0.3050	1.10	0.696
4		11/13/2006	9:05	DWC	151	28	0.0123	0.3010	1.64	0.687
8		11/14/2006	9:05	DWC	236	36	0.0200	0.2933	2.66	0.670
4		11/15/2006	9:05	CJS	222	28	0.0194	0.2939	2.58	0.671
2		11/16/2006	9:05	DWC	205	21	0.0184	0.2949	2.45	0.673
4		11/17/2006	9:05	DWC	219	28	0.0191	0.2942	2.54	0.672
8		11/21/2006	9:05	DWC	245	36	0.0209	0.2924	2.78	0.667
16		11/22/2006	9:05	DWC	394	45	0.0349	0.2784	4.64	0.636
32		11/27/2006	9:05	DWC	656	57	0.0599	0.2534	7.97	0.578
8		11/28/2006	11:25	DWC	612	36	0.0576	0.2557	7.67	0.584
2		11/29/2006	11:25	DWC	552	21	0.0531	0.2602	7.07	0.594
0.5		11/30/2006	11:25	DWC	480	11	0.0469	0.2664	6.24	0.608

- Notes:
- 1 "Final" based on test method; 24 hrs for Method A, end of primary for Method B.
 - 2 Correction value, for the current pressure, from the consolidometer's calibration curve.
 - 3 $\Delta H = D_{fi} - D_o - D_{ci} = \text{Col. A} - D_o - \text{Col. B}$
 - 4 $H_{vi} = (H_o - H_s) - \Delta H$
 - 5 $\epsilon_i = (\Delta H / H_o) \times 100 = (\text{Col. C} / H_o) \times 100$
 - 6 $e_i = H_{vi} / H_s = \text{Col. D} / H_s$

Consol 8/2006 Rev. 1



Load Time Readings

12/4/06

Project: Calvert Cliffs Nuclear Power Plant
 Schnabel Contract: 06120048
 Boring No.: B-434 Depth: 63.5-64.3 ft
 Reviewed by: CJS

Consol. ID: 2

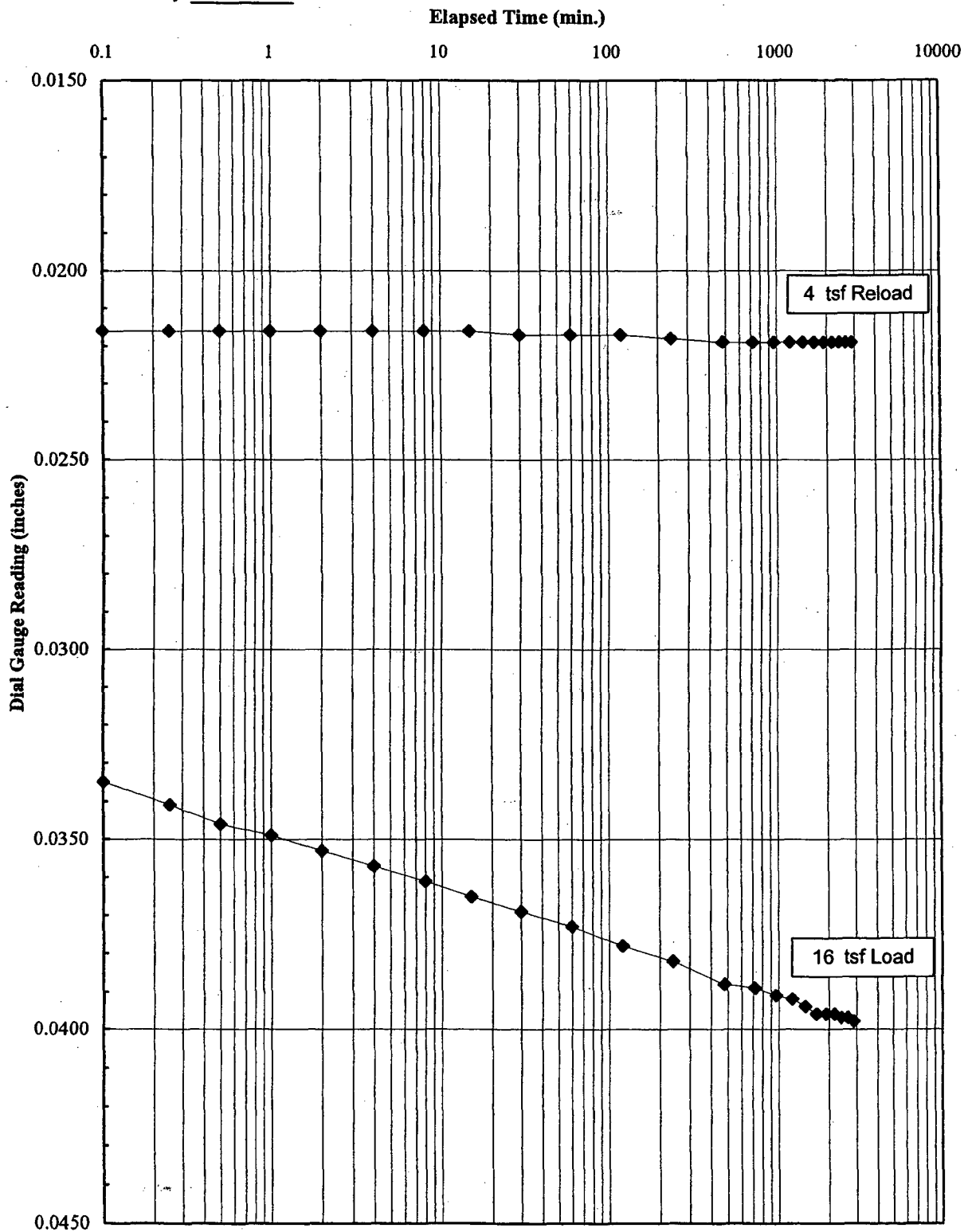
Elapsed Time (min.)	Dial Guage Readings (inches)					
	4 tsf Reload	16 tsf Load	X tsf Load	X tsf Load	X tsf Load	X tsf Load
	11/17/2006	11/22/2006	Date	Date	Date	Date
0.1	0.0216	0.0335				
0.25	0.0216	0.0341				
0.5	0.0216	0.0346				
1	0.0216	0.0349				
2	0.0216	0.0353				
4	0.0216	0.0357				
8	0.0216	0.0361				
15	0.0216	0.0365				
30	0.0217	0.0369				
60	0.0217	0.0373				
120	0.0217	0.0378				
240	0.0218	0.0382				
480	0.0219	0.0388				
720	0.0219	0.0389				
960	0.0219	0.0391				
1200	0.0219	0.0392				
1440	0.0219	0.0394				
1680	0.0219	0.0396				
1920	0.0219	0.0396				
2160	0.0219	0.0396				
2400	0.0219	0.0397				
2640	0.0219	0.0397				
2880	0.0219	0.0398				

Consolidation Time Curves

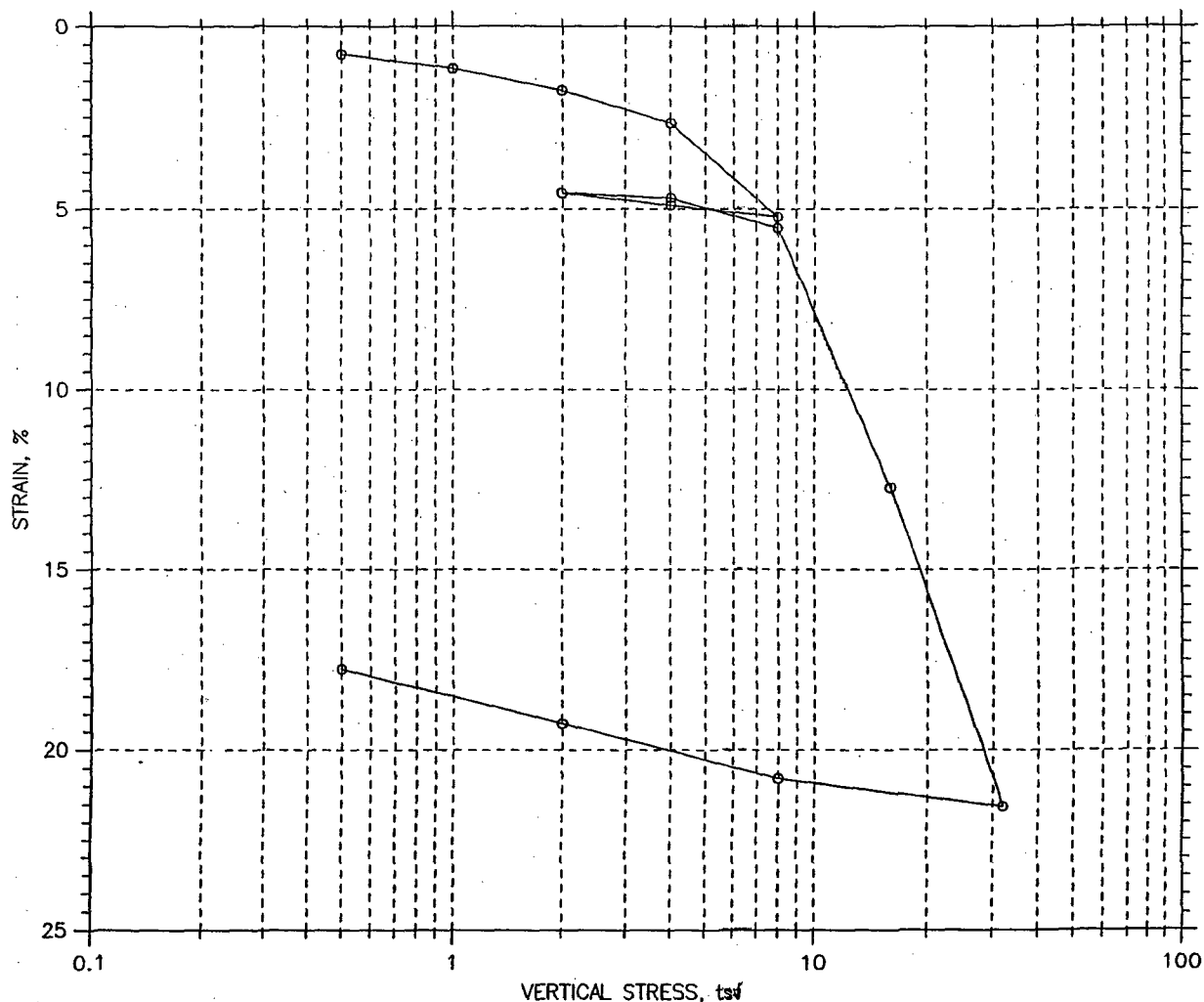
12/4/06

Project: Calvert Cliffs Nuclear Power Plant
Schnabel Contract: 06120048
Boring No.: B-434 Depth: 63.5-64.3 ft

Reviewed by: CJS



CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	47.32	33.30
Preconsolidation Pressure: 9 tsf				Dry Unit Weight, pcf	73.	88.75
Compression Index: ---				Saturation, %	97.62	99.99
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.31	0.90
LL: 69	PL: 25	PI: 44	GS: 2.70			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-703	Tested By: md	Checked By: jdt
	Sample No.: S-7	Test Date: 11/04/06	Depth: 18.5-19.7
	Test No.: C-52	Sample Type: tube	Elevation: ---
	Description: Moist, mottled light yellowish brown, dark gray organic clay with sand(OH), 83% <#200 sieve		
	Remarks: System C - Compression Ratio: 0.30, Recompression Ratio: 0.03, inundated @ 0.5 tsf		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
 Boring No.: B-703
 Sample No.: S-7
 Test No.: C-52

Location: Calvert County, MD
 Tested By: md
 Test Date: 11/04/06
 Sample Type: tube

Project No.: GTX-6880
 Checked By: jdt
 Depth: 18.5-19.7
 Elevation: ---

Soil Description: Moist, mottled light yellowish brown, dark gray organic clay with sand (OH), 83% <#200 sieve
 Remarks: System C - Compression Ratio: 0.30, Recompression Ratio: 0.03, inundated @ 0.5 tsf

Measured Specific Gravity: 2.70
 Initial Void Ratio: 1.31
 Final Void Ratio: 0.90

Liquid Limit: 69
 Plastic Limit: 25
 Plasticity Index: 44

Initial Height: 1.00 in
 Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimming	Specimen+Ring	Specimen+Ring	Trimming
	ETA	RING		968
Wt. Container + Wet Soil, gm	106.23	355.46	342.27	135.24
Wt. Container + Dry Soil, gm	76.08	310.94	310.94	103.48
Wt. Container, gm	8.09	216.88	216.88	8.11
Wt. Dry Soil, gm	67.99	94.065	94.065	95.37
Water Content, %	44.34	47.32	33.30	33.30
Void Ratio	---	1.31	0.90	---
Degree of Saturation, %	---	97.62	99.99	---
Dry Unit Weight, pcf	---	73.002	88.749	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-703
Sample No.: S-7
Test No.: C-52

Location: Calvert County, MD
Tested By: md
Test Date: 11/04/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 18.5-19.7
Elevation: ---

Soil Description: Moist, mottled light yellowish brown, dark gray organic clay with sand(OH), 83% <#200 sieve
Remarks: System C - Compression Ratio: 0.30, Recompression Ratio: 0.03, inundated @ 0.5 tsf

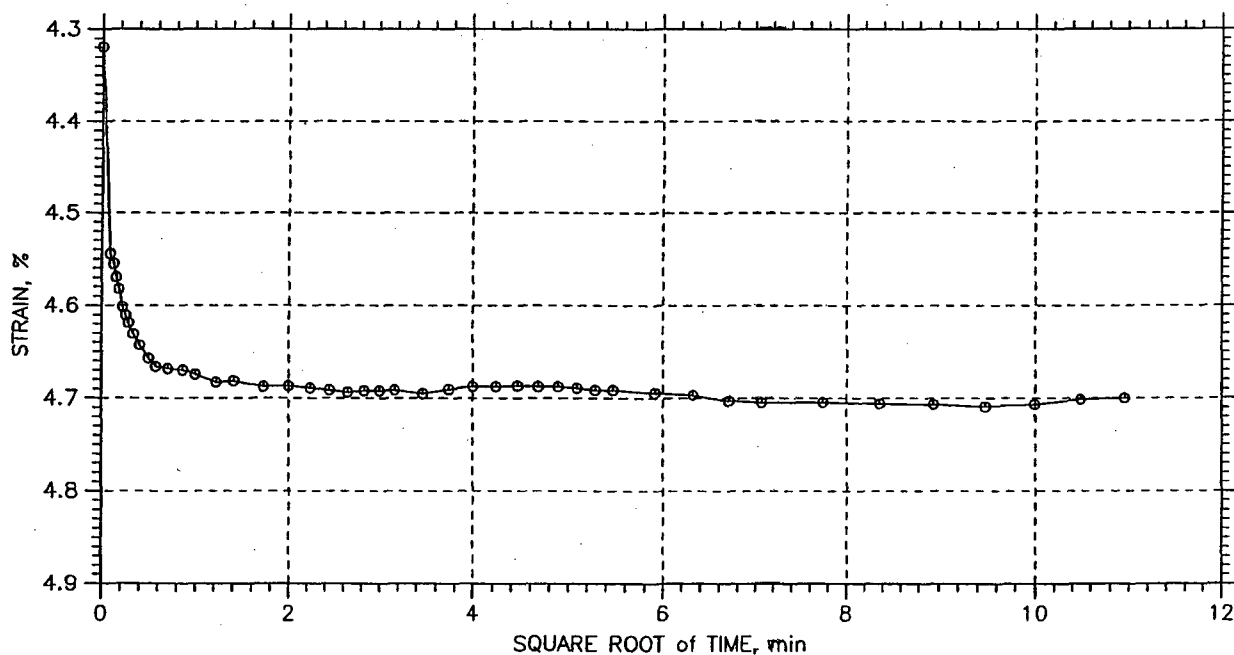
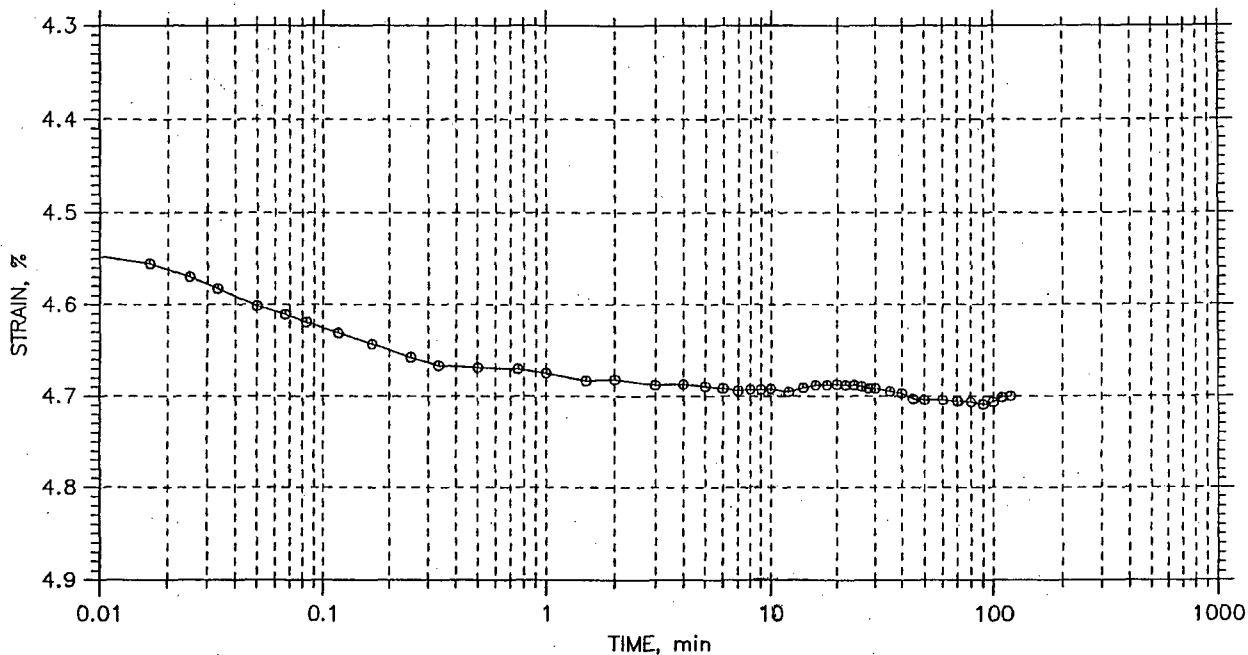
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.007584	1.291	0.76	0.4	0.0	2.00e-003	0.00e+000	2.00e-003
2	1	0.01159	1.282	1.16	0.0	0.0	2.51e-002	4.27e-002	3.16e-002
3	2	0.01744	1.269	1.74	0.0	0.0	4.90e-002	5.64e-002	5.24e-002
4	4	0.02654	1.248	2.65	0.0	0.0	1.58e-002	4.90e-002	2.39e-002
5	8	0.05211	1.189	5.21	0.4	0.1	1.90e-003	9.22e-003	3.14e-003
6	4	0.04893	1.196	4.89	0.0	0.0	1.37e-001	0.00e+000	1.37e-001
7	2	0.04553	1.204	4.55	0.1	0.0	7.11e-003	1.90e-002	1.03e-002
8	4	0.047	1.200	4.70	0.0	0.0	1.22e-001	0.00e+000	1.22e-001
9	8	0.05511	1.182	5.51	0.2	0.0	4.93e-003	8.30e-002	9.31e-003
10	16	0.1273	1.015	12.73	0.7	0.7	1.02e-003	1.01e-003	1.02e-003
11	32	0.2156	0.811	21.56	0.9	1.5	6.04e-004	3.79e-004	4.66e-004
12	8	0.2079	0.829	20.79	0.0	0.0	4.79e-002	0.00e+000	4.79e-002
13	2	0.1926	0.864	19.26	1.2	0.0	4.44e-004	0.00e+000	4.44e-004
14	0.5	0.1774	0.899	17.74	5.8	7.8	9.49e-005	7.03e-005	8.08e-005

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



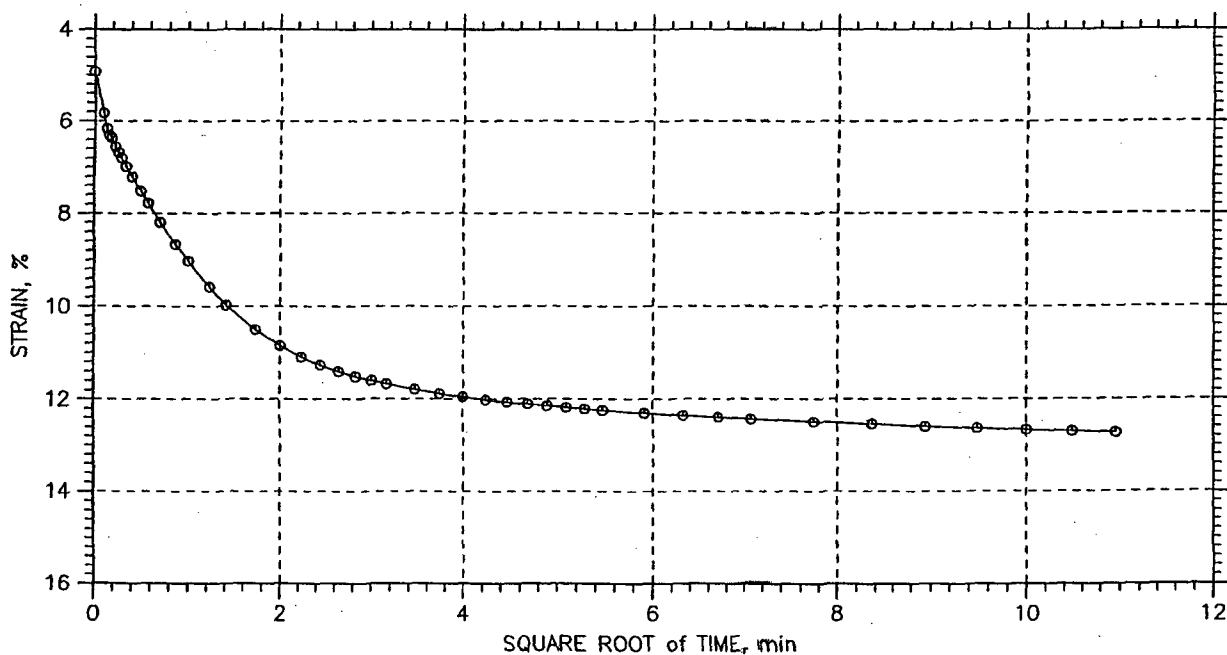
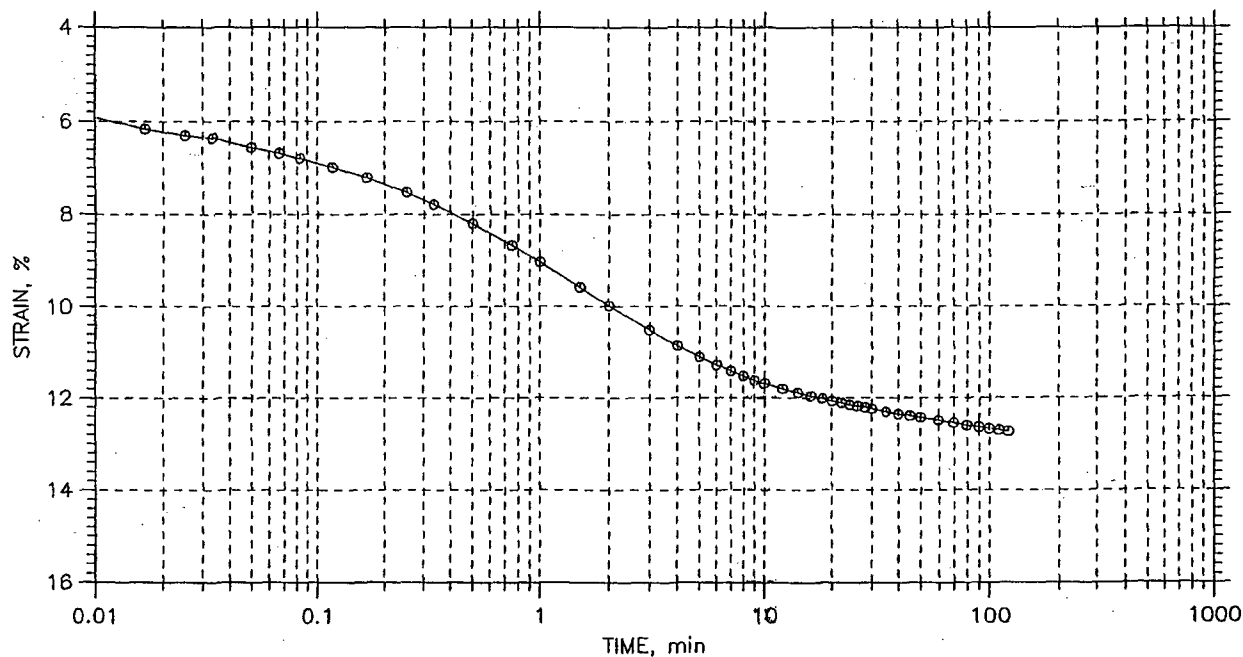
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-703	Tested By: md	Checked By: jdt
	Sample No.: S-7	Test Date: 11/04/06	Depth: 18.5-19.7
	Test No.: C-52	Sample Type: tube	Elevation: ---
	Description: Moist, mottled light yellowish brown, dark gray organic clay with sand(OH), 83% <#200 sieve		
	Remarks: System C - Compression Ratio: 0.30, Recompression Ratio: 0.03, inundated @ 0.5 tsf		

CONSOLIDATION TEST DATA

TIME CURVES

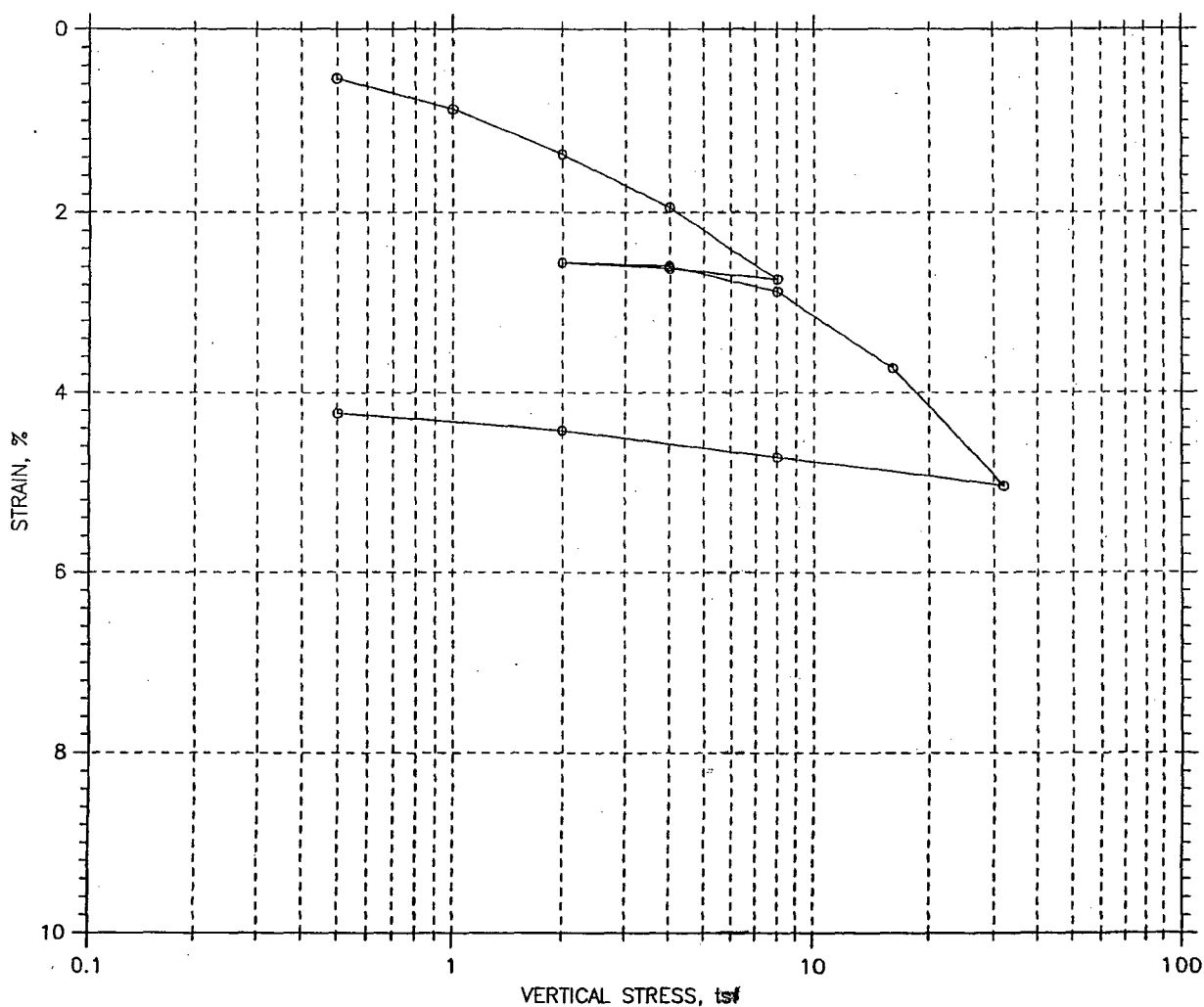
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-703	Tested By: md	Checked By: jdt
	Sample No.: S-7	Test Date: 11/04/06	Depth: 18.5-19.7
	Test No.: C-52	Sample Type: tube	Elevation: ---
	Description: Moist, mottled light yellowish brown, dark gray organic clay with sand(OH), 83% <#200 sieve		
	Remarks: System C - Compression Ratio: 0.30, Recompression Ratio: 0.03, inundated @ 0.5 tsf		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	27.53	25.48
Preconsolidation Pressure: 6 tsf				Dry Unit Weight, pcf	96.88	101.2
Compression Index: ---				Saturation, %	97.61	100.00
Diameter: 2.5 in		Height: 1 in		Void Ratio	0.78	0.70
LL: NP	PL: NP	PI: NP	GS: 2.76			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-722	Tested By: md	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/18/06	Depth: 33.5-35.5
	Test No.: C-21	Sample Type: tube	Elevation: ---
	Description: Moist, brownish yellow silty sand (SM), 20% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.04, Recompression Ratio: <0.01		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-722
Sample No.: UD-1
Test No.: C-21

Location: Calvert County, MD
Tested By: md
Test Date: 09/18/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 33.5-35.5
Elevation: ---

Soil Description: Moist, brownish yellow silty sand (SM), 20% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System C - Compression Ratio: 0.04, Recompression Ratio: <0.01

Measured Specific Gravity: 2.76
Initial Void Ratio: 0.78
Final Void Ratio: 0.70

Liquid Limit: NP
Plastic Limit: NP
Plasticity Index: NP

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID	1476	RING		1877
Wt. Container + Wet Soil, gm	187.34	375.64	373.08	164.16
Wt. Container + Dry Soil, gm	148.62	341.27	341.27	132.6
Wt. Container, gm	8.42	216.44	216.44	8.74
Wt. Dry Soil, gm	140.2	124.83	124.83	123.86
Water Content, %	27.62	27.53	25.48	25.48
Void Ratio	---	0.78	0.70	---
Degree of Saturation, %	---	97.61	100.00	---
Dry Unit Weight, pcf	---	96.88	101.16	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-722
Sample No.: UD-1
Test No.: C-21

Location: Calvert County, MD
Tested By: md
Test Date: 09/18/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 33.5-35.5
Elevation: ---

Soil Description: Moist, brownish yellow silty sand (SM), 20% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System C - Compression Ratio: 0.04, Recompression Ratio: <0.01

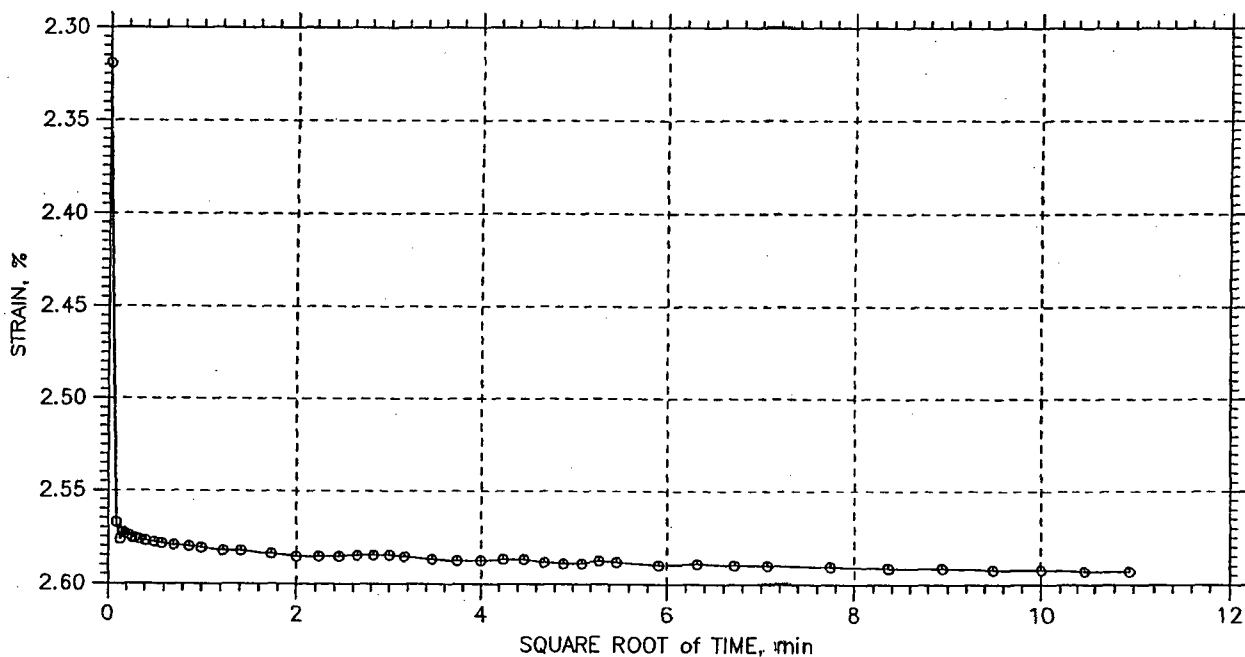
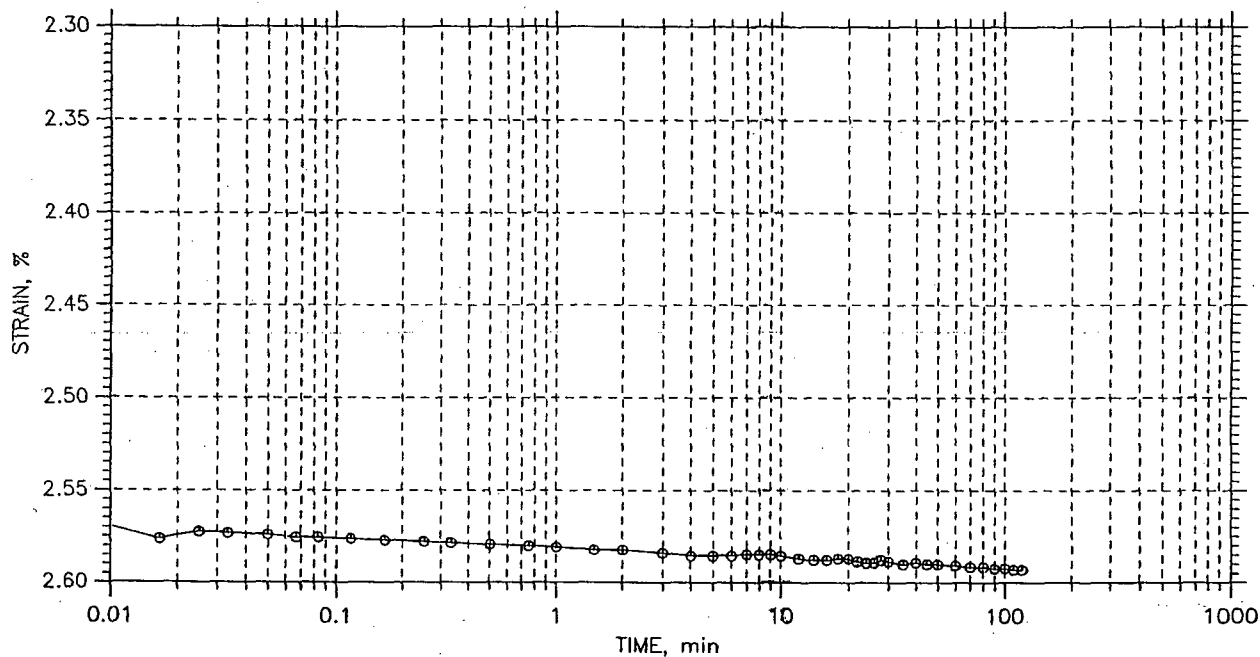
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.005383	0.769	0.54	0.0	0.0	4.11e-002	0.00e+000	4.11e-002
2	1	0.008744	0.763	0.87	0.0	0.0	6.08e-002	4.92e-002	5.44e-002
3	2	0.01367	0.754	1.37	0.0	0.0	6.57e-002	0.00e+000	6.57e-002
4	4	0.01943	0.744	1.94	0.0	0.0	7.34e-002	0.00e+000	7.34e-002
5	8	0.02734	0.730	2.73	0.0	0.0	8.57e-002	0.00e+000	8.57e-002
6	4	0.02617	0.732	2.62	0.0	0.0	1.92e-001	0.00e+000	1.92e-001
7	2	0.02553	0.733	2.55	0.0	0.0	1.54e-001	0.00e+000	1.54e-001
8	4	0.02593	0.732	2.59	0.0	0.0	1.74e-001	0.00e+000	1.74e-001
9	8	0.02872	0.727	2.87	0.0	0.0	1.72e-001	0.00e+000	1.72e-001
10	16	0.03726	0.712	3.73	0.0	0.0	1.45e-001	0.00e+000	1.45e-001
11	32	0.05043	0.689	5.04	0.0	0.0	7.42e-002	0.00e+000	7.42e-002
12	8	0.04722	0.695	4.72	0.0	0.0	7.69e-002	0.00e+000	7.69e-002
13	2	0.04426	0.700	4.43	0.0	0.0	1.39e-001	0.00e+000	1.39e-001
14	0.5	0.04232	0.703	4.23	0.0	0.0	6.78e-002	0.00e+000	6.78e-002

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



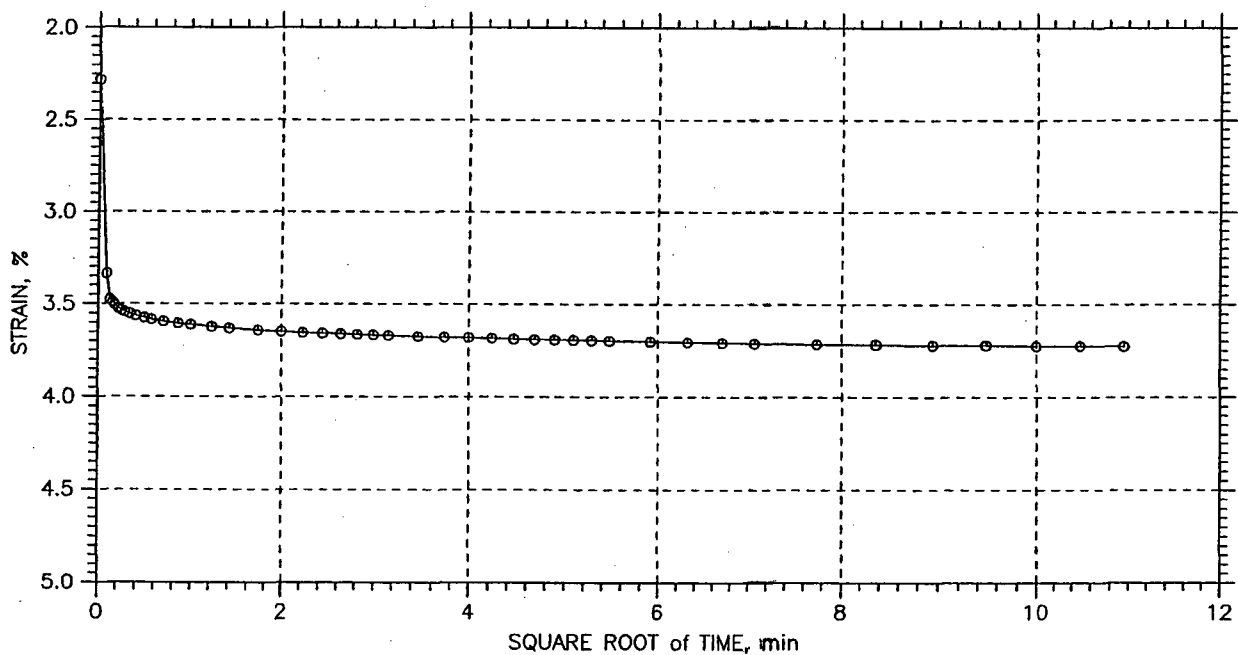
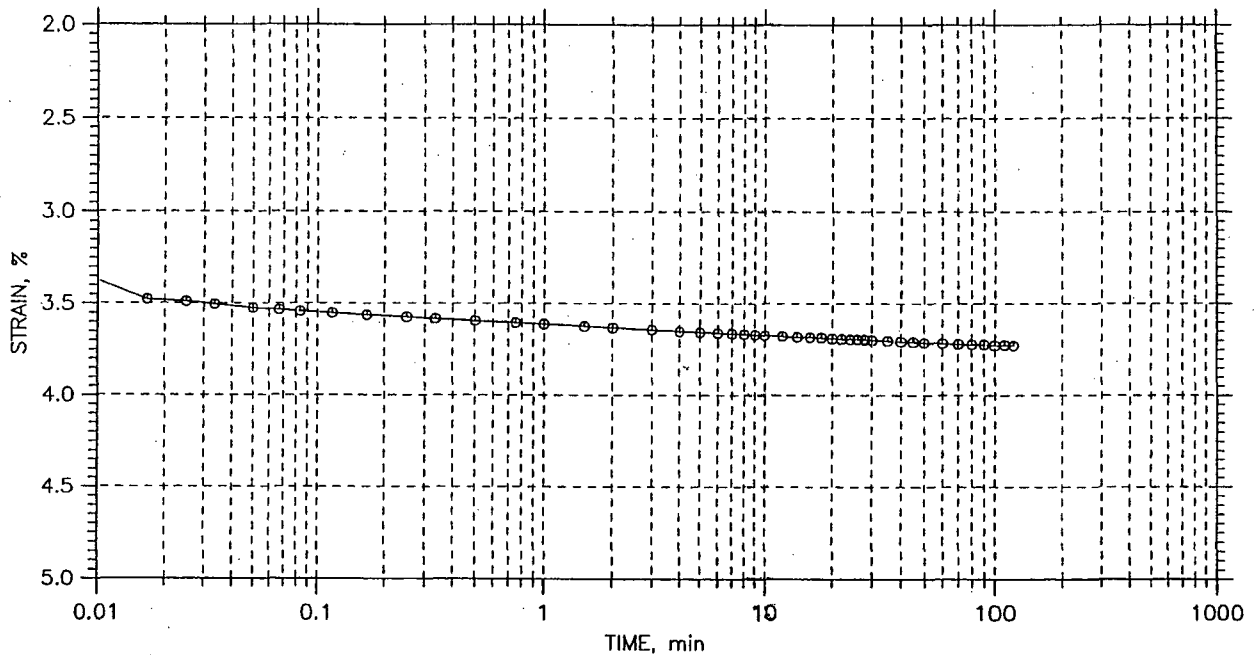
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-722	Tested By: md	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/18/06	Depth: 33.5-35.5
	Test No.: C-21	Sample Type: tube	Elevation: ---
	Description: Moist, brownish yellow silty sand (SM), 20% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.04, Recompression Ratio: <0.01		

CONSOLIDATION TEST DATA

TIME CURVES

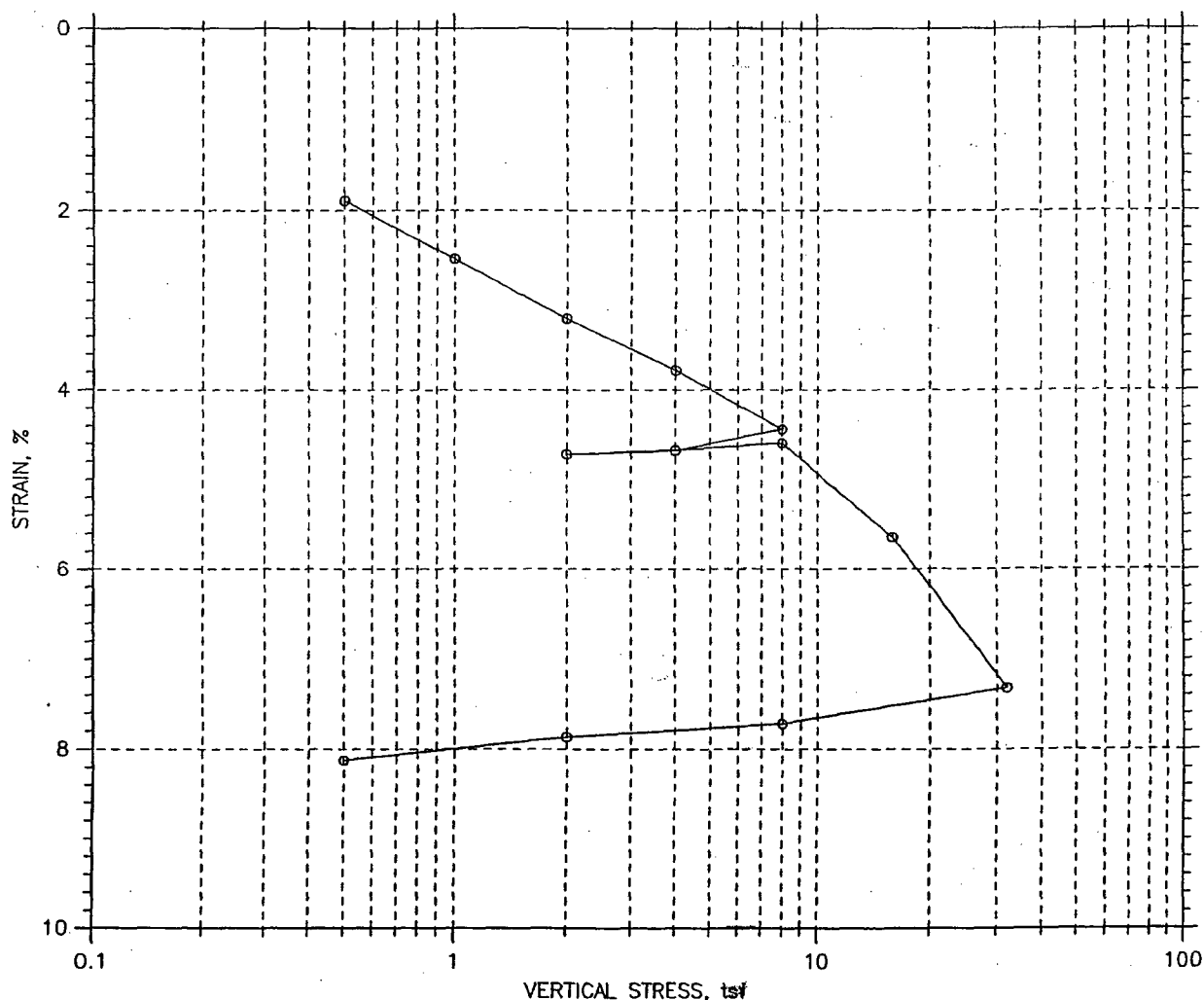
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-722	Tested By: md	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/18/06	Depth: 33.5-35.5
	Test No.: C-21	Sample Type: tube	Elevation: ---
	Description: Moist, brownish yellow silty sand (SM), 20% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.04, Recompression Ratio: <0.01		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test
Overburden Pressure: ---				29.14	25.16
Preconsolidation Pressure: 10.5 tsf				92.42	100.6
Compression Index: ---				95.07	99.99
Diameter: 2.5 in		Height: 1 in		Void Ratio	
LL: 56		PL: 15		0.83	
PI: 41		GS: 2.71		0.68	

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP		Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-723		Tested By: md	Checked By: jdt
	Sample No.: UD-2		Test Date: 09/20/06	Depth: 28.5-30.5
	Test No.: C-26		Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray clay (CH), 90% passing #200 sieve, inundated @ 0.5 tsf			
	Remarks: System R - Compression Ratio: 0.5, Recompression Ratio: < 0.01			

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-723
Sample No.: UD-2
Test No.: C-26

Location: Calvert County, MD
Tested By: md
Test Date: 09/20/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 28.5-30.5
Elevation: ---

Soil Description: Moist, dark olive gray clay (CH), 90% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System R - Compression Ratio: 0.5, Recompression Ratio: < 0.01

Measured Specific Gravity: 2.71
Initial Void Ratio: 0.83
Final Void Ratio: 0.68

Liquid Limit: 56
Plastic Limit: 15
Plasticity Index: 41

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
	CBR-B-1	RING		33
Wt. Container + Wet Soil, gm	143.26	263.04	258.3	158.83
Wt. Container + Dry Soil, gm	114.75	228.34	228.34	128.6
Wt. Container, gm	8.31	109.26	109.26	8.43
Wt. Dry Soil, gm	106.44	119.08	119.08	120.17
Water Content, %	26.79	29.14	25.16	25.16
Void Ratio	---	0.83	0.68	---
Degree of Saturation, %	---	95.07	99.99	---
Dry Unit Weight, pcf	---	92.419	100.59	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-723
Sample No.: UD-2
Test No.: C-26

Location: Calvert County, MD
Tested By: md
Test Date: 09/20/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 28.5-30.5
Elevation: ---

Soil Description: Moist, dark olive gray clay (CH), 90% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System R - Compression Ratio: 0.5, Recompression Ratio: < 0.01

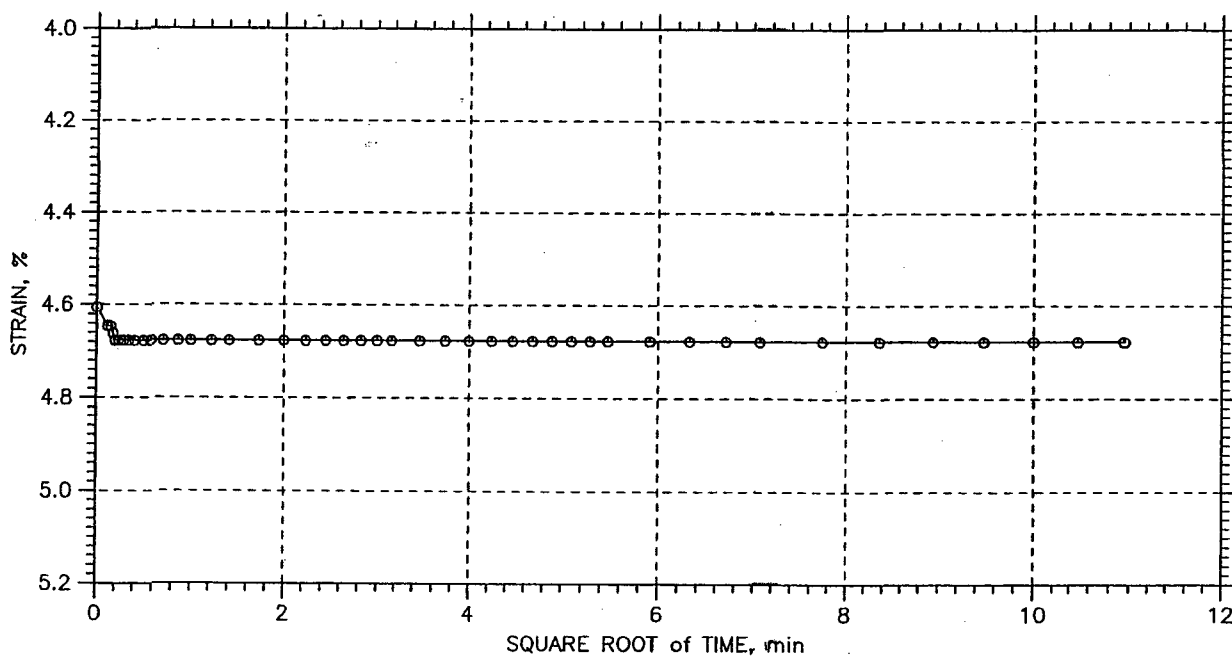
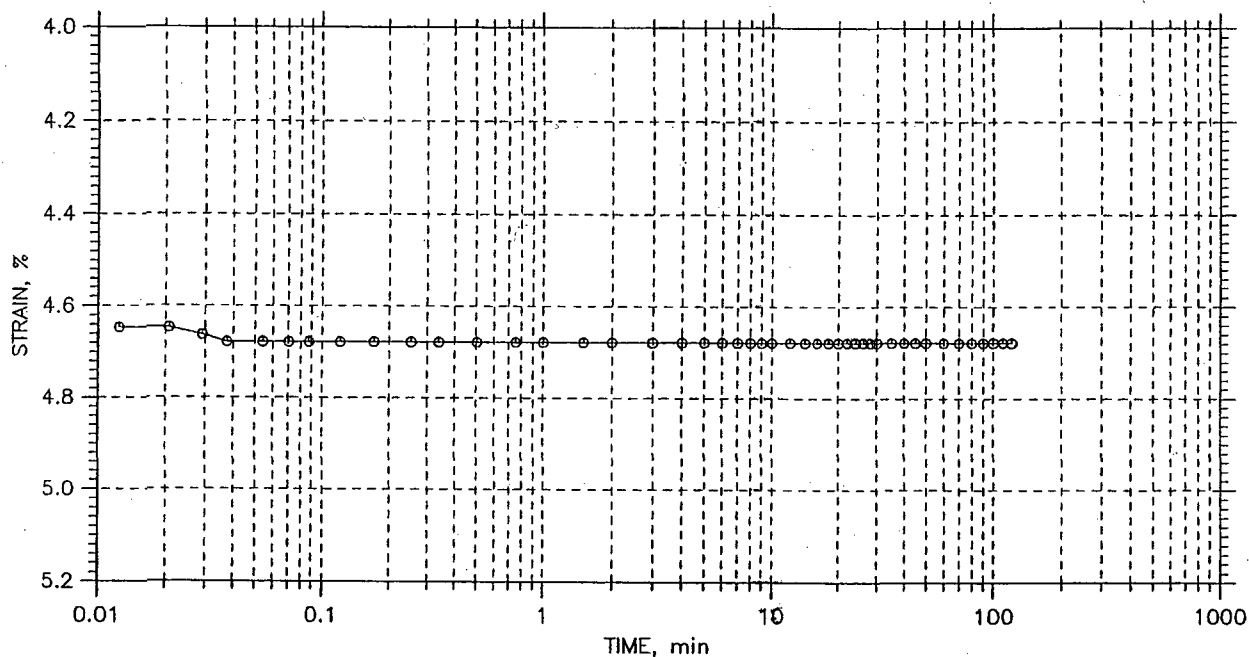
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in^2/sec	Log in^2/sec	Ave. in^2/sec
1	0.5	0.01889	0.796	1.89	0.1	0.0	9.37e-003	0.00e+000	9.37e-003
2	1	0.02535	0.784	2.54	0.1	0.1	1.27e-002	1.38e-002	1.32e-002
3	2	0.03201	0.772	3.20	0.0	0.0	1.70e-002	2.15e-002	1.90e-002
4	4	0.03779	0.761	3.78	0.0	0.0	1.75e-002	2.00e-002	1.86e-002
5	8	0.04437	0.749	4.44	0.0	0.0	1.77e-002	2.00e-002	1.88e-002
6	4	0.04685	0.745	4.69	0.0	0.0	6.11e-002	0.00e+000	6.11e-002
7	2	0.04724	0.744	4.72	0.0	0.0	4.62e-002	0.00e+000	4.62e-002
8	4	0.04677	0.745	4.68	0.0	0.0	3.55e-002	0.00e+000	3.55e-002
9	8	0.04594	0.746	4.59	0.0	0.0	2.66e-002	0.00e+000	2.66e-002
10	16	0.05646	0.727	5.65	0.0	0.0	3.66e-002	2.87e-002	3.21e-002
11	32	0.07319	0.697	7.32	0.0	0.0	3.71e-002	0.00e+000	3.71e-002
12	8	0.07717	0.689	7.72	0.0	0.0	3.34e-002	0.00e+000	3.34e-002
13	2	0.07866	0.687	7.87	0.0	0.0	5.17e-002	0.00e+000	5.17e-002
14	0.5	0.08126	0.682	8.13	0.0	0.0	2.18e-002	0.00e+000	2.18e-002

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



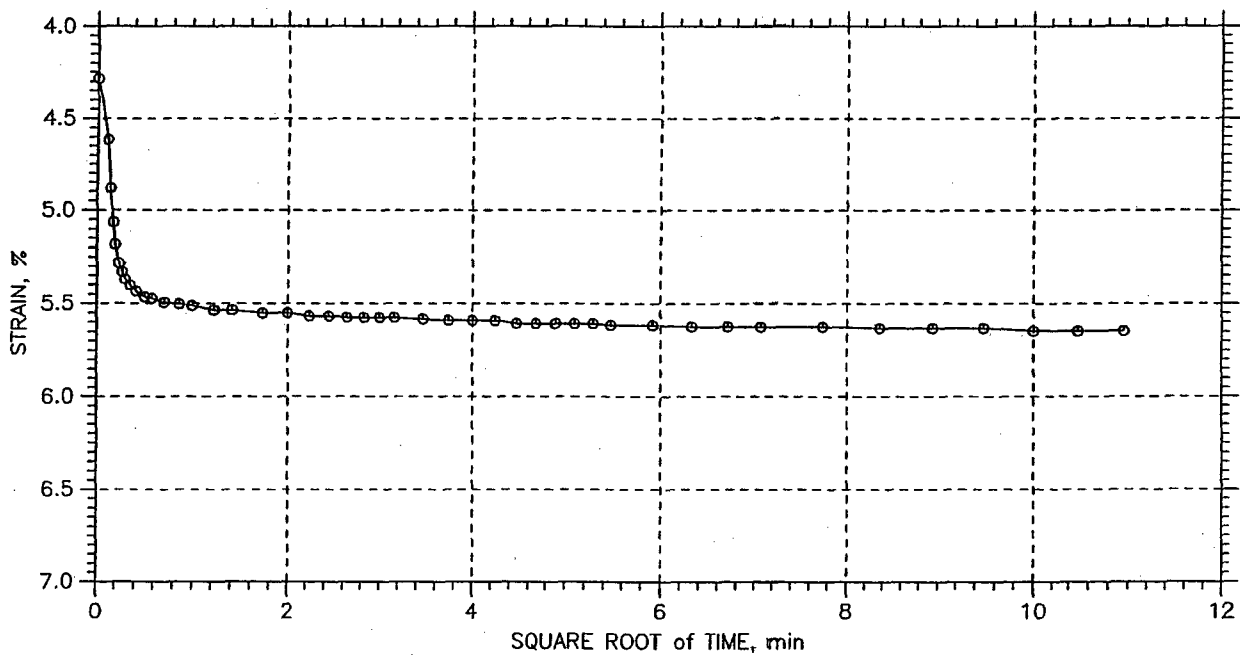
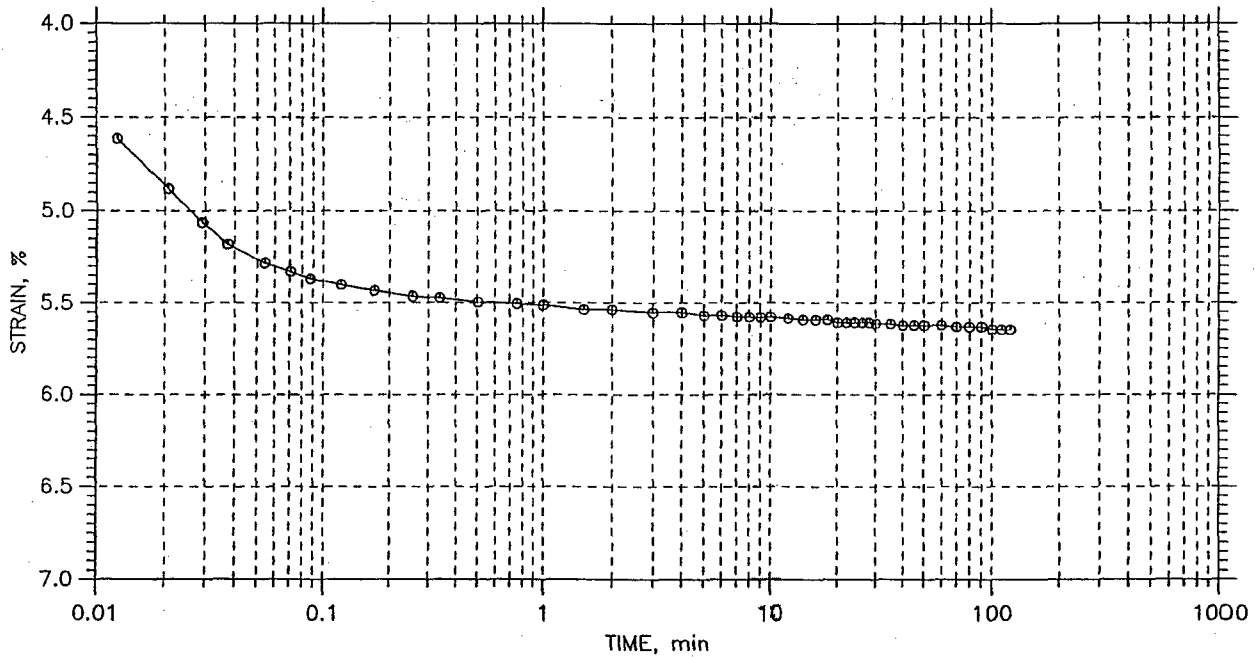
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-723	Tested By: md	Checked By: jdt
	Sample No.: UD-2	Test Date: 09/20/06	Depth: 28.5-30.5
	Test No.: C-26	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray clay (CH), 90% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System R - Compression Ratio: 0.5, Recompression Ratio: < 0.01		

CONSOLIDATION TEST DATA

TIME CURVES

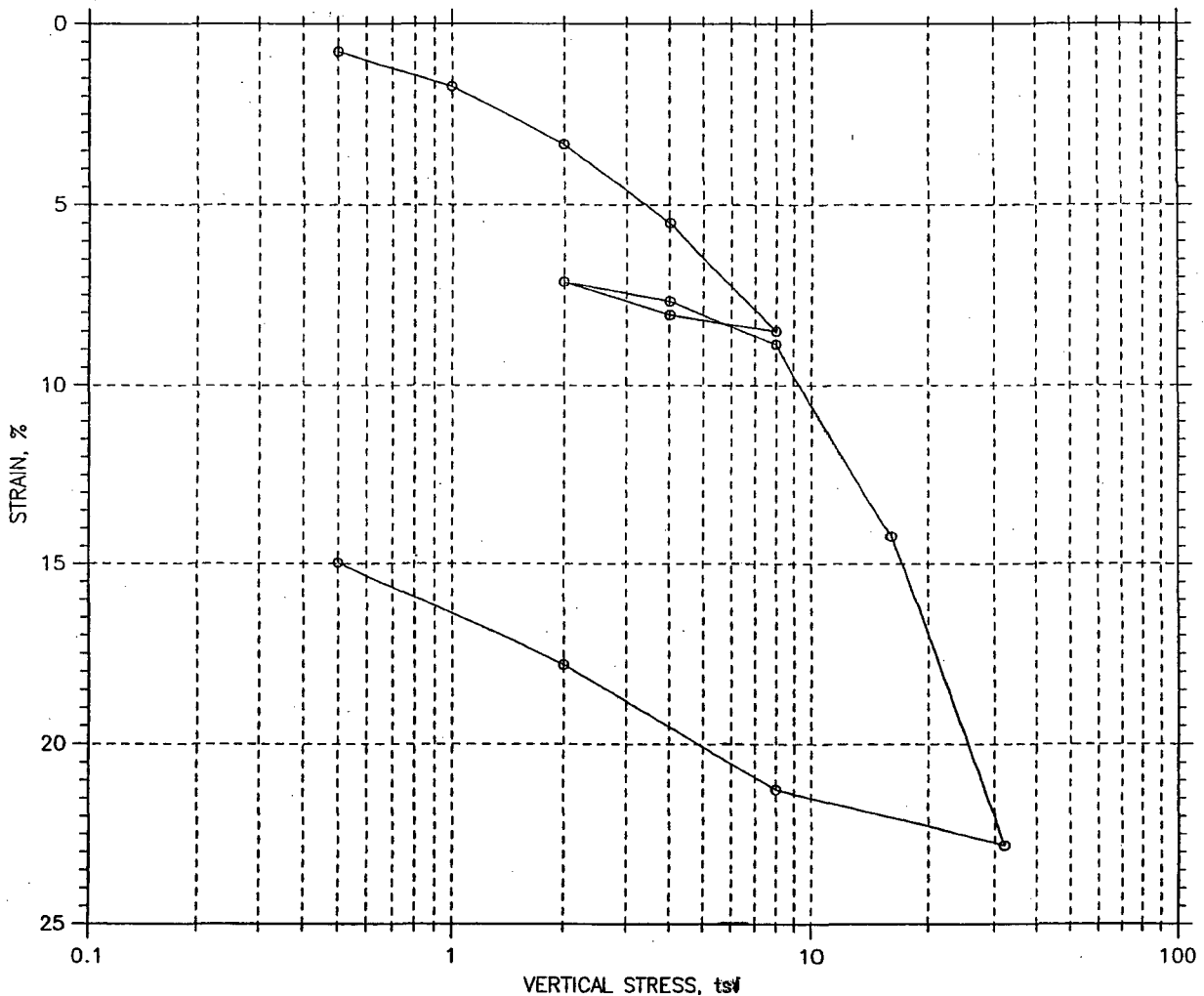
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-723	Tested By: md	Checked By: jdt
	Sample No.: UD-2	Test Date: 09/20/08	Depth: 28.5-30.5
	Test No.: C-26	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray clay (CH), 90% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System R - Compression Ratio: 0.5, Recompression Ratio: < 0.01		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	46.50	30.93
Preconsolidation Pressure: 10.3 tsf				Dry Unit Weight, pcf	78.1	91.84
Compression Index: ---				Saturation, %	108.39	99.99
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.16	0.84
LL: 69	PL: 22	PI: 47	GS: 2.70			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-726	Tested By: md	Checked By: jdt
	Sample No.: UD-2	Test Date: 09/18/2006	Depth: 23.5-25.5
	Test No.: C-23	Sample Type: tube	Elevation: ---
	Description: Moist, black clay (CH), 96% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System S - Compression Ratio: 0.29, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-726
Sample No.: UD-2
Test No.: C-23

Location: Calvert County, MD
Tested By: md
Test Date: 09/18/2006
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 23.5-25.5
Elevation: ---

Soil Description: Moist, black clay (CH), 96% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System S - Compression Ratio: 0.29, Recompression Ratio: 0.04

Measured Specific Gravity: 2.70
Initial Void Ratio: 1.16
Final Void Ratio: 0.84

Liquid Limit: 69
Plastic Limit: 22
Plasticity Index: 47

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
	Dane	RING		1756
Wt. Container + Wet Soil, gm	145.09	364.01	348.35	146.25
Wt. Container + Dry Soil, gm	108.36	317.22	317.22	113.68
Wt. Container, gm	8.27	216.59	216.59	8.39
Wt. Dry Soil, gm	100.09	100.63	100.63	105.29
Water Content, %	36.70	46.50	30.93	30.93
Void Ratio	---	1.16	0.84	---
Degree of Saturation, %	---	108.39	99.99	---
Dry Unit Weight, pcf	---	78.098	91.842	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-726
Sample No.: UD-2
Test No.: C-23

Location: Calvert County, MD
Tested By: md
Test Date: 09/18/2006
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 23.5-25.5
Elevation: ---

Soil Description: Moist, black clay (CH), 96% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System S - Compression Ratio: 0.29, Recompression Ratio: 0.04

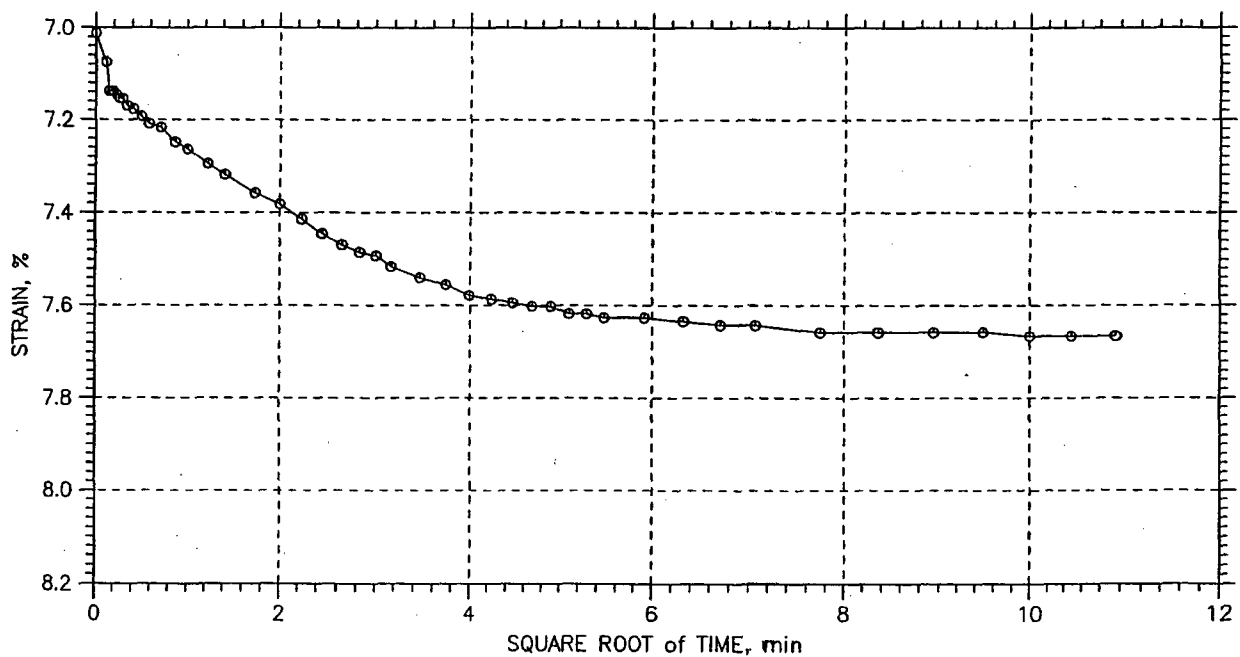
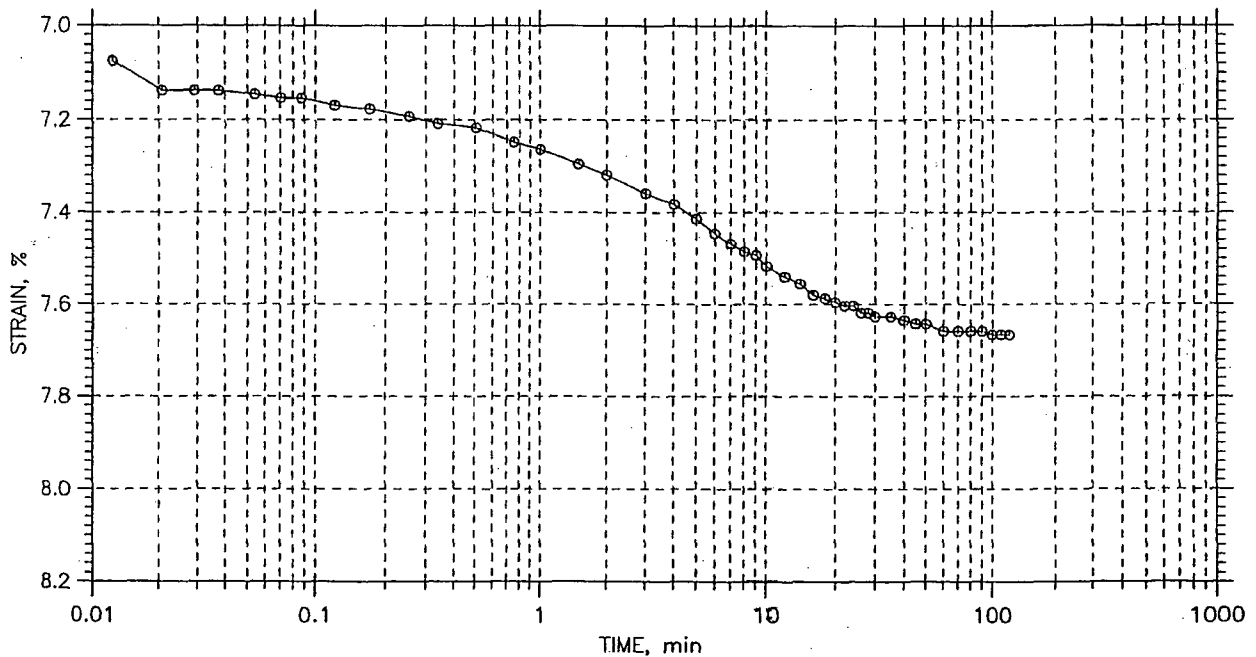
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Sq.Rt. min	Fitting		Coefficient of Consolidation		
						Log		Sq.Rt. in^2/sec	Log in^2/sec	Ave. in^2/sec
1	0.5	0.007633	1.142	0.76	0.1	0.0		1.18e-002	0.00e+000	1.18e-002
2	1	0.01728	1.121	1.73	7.5	0.0		1.07e-004	0.00e+000	1.07e-004
3	2	0.03319	1.087	3.32	3.4	0.0		2.32e-004	0.00e+000	2.32e-004
4	4	0.05488	1.040	5.49	3.8	0.0		1.96e-004	0.00e+000	1.96e-004
5	8	0.08484	0.975	8.48	5.0	0.0		1.43e-004	0.00e+000	1.43e-004
6	4	0.08043	0.985	8.04	2.1	2.7		3.24e-004	2.61e-004	2.89e-004
7	2	0.07126	1.004	7.13	4.7	4.8		1.48e-004	1.47e-004	1.47e-004
8	4	0.07665	0.993	7.67	2.5	2.7		2.81e-004	2.57e-004	2.69e-004
9	8	0.08846	0.967	8.85	3.4	3.9		2.03e-004	1.78e-004	1.90e-004
10	16	0.1422	0.851	14.22	11.4	17.0		5.64e-005	3.79e-005	4.53e-005
11	32	0.2281	0.666	22.81	25.6	0.0		2.14e-005	0.00e+000	2.14e-005
12	8	0.2125	0.700	21.25	6.7	9.7		7.46e-005	5.15e-005	6.09e-005
13	2	0.178	0.774	17.80	37.4	0.0		1.42e-005	0.00e+000	1.42e-005
14	0.5	0.1496	0.835	14.96	67.7	0.0		8.49e-006	0.00e+000	8.49e-006

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



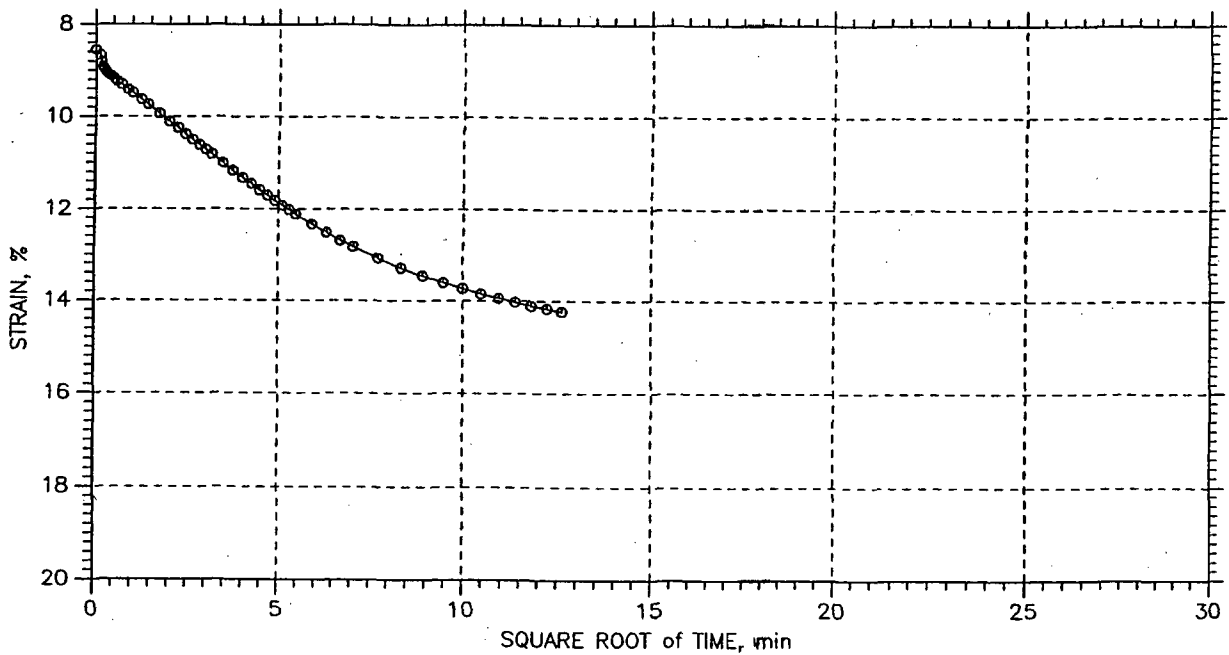
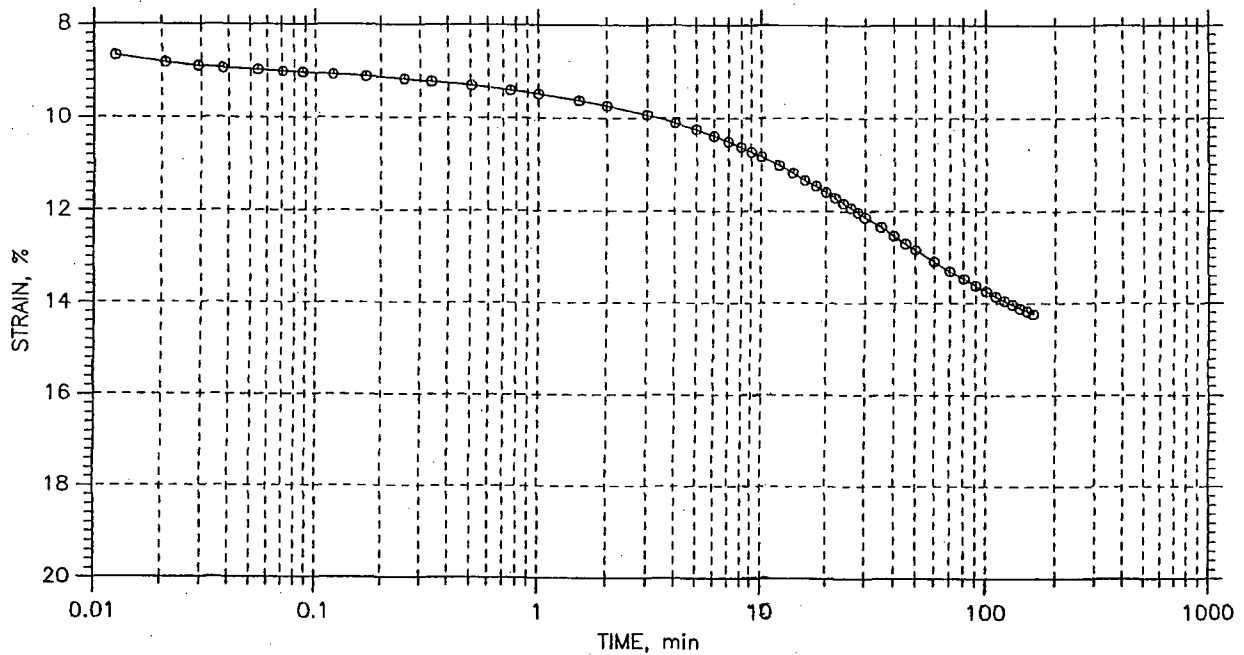
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-726	Tested By: md	Checked By: jdt
	Sample No.: UD-2	Test Date: 09/18/2006	Depth: 23.5-25.5
	Test No.: C-23	Sample Type: tube	Elevation: ---
	Description: Moist, black clay (CH), 96% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System S - Compression Ratio: 0.29, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA

TIME CURVES

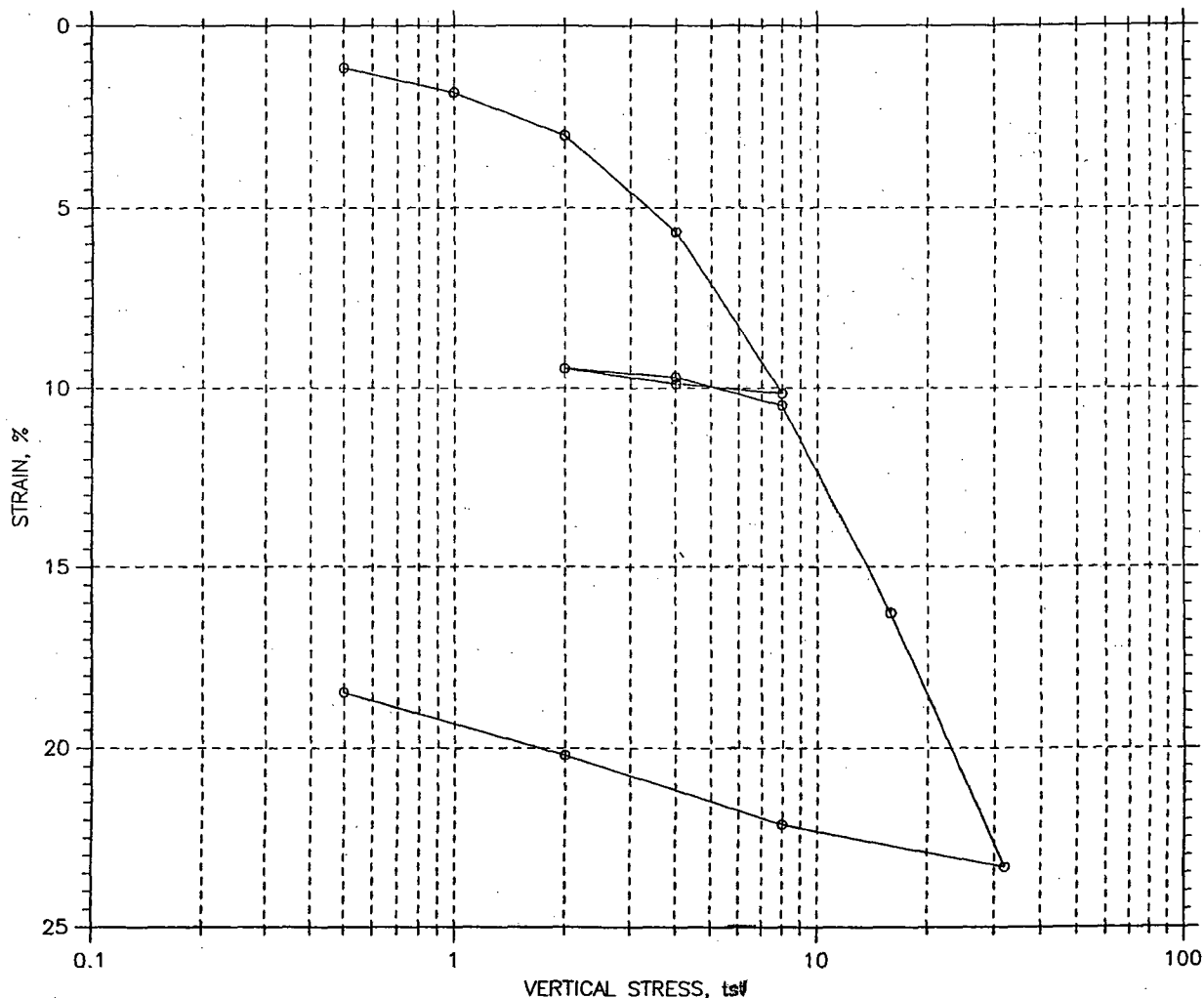
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-726	Tested By: md	Checked By: jdt
	Sample No.: UD-2	Test Date: 09/18/2006	Depth: 23.5-25.5
	Test No.: C-23	Sample Type: tube	Elevation: ---
	Description: Moist, black clay (CH), 96% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System S - Compression Ratio: 0.29, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	37.06	27.63
Preconsolidation Pressure: 6.4 tsf				Dry Unit Weight, pcf	79.22	97.15
Compression Index: ---				Saturation, %	87.88	99.99
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.15	0.75
LL: 64	PL: 19	PI: 45	GS: 2.73			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs	Location: MD	Project No.: GTX-6880
	Boring No.: B-723	Tested By: md	Checked By: njh
	Sample No.: UD-2	Test Date: 09/16/08	Depth: 38.5-40.5
	Test No.: C-17	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray clay (CH), 95% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.24, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs
Boring No.: B-723
Sample No.: UD-2
Test No.: C-17

Location: MD
Tested By: md
Test Date: 09/16/06
Sample Type: tube

Project No.: GTX-6880
Checked By: njh
Depth: 38.5-40.5
Elevation: ---

Soil Description: Moist, dark olive gray clay (CH), 95% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: 0.24, Recompression Ratio: 0.03

Measured Specific Gravity: 2.73
Initial Void Ratio: 1.15
Final Void Ratio: 0.75

Liquid Limit: 64
Plastic Limit: 19
Plasticity Index: 45

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID	1886	RING		1785
Wt. Container + Wet Soil, gm	190.6	356.39	346.76	142.31
Wt. Container + Dry Soil, gm	144.98	318.56	318.56	113.3
Wt. Container, gm	8.23	216.48	216.48	8.29
Wt. Dry Soil, gm	136.75	102.08	102.08	105.01
Water Content, %	33.36	37.06	27.63	27.63
Void Ratio	---	1.15	0.75	---
Degree of Saturation, %	---	87.88	99.99	---
Dry Unit Weight, pcf	---	79.222	97.152	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs
Boring No.: B-723
Sample No.: UD-2
Test No.: C-17

Location: MD
Tested By: md
Test Date: 09/16/06
Sample Type: tube

Project No.: GTX-6880
Checked By: njh
Depth: 38.5-40.5
Elevation: ---

Soil Description: Moist, dark olive gray clay (CH), 95% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: 0.24, Recompression Ratio: 0.03

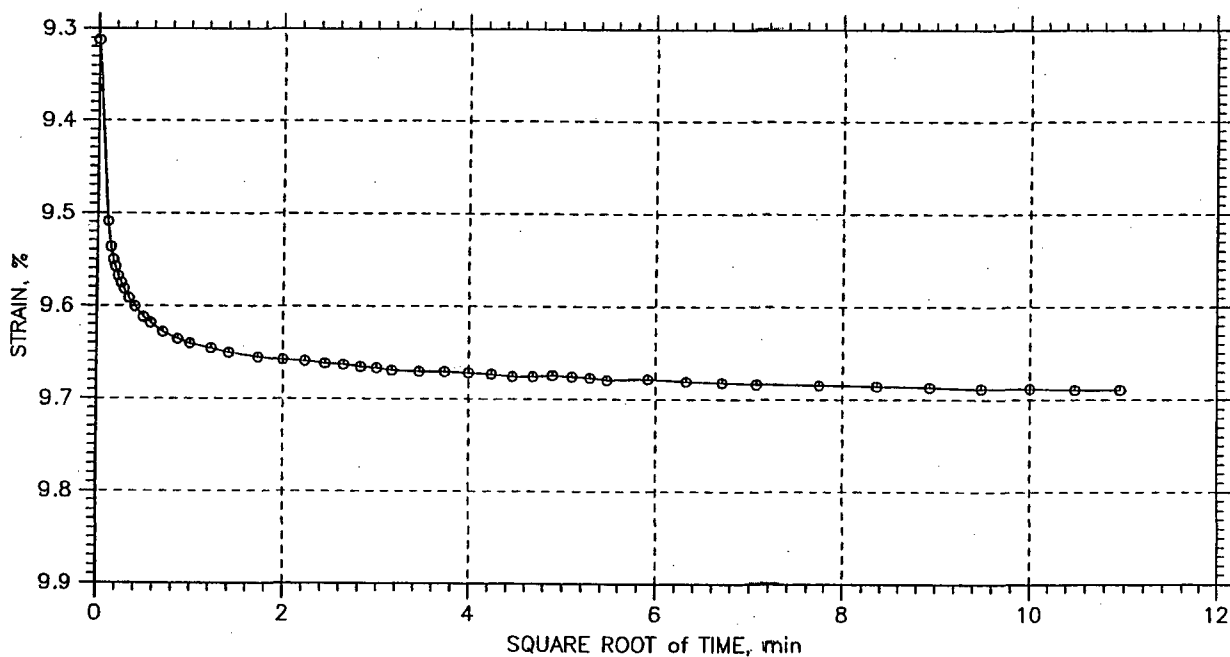
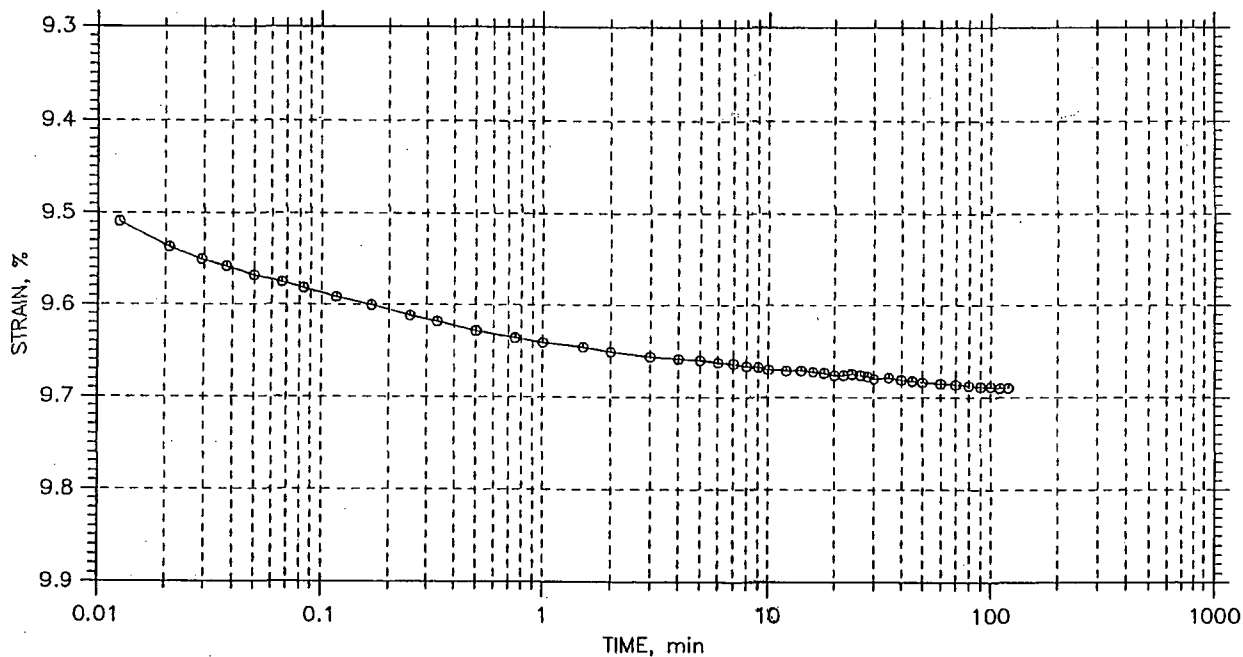
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.01164	1.126	1.16	0.0	0.0	2.72e-002	0.00e+000	2.72e-002
2	1	0.01839	1.112	1.84	0.1	0.0	1.50e-002	3.02e-002	2.00e-002
3	2	0.03009	1.087	3.01	0.0	0.0	3.57e-002	3.62e-002	3.59e-002
4	4	0.05662	1.029	5.66	0.1	0.0	1.37e-002	3.27e-002	1.93e-002
5	8	0.1015	0.933	10.15	0.1	0.0	7.21e-003	3.61e-002	1.20e-002
6	4	0.09875	0.939	9.87	0.0	0.0	1.84e-002	0.00e+000	1.84e-002
7	2	0.09453	0.948	9.45	0.1	0.0	6.42e-003	0.00e+000	6.42e-003
8	4	0.09689	0.943	9.69	0.0	0.0	2.83e-002	0.00e+000	2.83e-002
9	8	0.1048	0.926	10.48	0.3	0.0	2.20e-003	0.00e+000	2.20e-003
10	16	0.1627	0.801	16.27	1.2	1.3	5.27e-004	4.75e-004	5.00e-004
11	32	0.2333	0.649	23.33	2.8	3.1	1.91e-004	1.70e-004	1.80e-004
12	8	0.2213	0.675	22.13	0.2	0.0	2.99e-003	0.00e+000	2.99e-003
13	2	0.202	0.717	20.20	2.7	0.0	1.89e-004	0.00e+000	1.89e-004
14	0.5	0.1846	0.754	18.46	7.0	0.0	7.60e-005	0.00e+000	7.60e-005

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



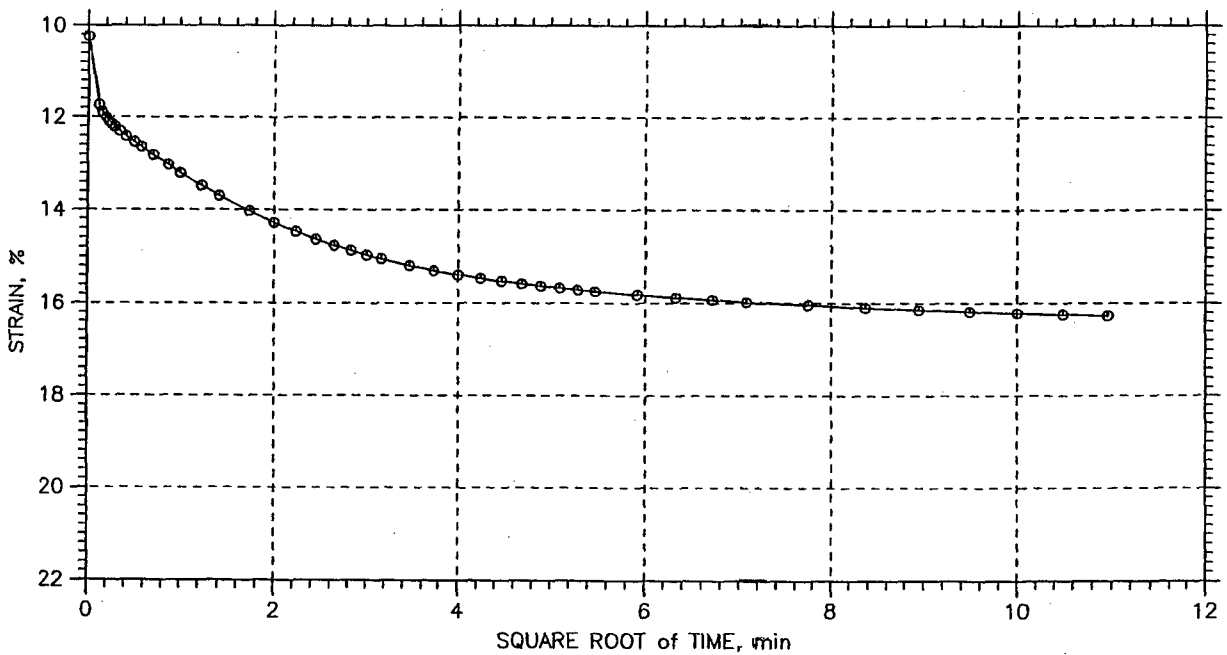
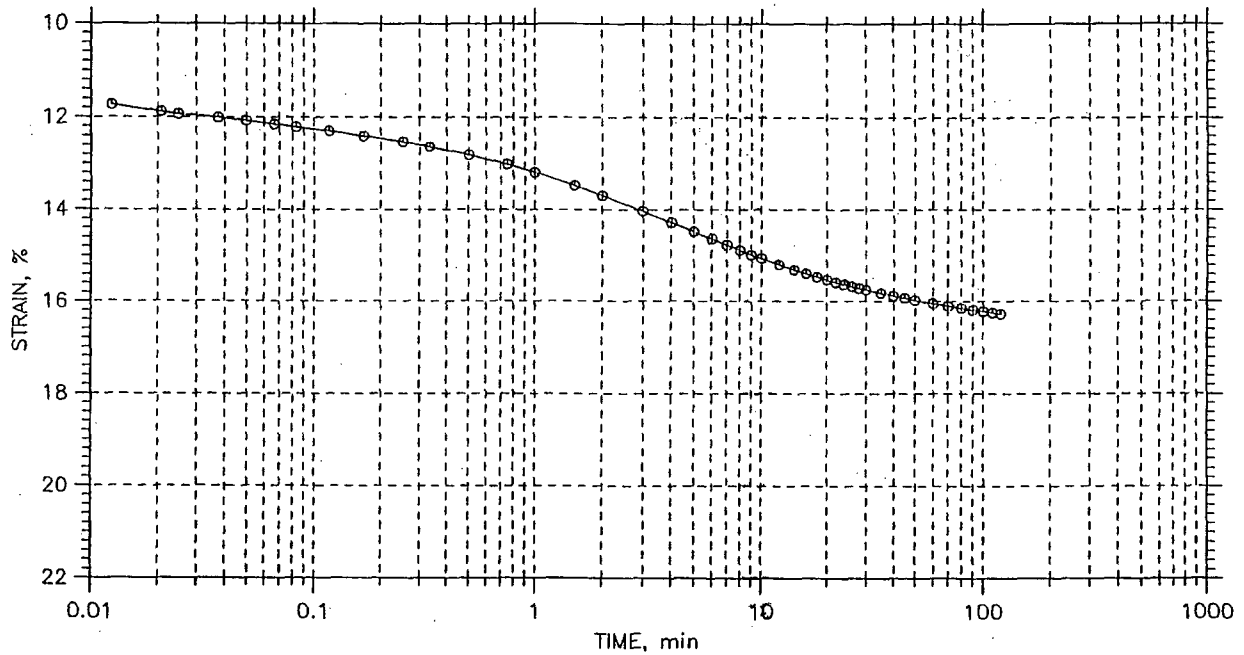
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs	Location: MD	Project No.: GTX-6880
	Boring No.: B-723	Tested By: md	Checked By: njh
	Sample No.: UD-2	Test Date: 09/16/08	Depth: 38.5-40.5
	Test No.: C-17	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray clay (CH), 95% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.24, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

TIME CURVES

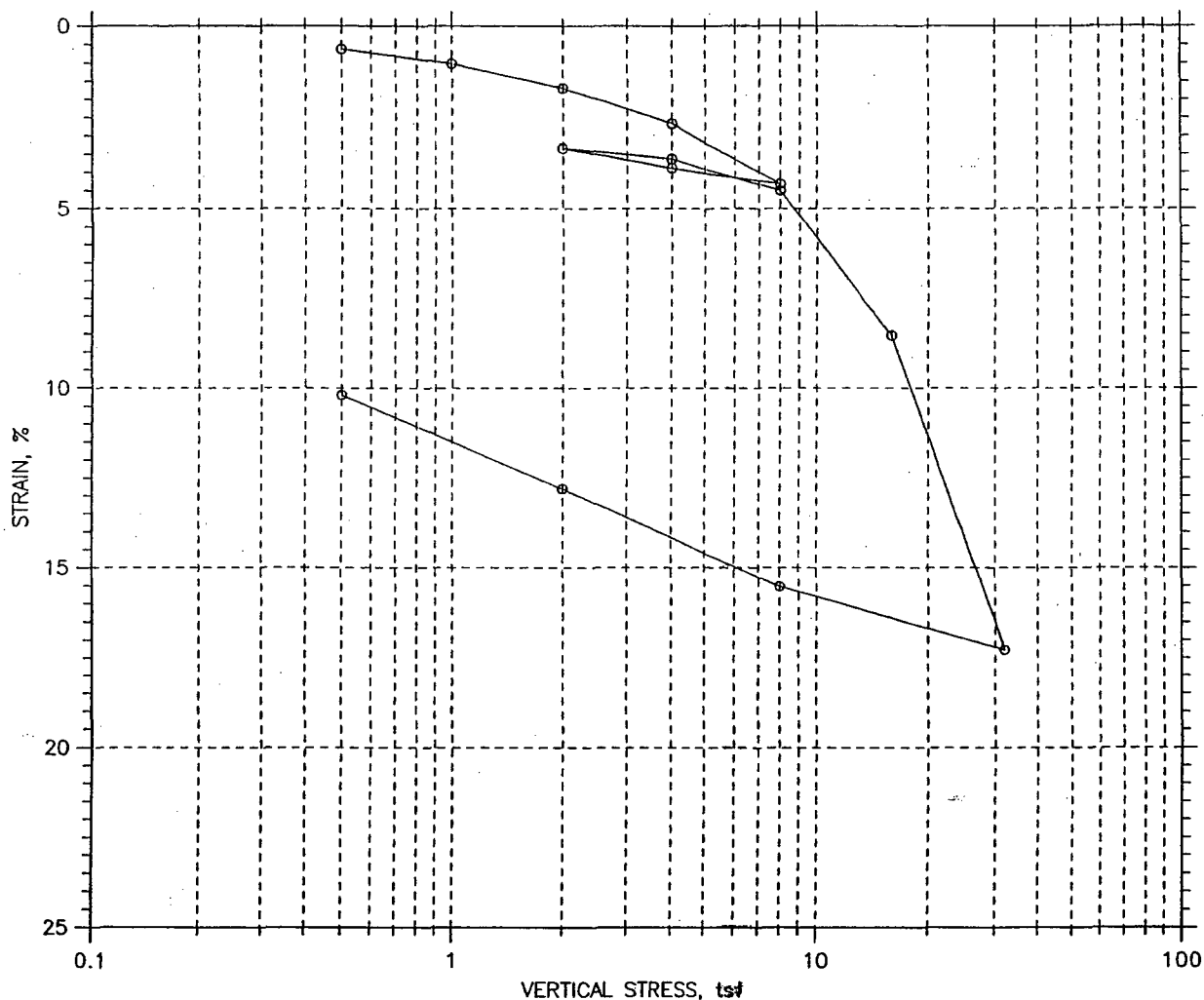
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs	Location: MD	Project No.: GTX-6880
	Boring No.: B-723	Tested By: md	Checked By: njh
	Sample No.: UD-2	Test Date: 09/16/06	Depth: 38.5-40.5
	Test No.: C-17	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray clay (CH), 95% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.24, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	38.08	30.15
Preconsolidation Pressure: 12 tsf				Dry Unit Weight, pcf	84.95	94.59
Compression Index: ---				Saturation, %	101.16	99.99
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.05	0.84
LL: 56	PL: 18	PI: 38	GS: 2.79			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-729	Tested By: md	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/20/08	Depth: 68.5-70.0
	Test No.: C-25	Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray organic clay (OH), 93% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.29, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-729
Sample No.: UD-1
Test No.: C-25

Location: Calvert County, MD
Tested By: md
Test Date: 09/20/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 68.5-70.0
Elevation: ---

Soil Description: Moist, dark greenish gray organic clay (OH), 93% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: 0.29, Recompression Ratio: 0.04

Measured Specific Gravity: 2.79
Initial Void Ratio: 1.05
Final Void Ratio: 0.84

Liquid Limit: 56
Plastic Limit: 18
Plasticity Index: 38

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimming	Specimen+Ring	Specimen+Ring	Trimming
	1511	RING		free willy
Wt. Container + Wet Soil, gm	121.86	367.6	358.92	154.46
Wt. Container + Dry Soil, gm	93.71	325.91	325.91	120.57
Wt. Container, gm	8.08	216.45	216.45	8.17
Wt. Dry Soil, gm	85.63	109.46	109.46	112.4
Water Content, %	32.87	38.08	30.15	30.15
Void Ratio	---	1.05	0.84	---
Degree of Saturation, %	---	101.16	99.99	---
Dry Unit Weight, pcf	---	84.954	94.595	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-729
Sample No.: UD-1
Test No.: C-25

Location: Calvert County, MD
Tested By: md
Test Date: 09/20/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 68.5-70.0
Elevation: ---

Soil Description: Moist, dark greenish gray organic clay (OH), 93% passing#200 sieve, inundated@0.5 tsf
Remarks: System G - Compression Ratio: 0.29, Recompression Ratio: 0.04

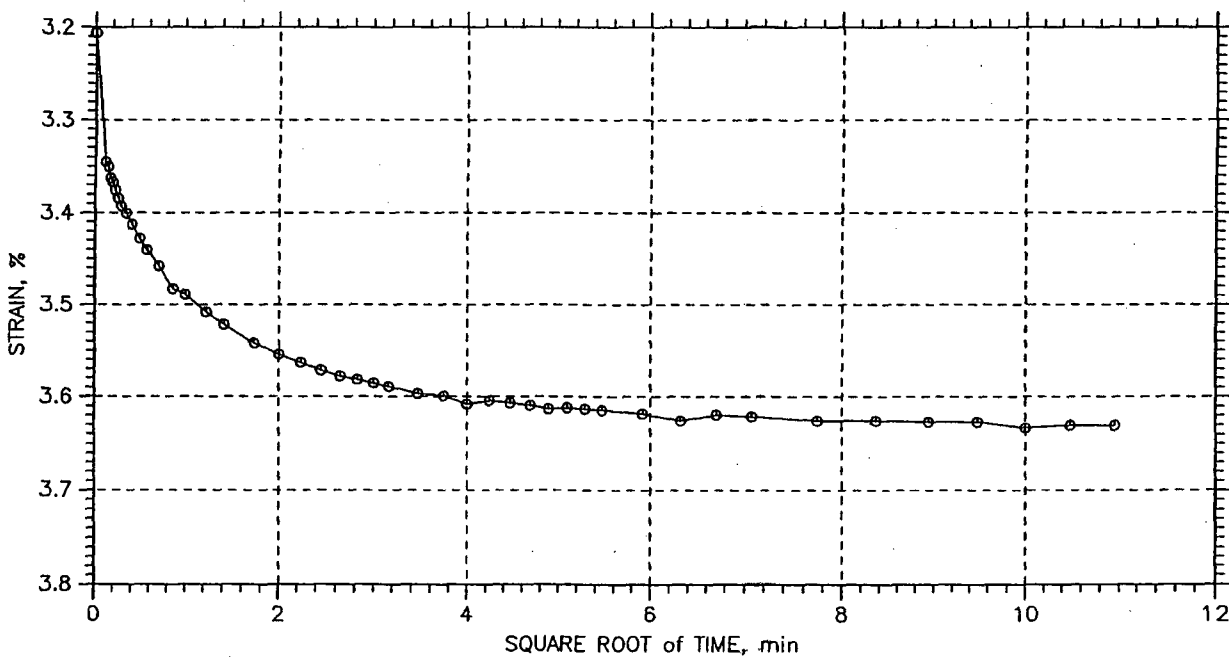
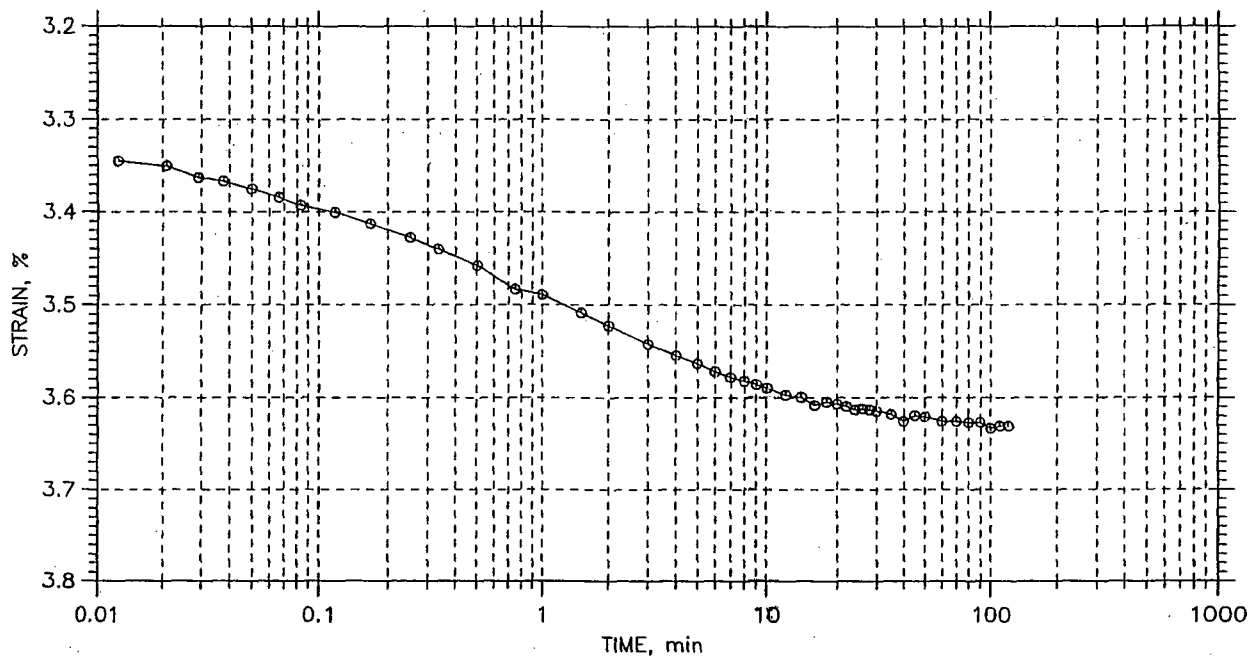
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in^2/sec	Log in^2/sec	Ave. in^2/sec
1	0.5	0.006284	1.037	0.63	0.0	0.0	4.47e-002	0.00e+000	4.47e-002
2	1	0.0102	1.029	1.02	0.2	0.0	3.66e-003	0.00e+000	3.66e-003
3	2	0.01692	1.016	1.69	0.4	0.0	1.91e-003	0.00e+000	1.91e-003
4	4	0.02667	0.996	2.67	0.4	0.0	1.81e-003	0.00e+000	1.81e-003
5	8	0.04311	0.962	4.31	1.3	0.0	5.76e-004	0.00e+000	5.76e-004
6	4	0.03885	0.971	3.88	0.4	0.0	1.80e-003	0.00e+000	1.80e-003
7	2	0.03345	0.982	3.35	1.6	0.0	4.87e-004	0.00e+000	4.87e-004
8	4	0.03631	0.976	3.63	0.3	0.0	2.37e-003	0.00e+000	2.37e-003
9	8	0.04487	0.958	4.49	0.9	0.9	8.25e-004	8.75e-004	8.50e-004
10	16	0.0854	0.875	8.54	5.5	8.6	1.31e-004	8.31e-005	1.02e-004
11	32	0.1727	0.696	17.27	21.0	20.7	2.97e-005	3.01e-005	2.99e-005
12	8	0.1551	0.732	15.51	2.2	0.0	2.58e-004	0.00e+000	2.58e-004
13	2	0.128	0.788	12.80	16.0	0.0	3.79e-005	0.00e+000	3.79e-005
14	0.5	0.1019	0.841	10.19	56.7	0.0	1.14e-005	0.00e+000	1.14e-005

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



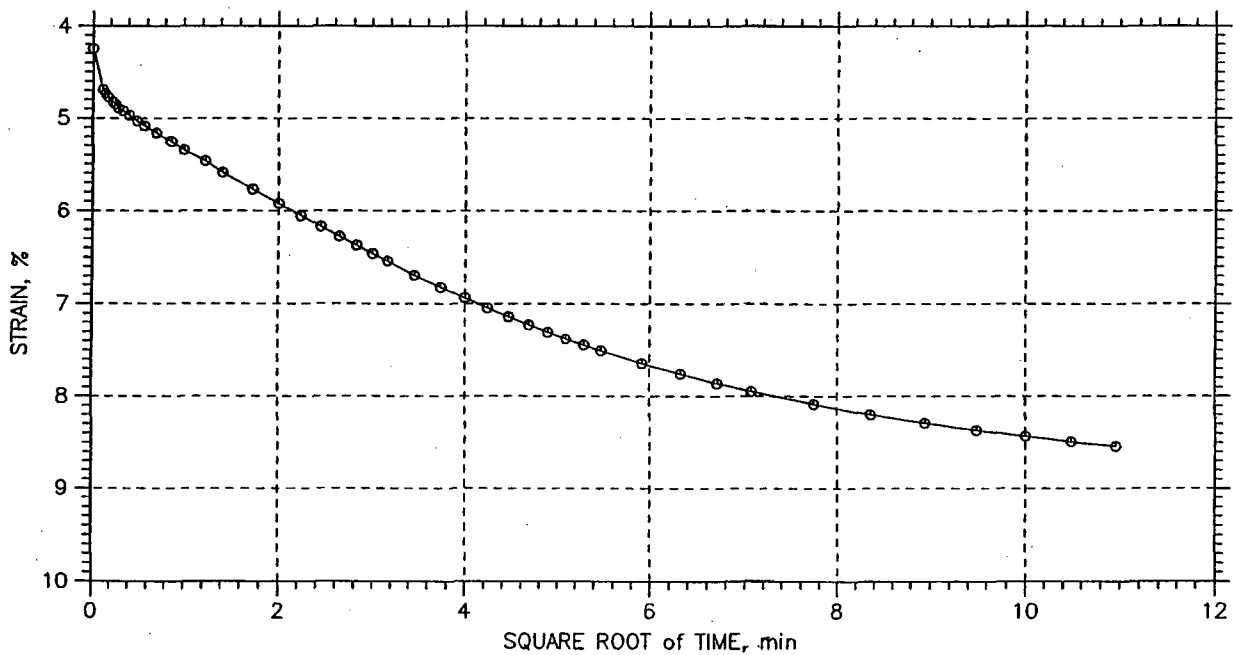
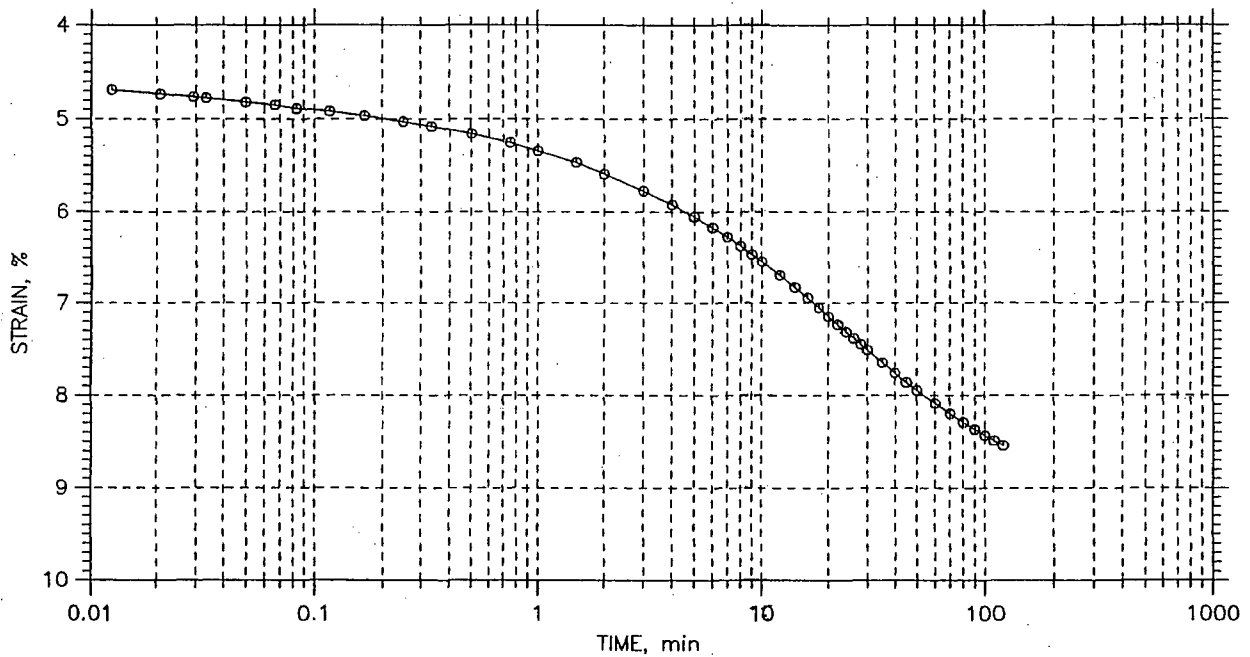
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-729	Tested By: md	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/20/06	Depth: 68.5-70.0
	Test No.: C-25	Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray organic clay (OH), 93% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.29, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA

TIME CURVES

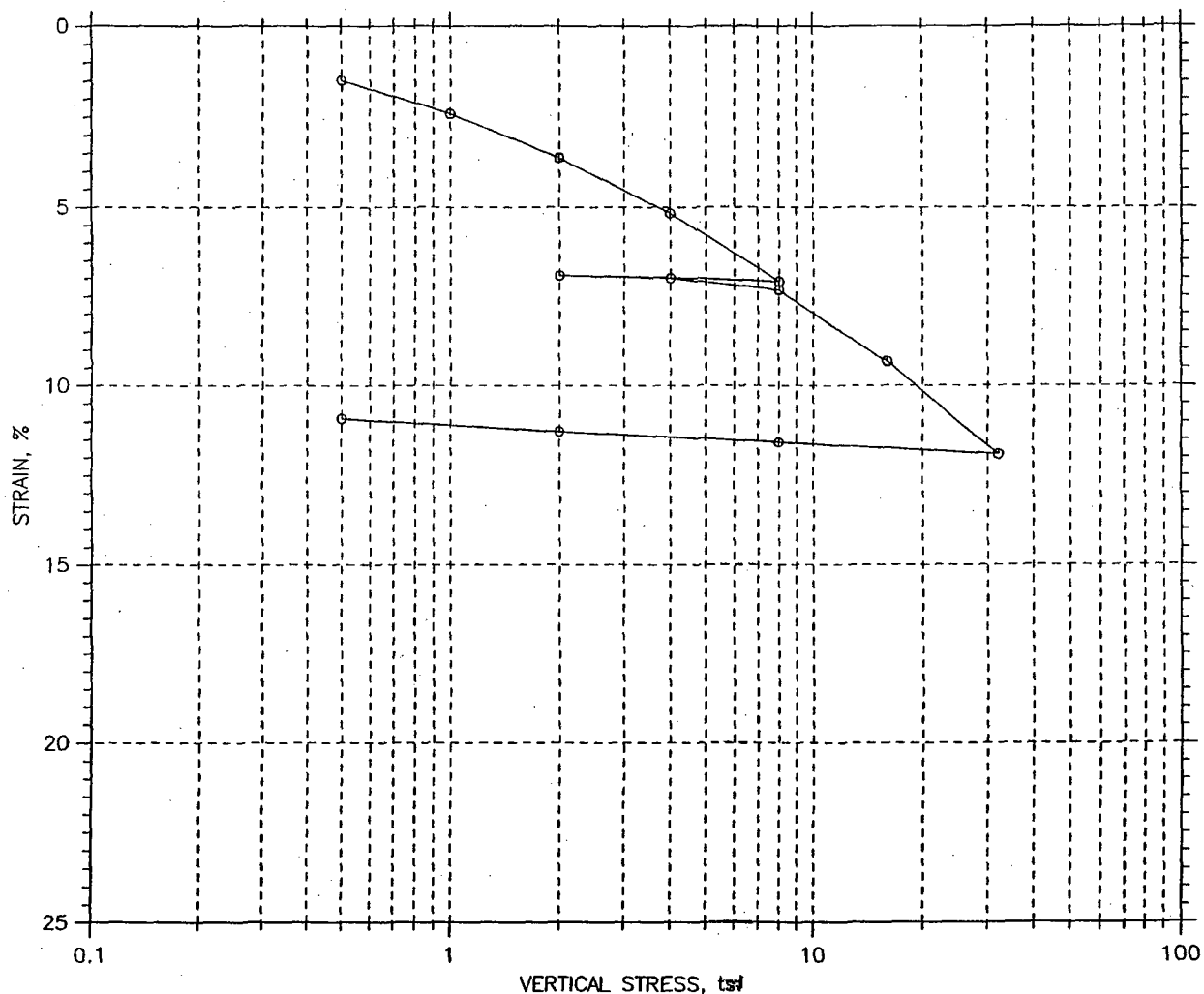
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-729	Tested By: md	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/20/08	Depth: 68.5-70.0
	Test No.: C-25	Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray organic clay (OH), 93% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: 0.29, Recompression Ratio: 0.04		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---			Water Content, %	25.65	21.65	
Preconsolidation Pressure: 4 tsf			Dry Unit Weight, pcf	94.24	105.8	
Compression Index: ---			Saturation, %	85.84	95.57	
Diameter: 2.5 in		Height: 1 in		Void Ratio	0.82	0.62
LL: 26	PL: 19	PI: 7	GS: 2.75			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-732	Tested By: md	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/20/08	Depth: 15-17
	Test No.: C-24	Sample Type: tube	Elevation: ---
	Description: Moist, mottled pale yellow and brownish yellow clayey sand (SC), 32% < #200 sieve		
	Remarks: System C-Compression Ratio: 0.08, Recompression Ratio: 0.01, inundated @ 0.5 tsf		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-732
Sample No.: UD-1
Test No.: C-24

Location: Calvert County, MD
Tested By: md
Test Date: 09/20/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 15-17
Elevation: ---

Soil Description: Moist, mottled pale yellow and brownish yellow clayey sand (SC), 32% < #200 sieve
Remarks: System C-Compression Ratio: 0.08, Recompression Ratio: 0.01, inundated @ 0.5 tsf

Measured Specific Gravity: 2.75
Initial Void Ratio: 0.82
Final Void Ratio: 0.62

Liquid Limit: 26
Plastic Limit: 19
Plasticity Index: 7

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
	1157	RING		609
Wt. Container + Wet Soil, gm	121.67	369.06	364.2	155.31
Wt. Container + Dry Soil, gm	99.58	337.91	337.91	129.14
Wt. Container, gm	8.06	216.49	216.49	8.25
Wt. Dry Soil, gm	91.52	121.42	121.42	120.89
Water Content, %	24.14	25.65	21.65	21.65
Void Ratio	---	0.82	0.62	---
Degree of Saturation, %	---	85.84	95.57	---
Dry Unit Weight, pcf	---	94.235	105.78	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
 Boring No.: B-732
 Sample No.: UD-1
 Test No.: C-24

Location: Calvert County, MD
 Tested By: md
 Test Date: 09/20/06
 Sample Type: tube

Project No.: GTX-6880
 Checked By: jdt
 Depth: 15-17
 Elevation: ---

Soil Description: Moist, mottled pale yellow and brownish yellow clayey sand (SC), 32% < #200 sieve
 Remarks: System C-Compression Ratio: 0.08, Recompression Ratio: 0.01, inundated @ 0.5 tsf

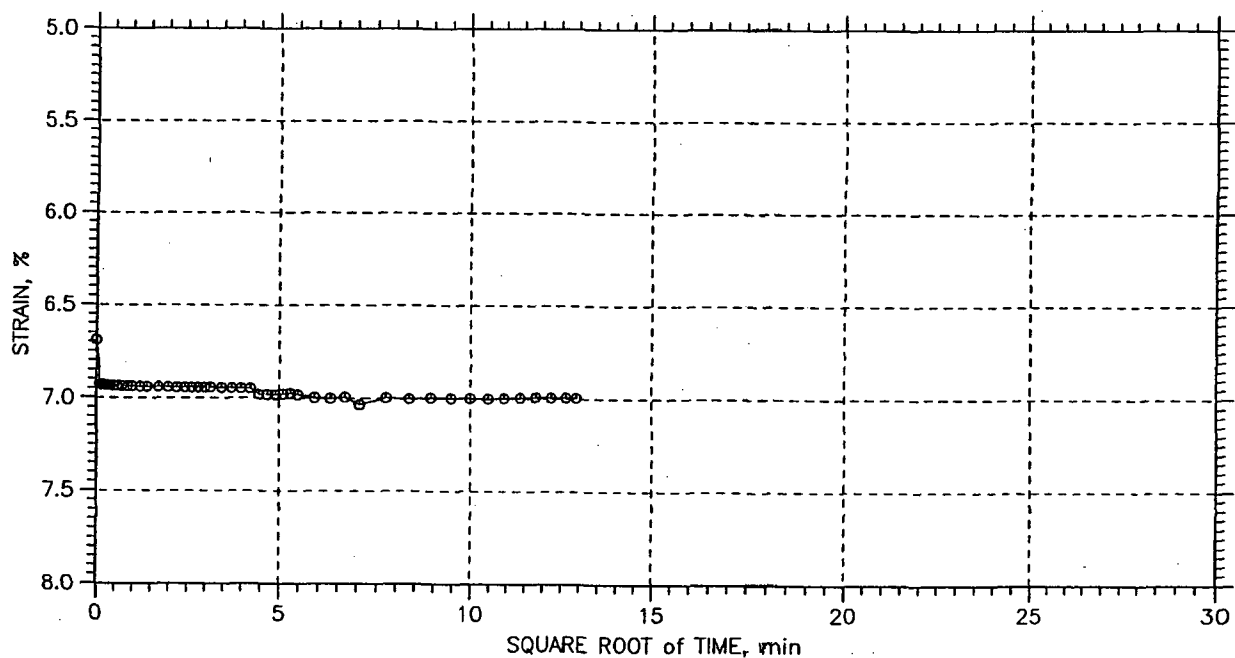
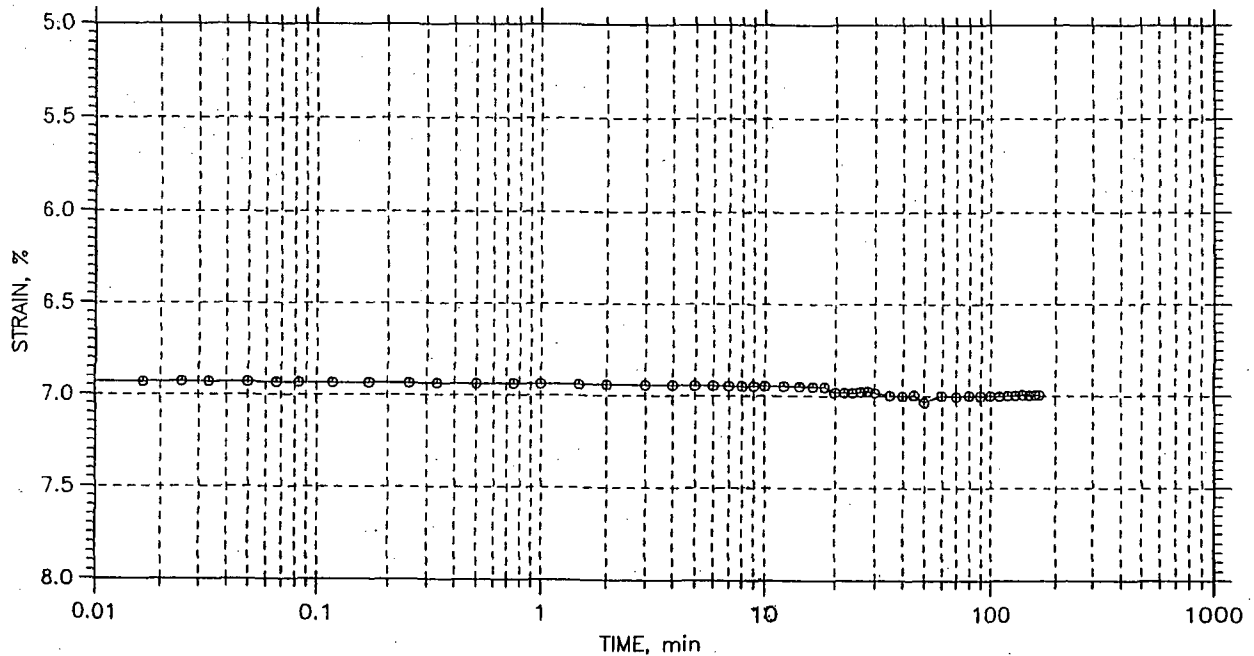
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.01488	0.795	1.49	0.0	0.0	2.72e-002	2.31e-002	2.49e-002
2	1	0.024	0.778	2.40	0.0	0.0	2.42e-002	3.01e-002	2.68e-002
3	2	0.03623	0.756	3.62	0.0	0.0	4.24e-002	3.59e-002	3.89e-002
4	4	0.05164	0.728	5.16	0.0	0.0	4.96e-002	4.15e-002	4.52e-002
5	8	0.07085	0.693	7.09	0.0	0.0	5.90e-002	5.22e-002	5.54e-002
6	4	0.06982	0.695	6.98	0.0	0.0	1.74e-001	0.00e+000	1.74e-001
7	2	0.06922	0.696	6.92	0.0	0.0	1.45e-001	0.00e+000	1.45e-001
8	4	0.06993	0.694	6.99	0.0	0.0	1.34e-001	0.00e+000	1.34e-001
9	8	0.0732	0.688	7.32	0.0	0.0	1.49e-001	0.00e+000	1.49e-001
10	16	0.0933	0.652	9.33	0.0	0.0	6.37e-002	0.00e+000	6.37e-002
11	32	0.119	0.605	11.90	0.0	0.0	5.71e-002	0.00e+000	5.71e-002
12	8	0.1157	0.611	11.57	0.0	0.0	5.97e-002	0.00e+000	5.97e-002
13	2	0.1127	0.616	11.27	0.0	0.0	1.06e-001	0.00e+000	1.06e-001
14	0.5	0.1092	0.623	10.92	0.0	0.0	2.21e-002	0.00e+000	2.21e-002

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



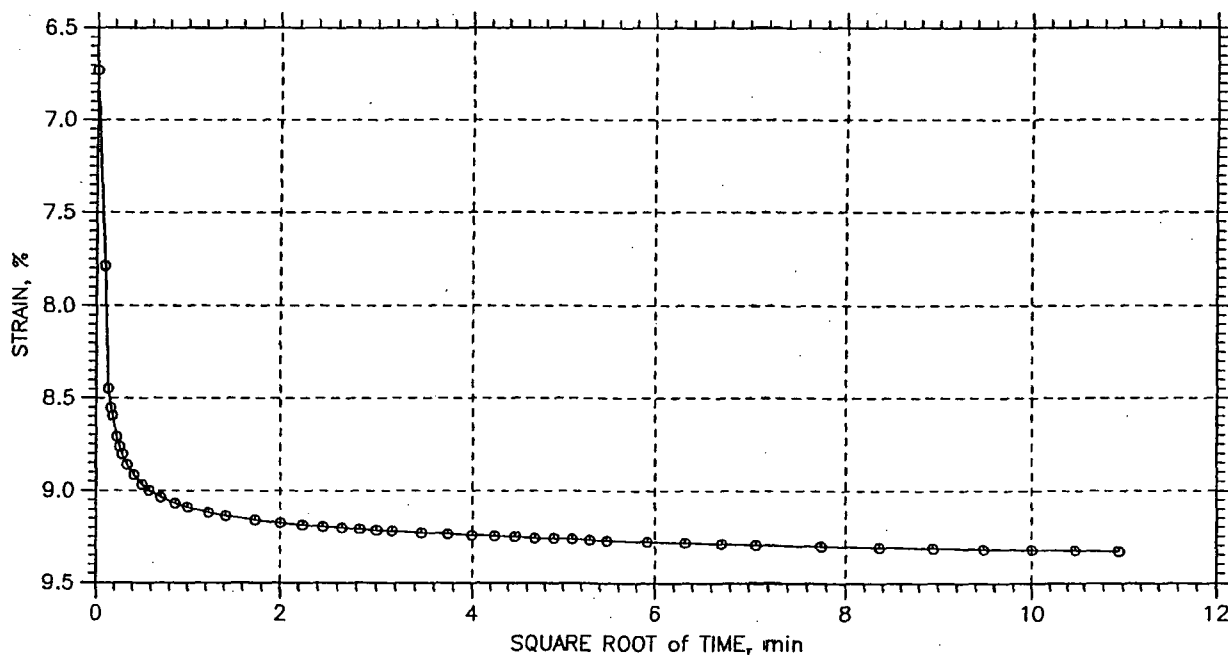
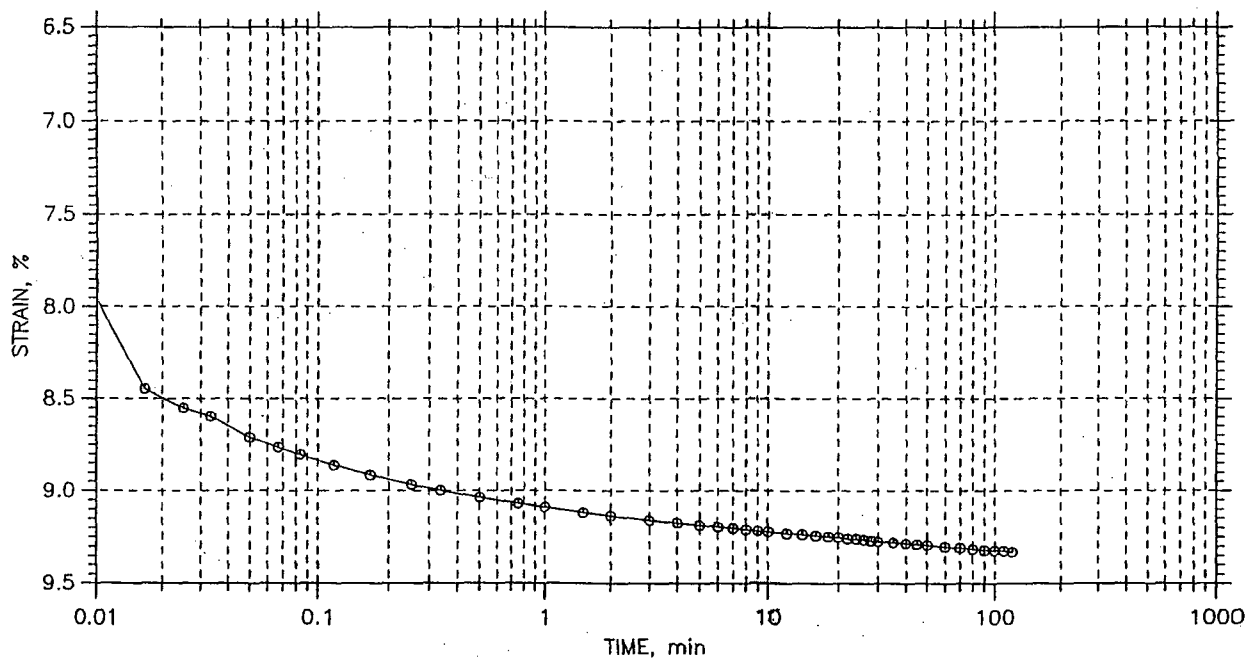
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-732	Tested By: md	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/20/08	Depth: 15-17
	Test No.: C-24	Sample Type: tube	Elevation: ---
	Description: Moist, mottled pale yellow and brownish yellow clayey sand (SC), 32% < #200 sieve		
	Remarks: System C-Compression Ratio: 0.08, Recompression Ratio: 0.01, inundated @ 0.5 tsf		

CONSOLIDATION TEST DATA

TIME CURVES

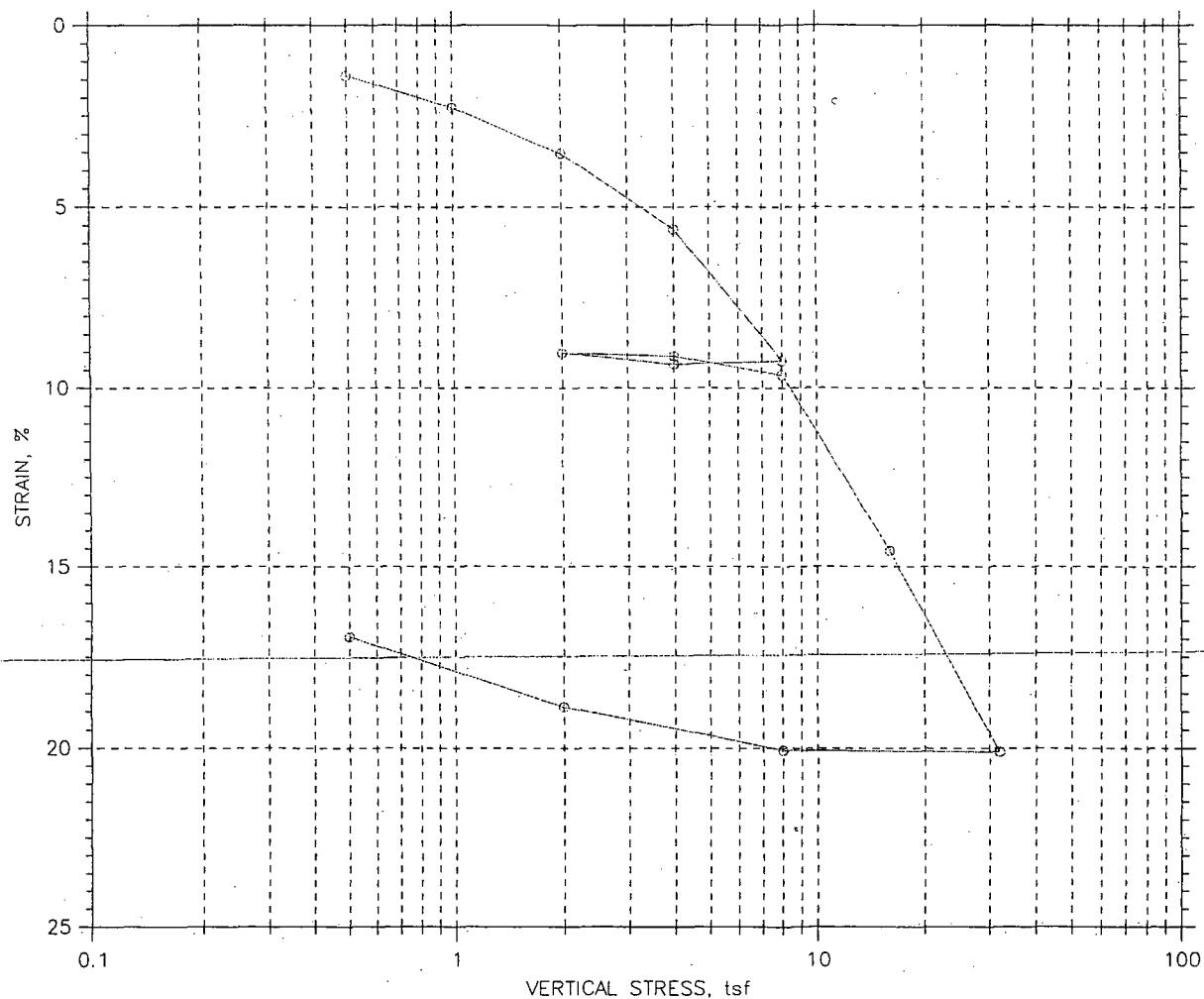
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-732	Tested By: md	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/20/06	Depth: 15-17
	Test No.: C-24	Sample Type: tube	Elevation: ---
	Description: Moist, mottled pale yellow and brownish yellow clayey sand (SC), 32% < #200 sieve		
	Remarks: System C-Compression Ratio: 0.08, Recompression Ratio: 0.01, inundated @ 0.5 tsf		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	37.46	24.35
Preconsolidation Pressure: 5.7 tsf				Dry Unit Weight, pcf	85.03	102.4
Compression Index: ---				Saturation, %	101.82	100.00
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.00	0.66
LL: 51	PL: 15	PI: 36	GS: 2.73			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-733	Tested By: md	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/18/06	Depth: 23.5-25.5
	Test No.: C-22	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray clay with sand (CH), 78% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System R - Compression Ratio: 0.18, Recompression Ratio: 0.02		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
 Boring No.: B-733
 Sample No.: UD-1
 Test No.: C-22

Location: Calvert County, MD
 Tested By: md
 Test Date: 09/18/06
 Sample Type: tube

Project No.: GTX-6880
 Checked By: jdt
 Depth: 23.5-25.5
 Elevation: ---

Soil Description: Moist, dark olive gray clay with sand (CH), 78% passing #200 sieve, inundated @ 0.5 tsf
 Remarks: System R - Compression Ratio: 0.18, Recompression Ratio: 0.02

Measured Specific Gravity: 2.73
 Initial Void Ratio: 1.00
 Final Void Ratio: 0.66

Liquid Limit: 51
 Plastic Limit: 15
 Plasticity Index: 36

Initial Height: 1.00 in
 Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
	Bells	RING		614
Wt. Container + Wet Soil, gm	128.65	259.9	245.53	147.08
Wt. Container + Dry Soil, gm	98.14	218.86	218.86	119.89
Wt. Container, gm	7.89	109.3	109.3	8.21
Wt. Dry Soil, gm	90.25	109.56	109.56	111.68
Water Content, %	33.81	37.46	24.35	24.35
Void Ratio	---	1.00	0.66	---
Degree of Saturation, %	---	101.82	100.00	---
Dry Unit Weight, pcf	---	85.025	102.38	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-733
Sample No.: UD-1
Test No.: C-22

Location: Calvert County, MD
Tested By: md
Test Date: 09/18/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 23.5-25.5
Elevation: ---

Soil Description: Moist, dark olive gray clay with sand (CH), 78% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System R - Compression Ratio: 0.18, Recompression Ratio: 0.02

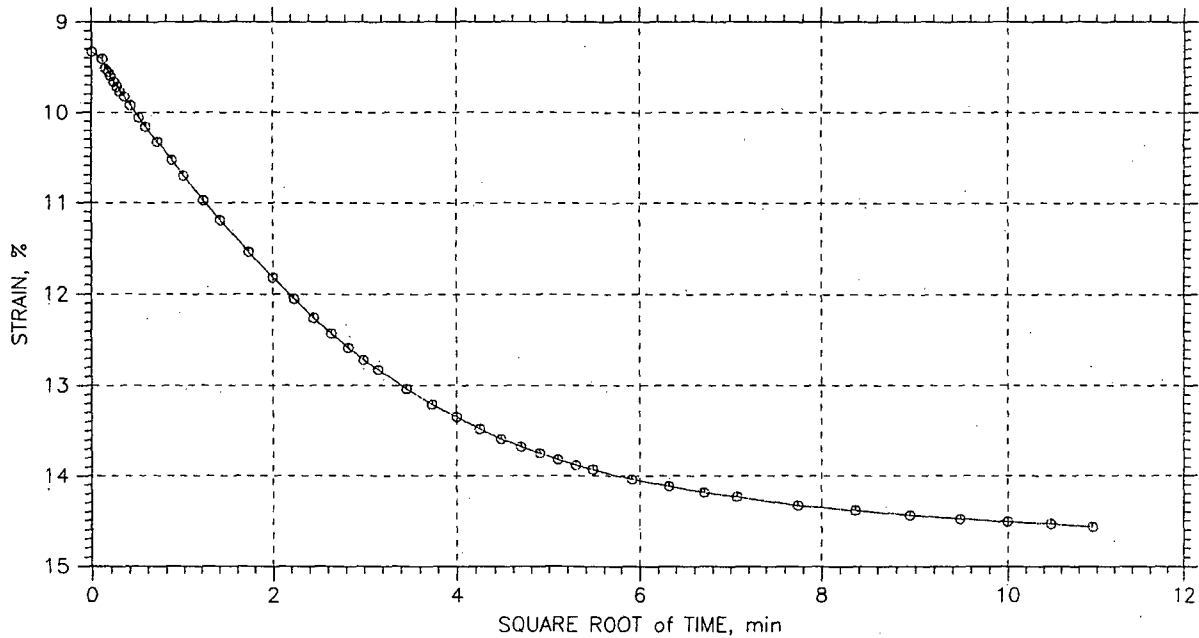
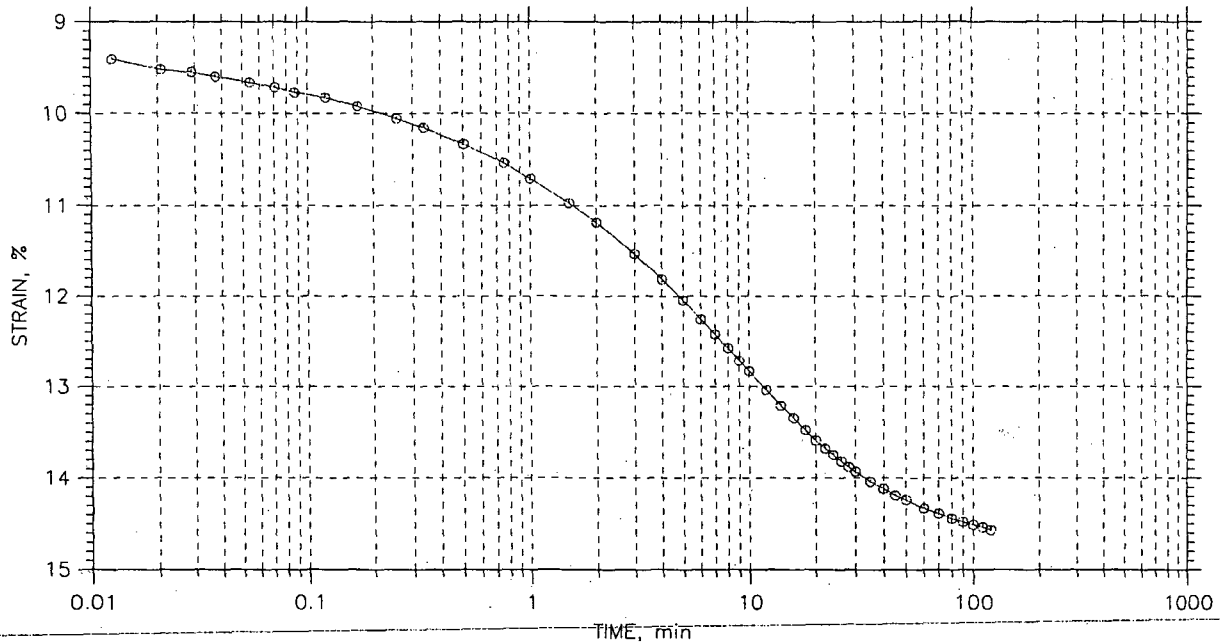
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq. Rt. min	Log min	Sq. Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.01385	0.977	1.38	0.1	0.1	6.80e-003	9.21e-003	7.82e-003
2	1	0.02267	0.959	2.27	0.3	0.3	2.58e-003	2.99e-003	2.77e-003
3	2	0.03539	0.933	3.54	0.3	0.2	2.57e-003	3.54e-003	2.98e-003
4	4	0.05606	0.892	5.61	0.8	0.7	9.04e-004	1.14e-003	1.01e-003
5	8	0.0924	0.819	9.24	1.6	2.6	4.47e-004	2.76e-004	3.41e-004
6	4	0.09339	0.817	9.34	0.4	0.0	1.77e-003	0.00e+000	1.77e-003
7	2	0.09031	0.823	9.03	1.3	1.7	5.02e-004	4.05e-004	4.48e-004
8	4	0.09118	0.822	9.12	0.5	0.0	1.34e-003	0.00e+000	1.34e-003
9	8	0.09642	0.811	9.64	1.7	1.2	4.00e-004	5.46e-004	4.62e-004
10	16	0.1457	0.712	14.57	2.8	3.7	2.27e-004	1.70e-004	1.95e-004
11	32	0.201	0.602	20.10	3.3	4.1	1.70e-004	1.39e-004	1.53e-004
12	8	0.2006	0.602	20.06	0.8	0.0	6.44e-004	0.00e+000	6.44e-004
13	2	0.1887	0.626	18.87	3.5	0.0	1.51e-004	0.00e+000	1.51e-004
14	0.5	0.1695	0.665	16.95	12.7	0.0	4.36e-005	0.00e+000	4.36e-005

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 10 of 14

Stress: 16. tsf



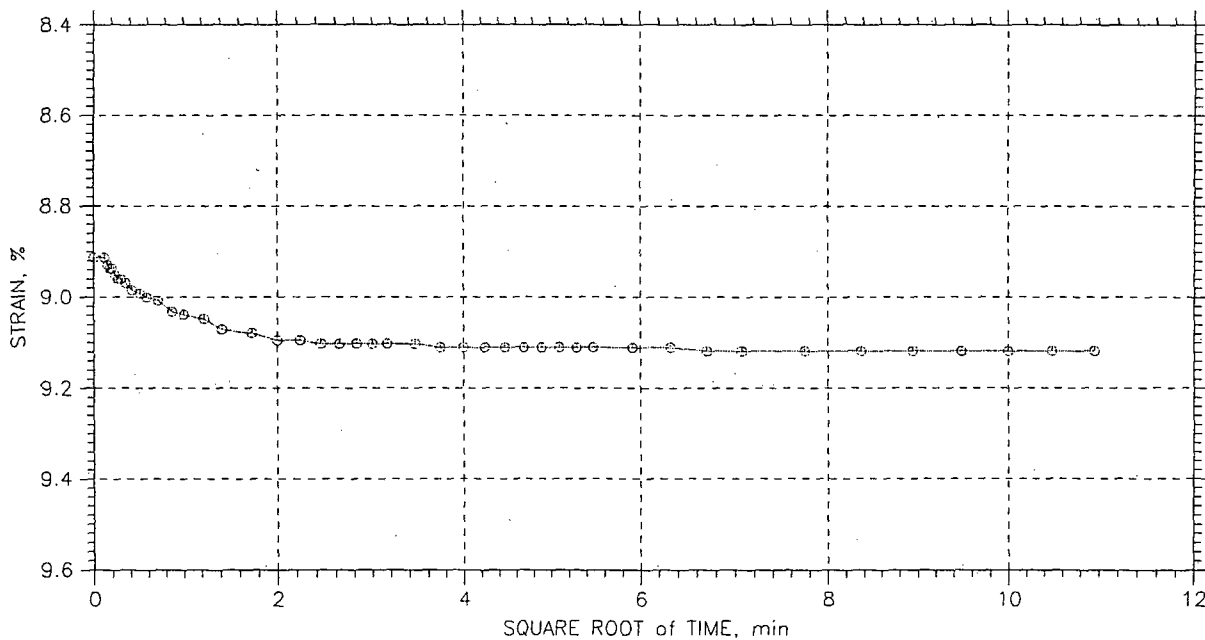
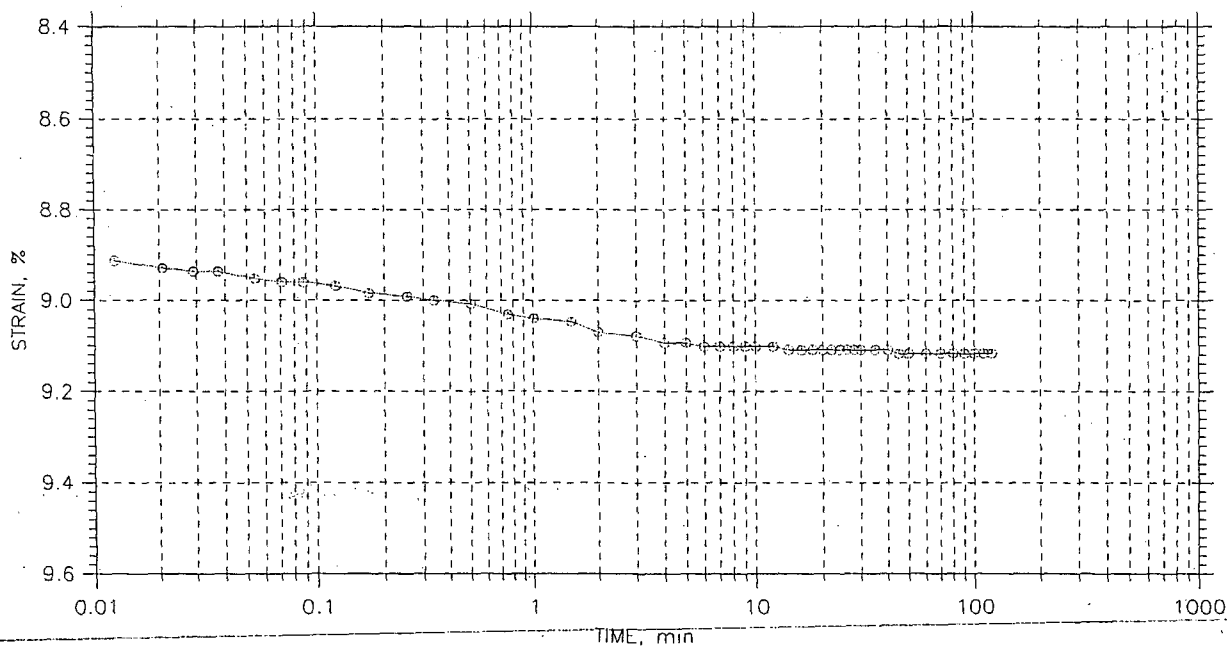
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-733	Tested By: md	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/18/06	Depth: 23.5-25.5
	Test No.: C-22	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray clay with sand (CH), 78% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System R - Compression Ratio: 0.18, Recompression Ratio: 0.02		

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

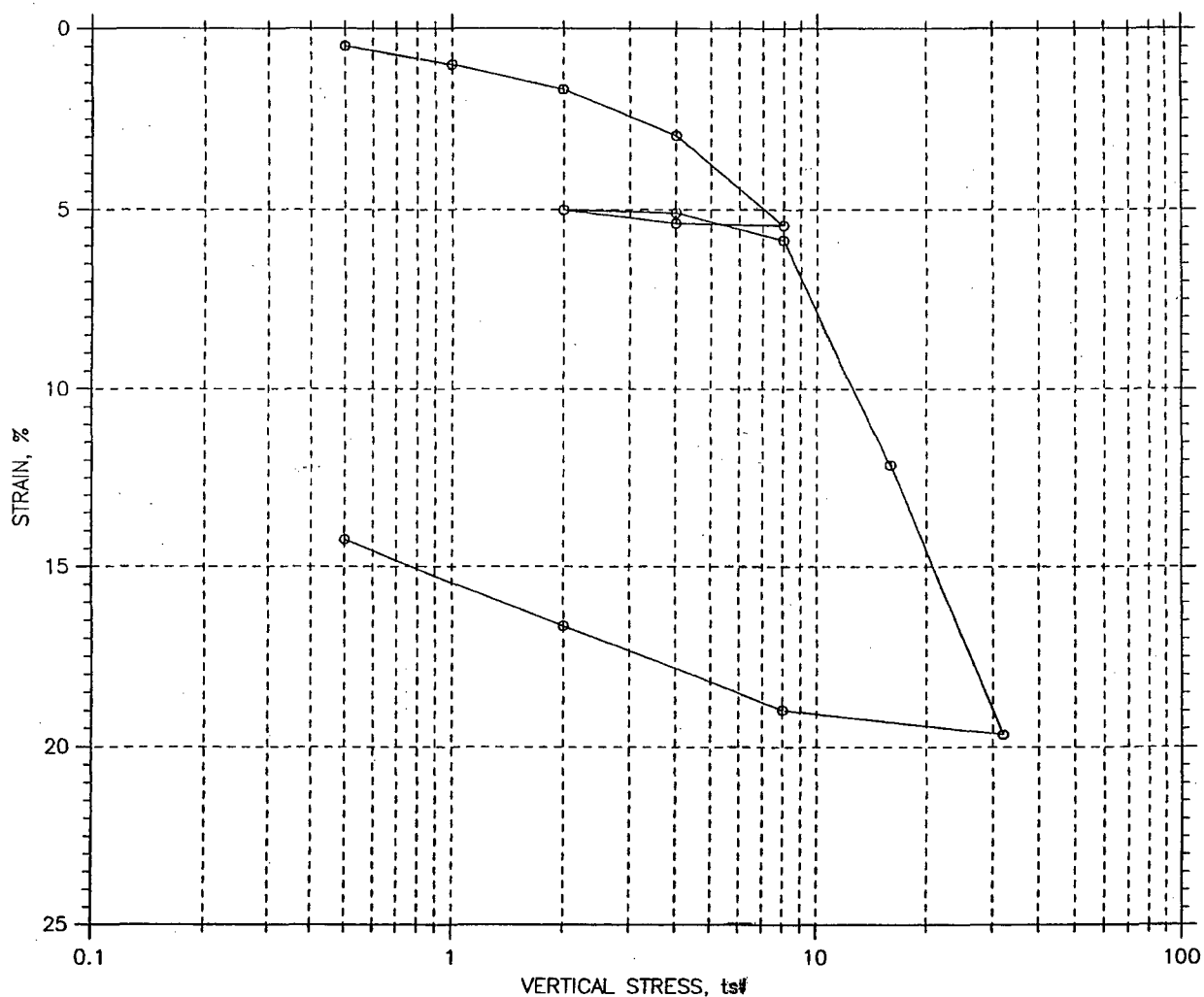
Stress: 4. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-733	Tested By: md	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/18/06	Depth: 23.5-25.5
	Test No.: C-22	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray clay with sand (CH), 78% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System R - Compression Ratio: 0.18, Recompression Ratio: 0.02		



CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	38.23	26.65
Preconsolidation Pressure: 7.5 tsf				Dry Unit Weight, pcf	84.61	98.66
Compression Index: ---				Saturation, %	102.88	100.00
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.01	0.73
LL: 51	PL: 16	PI: 35	GS: 2.73			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-735	Tested By: md	Checked By: jdt
	Sample No.: S-9 UD-1	Test Date: 09/16/2006	Depth: 28-30 ft
	Test No.: C-19	Sample Type: Tube	Elevation: ---
	Description: Moist, dark gray clay (CH), 87% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System T - Compression Ratio: 0.25, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-735
Sample No.: S-9 UD-1
Test No.: C-19

Location: Calvert County, MD
Tested By: md
Test Date: 09/16/2006
Sample Type: Tube

Project No.: GTX-6880
Checked By: jdt
Depth: 28-30 ft
Elevation: ---

Soil Description: Moist, dark gray clay (CH), 87% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System T - Compression Ratio: 0.25, Recompression Ratio: 0.03

Measured Specific Gravity: 2.73
Initial Void Ratio: 1.01
Final Void Ratio: 0.73

Liquid Limit: 51
Plastic Limit: 16
Plasticity Index: 35

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimming	Specimen+Ring	Specimen+Ring	Trimming
	1458	RING		1343
Wt. Container + Wet Soil, gm	147.57	367.29	354.67	150.17
Wt. Container + Dry Soil, gm	114.04	325.62	325.62	120.32
Wt. Container, gm	8.38	216.6	216.6	8.31
Wt. Dry Soil, gm	105.66	109.02	109.02	112.01
Water Content, %	31.73	38.23	26.65	26.65
Void Ratio	---	1.01	0.73	---
Degree of Saturation, %	---	102.88	100.00	---
Dry Unit Weight, pcf	---	84.607	98.655	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-735
Sample No.: S-9 UD-1
Test No.: C-19

Location: Calvert County, MD
Tested By: md
Test Date: 09/16/2006
Sample Type: Tube

Project No.: GTX-6880
Checked By: jdt
Depth: 28-30 ft
Elevation: ---

Soil Description: Moist, dark gray clay (CH), 87% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System T - Compression Ratio: 0.25, Recompression Ratio: 0.03

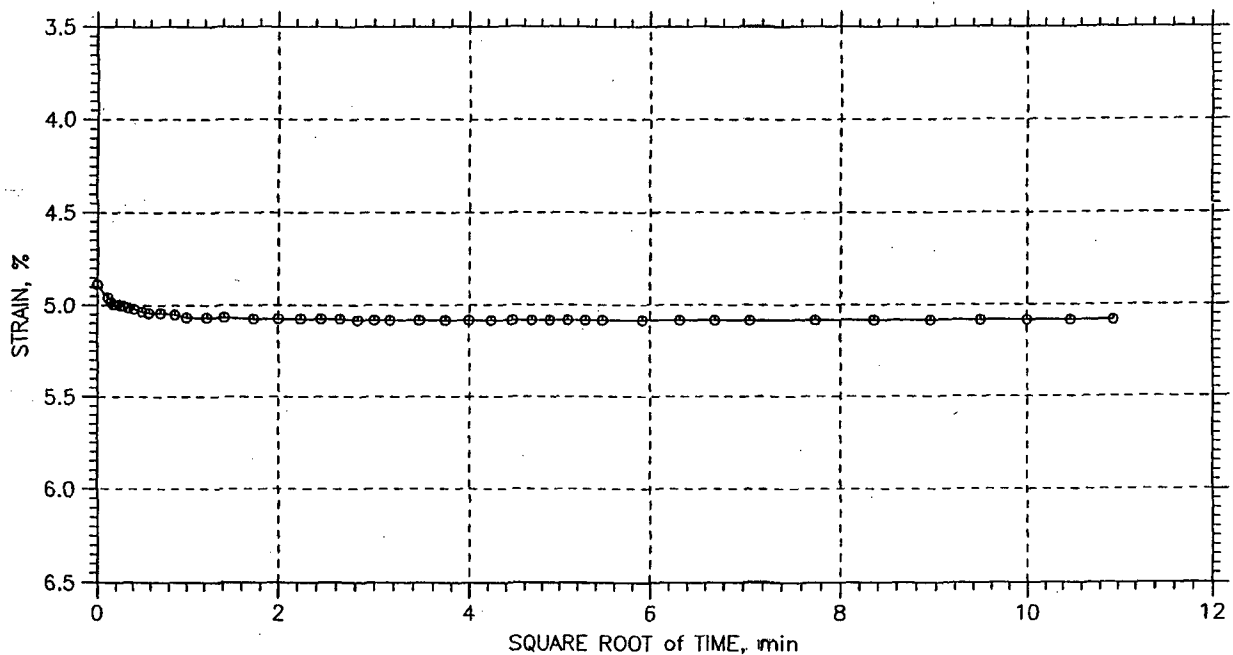
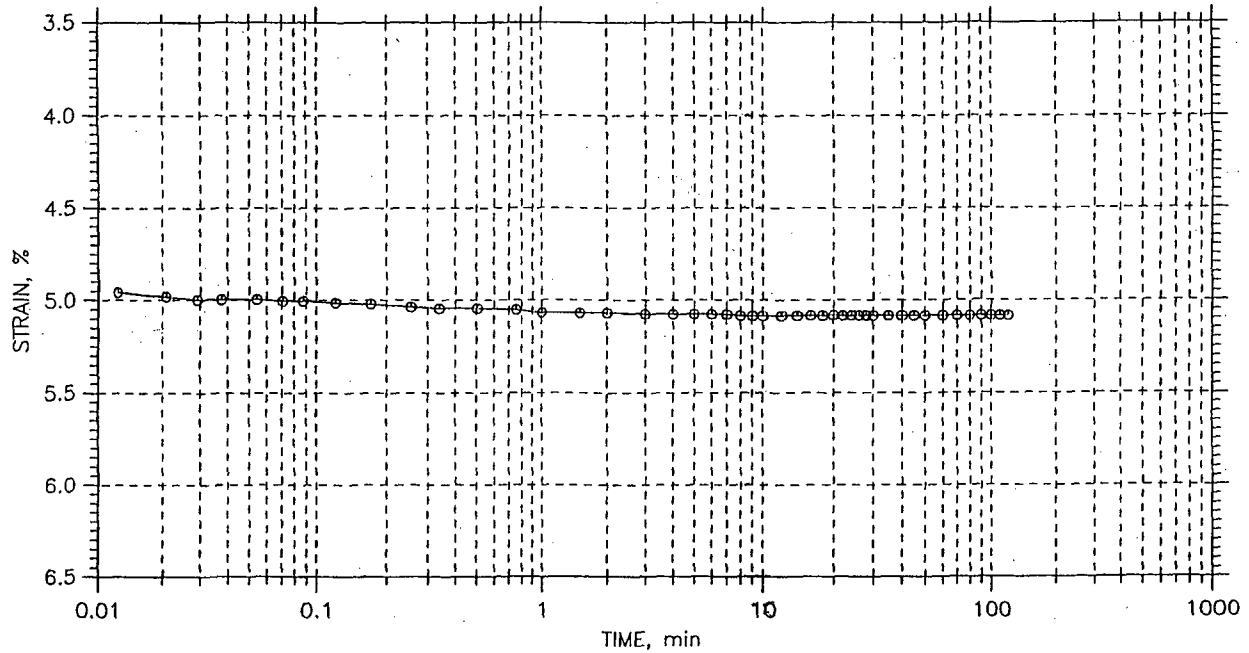
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in^2/sec	Log in^2/sec	Ave. in^2/sec
1	0.5	0.004798	1.005	0.48	0.1	0.0	1.28e-002	0.00e+000	1.28e-002
2	1	0.009879	0.994	0.99	0.2	0.0	3.93e-003	0.00e+000	3.93e-003
3	2	0.01673	0.981	1.67	0.2	0.1	4.96e-003	9.43e-003	6.50e-003
4	4	0.02953	0.955	2.95	0.5	0.0	1.50e-003	0.00e+000	1.50e-003
5	8	0.05429	0.905	5.43	0.4	0.0	1.77e-003	0.00e+000	1.77e-003
6	4	0.05374	0.906	5.37	0.0	0.0	2.90e-002	0.00e+000	2.90e-002
7	2	0.05	0.914	5.00	0.3	0.0	2.23e-003	0.00e+000	2.23e-003
8	4	0.05083	0.912	5.08	0.1	0.0	1.30e-002	0.00e+000	1.30e-002
9	8	0.05838	0.897	5.84	0.4	0.2	1.73e-003	4.21e-003	2.45e-003
10	16	0.1214	0.770	12.14	2.3	2.4	3.00e-004	2.84e-004	2.92e-004
11	32	0.1966	0.618	19.66	3.9	6.3	1.51e-004	9.28e-005	1.15e-004
12	8	0.1898	0.632	18.98	1.1	0.0	5.08e-004	0.00e+000	5.08e-004
13	2	0.1665	0.679	16.65	4.8	0.0	1.16e-004	0.00e+000	1.16e-004
14	0.5	0.1424	0.728	14.24	12.9	0.0	4.57e-005	0.00e+000	4.57e-005

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



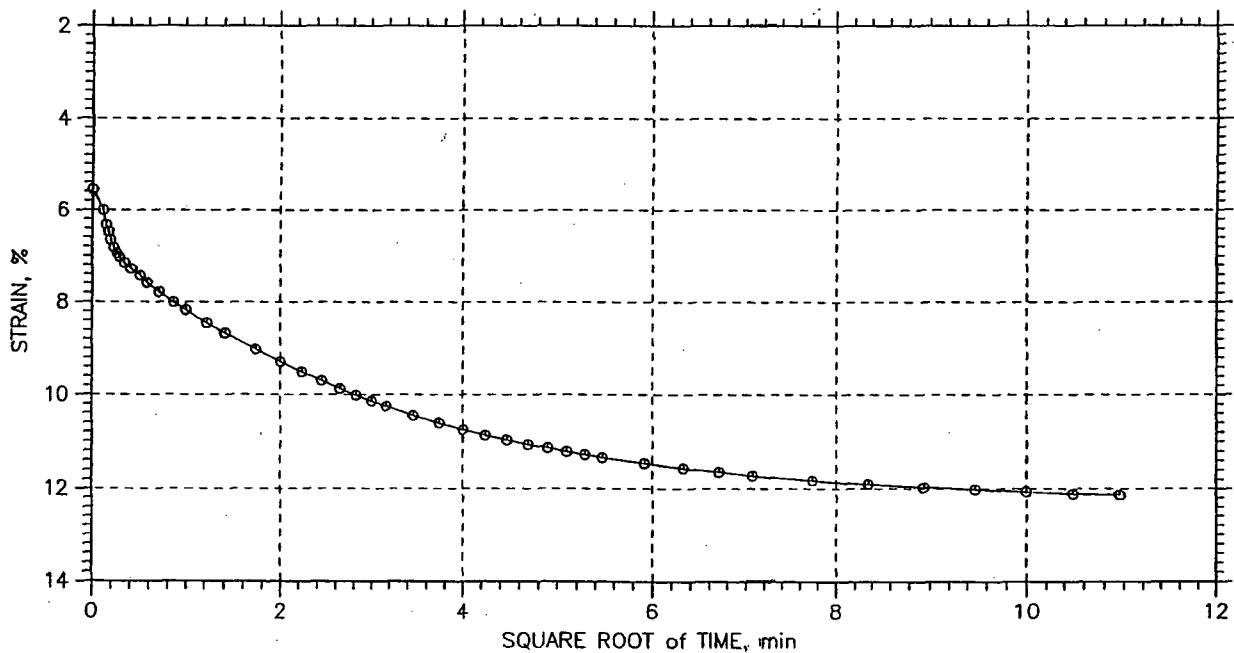
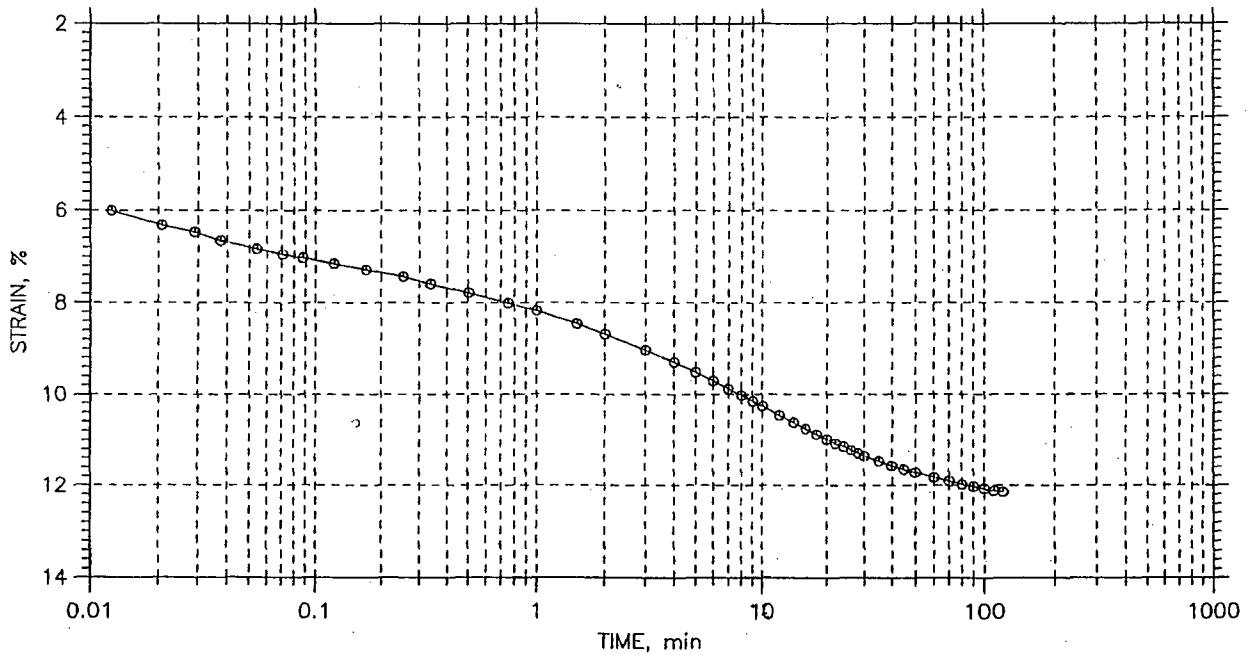
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-735	Tested By: md	Checked By: jdt
	Sample No.: S-9 UD-1	Test Date: 09/16/2006	Depth: 28-30 ft
	Test No.: C-19	Sample Type: Tube	Elevation: ---
	Description: Moist, dark gray clay (CH), 87% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System T - Compression Ratio: 0.25, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

TIME CURVES

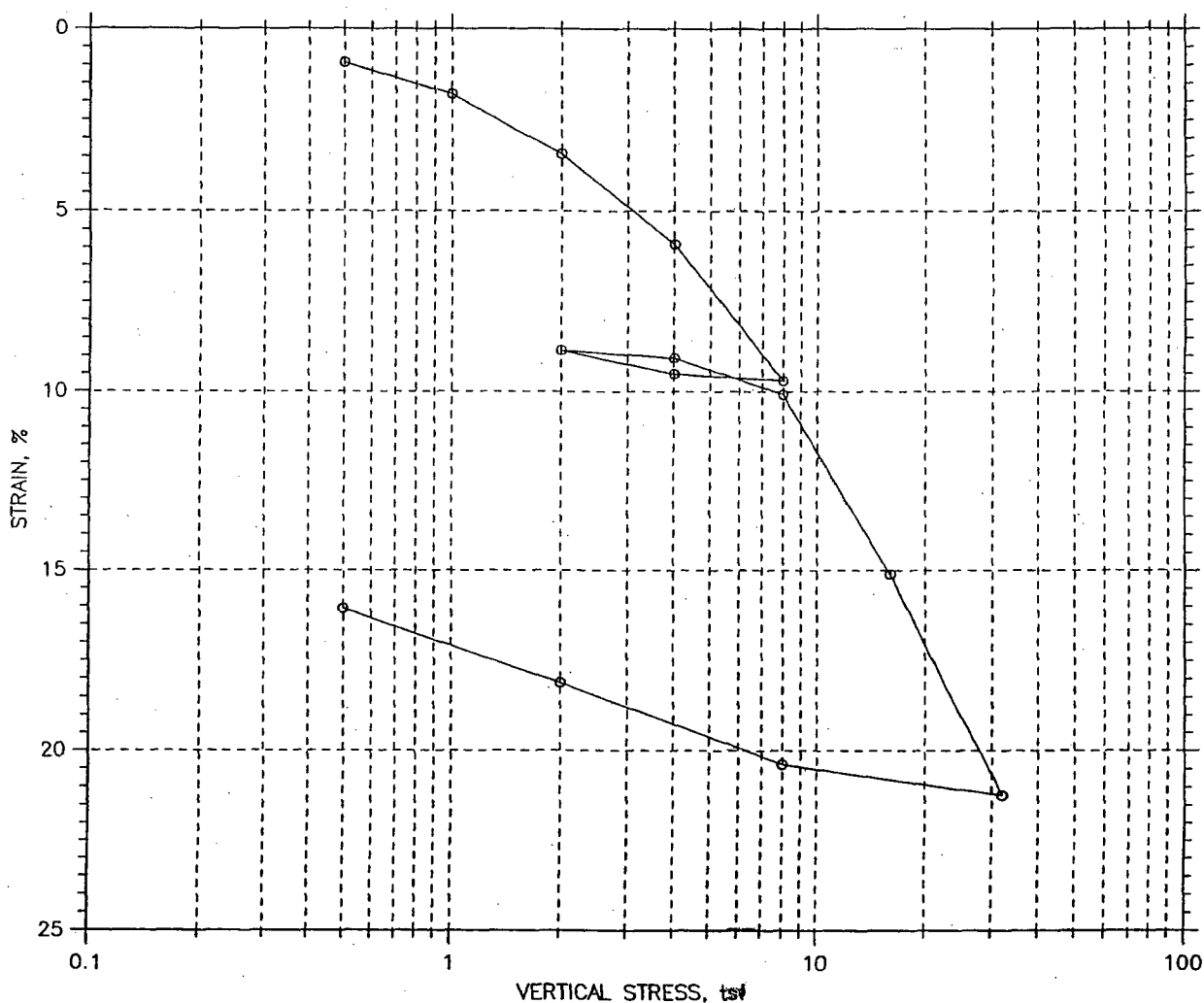
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-735	Tested By: md	Checked By: jdt
	Sample No.: S-9 UD-1	Test Date: 09/16/2006	Depth: 28-30 ft
	Test No.: C-19	Sample Type: Tube	Elevation: ---
	Description: Moist, dark gray clay (CH), 87% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System T - Compression Ratio: 0.25, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	48.06	29.99
Preconsolidation Pressure: 6.1 tsf				Dry Unit Weight, pcf	77.05	91.79
Compression Index: ---				Saturation, %	111.76	100.00
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.13	0.79
LL: 75	PL: 23	PI: 52	GS: 2.63			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-737	Tested By: md	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/16/08	Depth: 10.5-12.5ft
	Test No.: C-15	Sample Type: tube	Elevation: ---
	Description: Moist, very pale brown clay (CH), 93% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System R - Compression Ratio: 0.20, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
 Boring No.: B-737
 Sample No.: UD-1
 Test No.: C-15

Location: Calvert County, MD
 Tested By: md
 Test Date: 09/16/06
 Sample Type: tube

Project No.: GTX-6880
 Checked By: jdt
 Depth: 10.5-12.5ft
 Elevation: ---

Soil Description: Moist, very pale brown clay (CH), 93% passing #200 sieve, inundated @ 0.5 tsf
 Remarks: System R - Compression Ratio: 0.20, Recompression Ratio: 0.03

Measured Specific Gravity: 2.63
 Initial Void Ratio: 1.13
 Final Void Ratio: 0.79

Liquid Limit: 75
 Plastic Limit: 23
 Plasticity Index: 52

Initial Height: 1.00 in
 Specimen Diameter: 2.50 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID	1270	RING		1110
Wt. Container + Wet Soil, gm	122	256.28	238.34	145.32
Wt. Container + Dry Soil, gm	91.04	208.57	208.57	113.67
Wt. Container, gm	8.66	109.29	109.29	8.12
Wt. Dry Soil, gm	82.38	99.28	99.28	105.55
Water Content, %	37.58	48.06	29.99	29.99
Void Ratio	---	1.13	0.79	---
Degree of Saturation, %	---	111.76	100.00	---
Dry Unit Weight, pcf	---	77.05	91.795	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-737
Sample No.: UD-1
Test No.: C-15

Location: Calvert County, MD
Tested By: md
Test Date: 09/16/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 10.5-12.5ft
Elevation: ---

Soil Description: Moist, very pale brown clay (CH), 93% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System R - Compression Ratio: 0.20, Recompression Ratio: 0.03

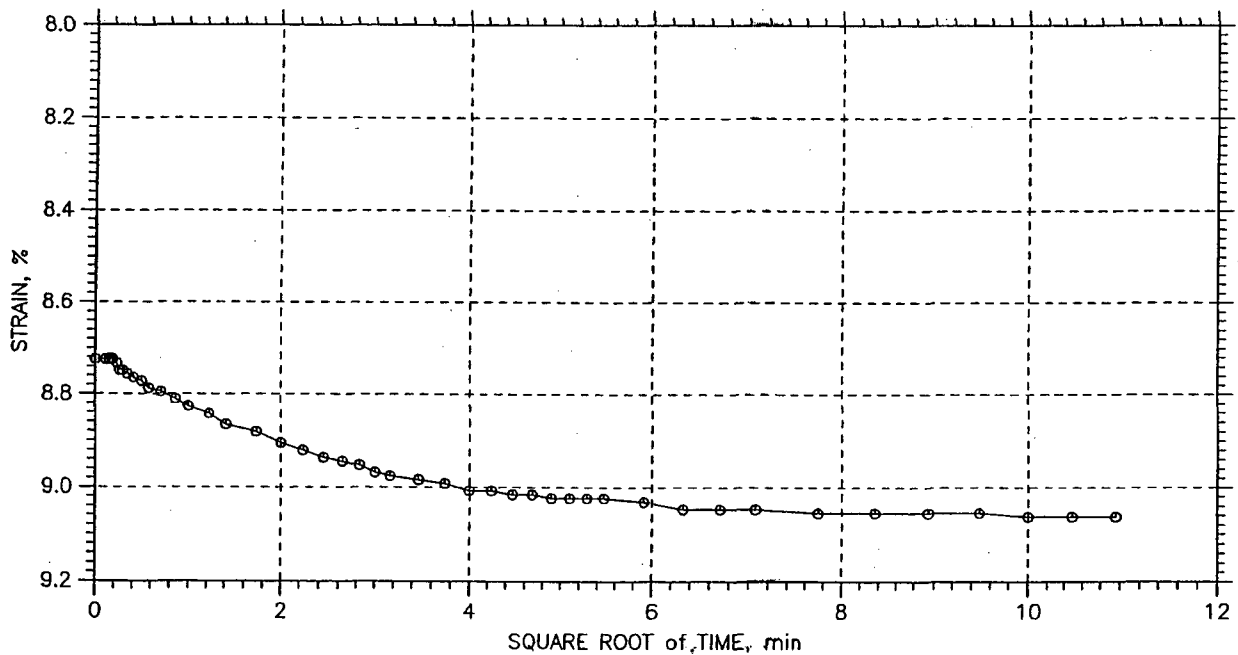
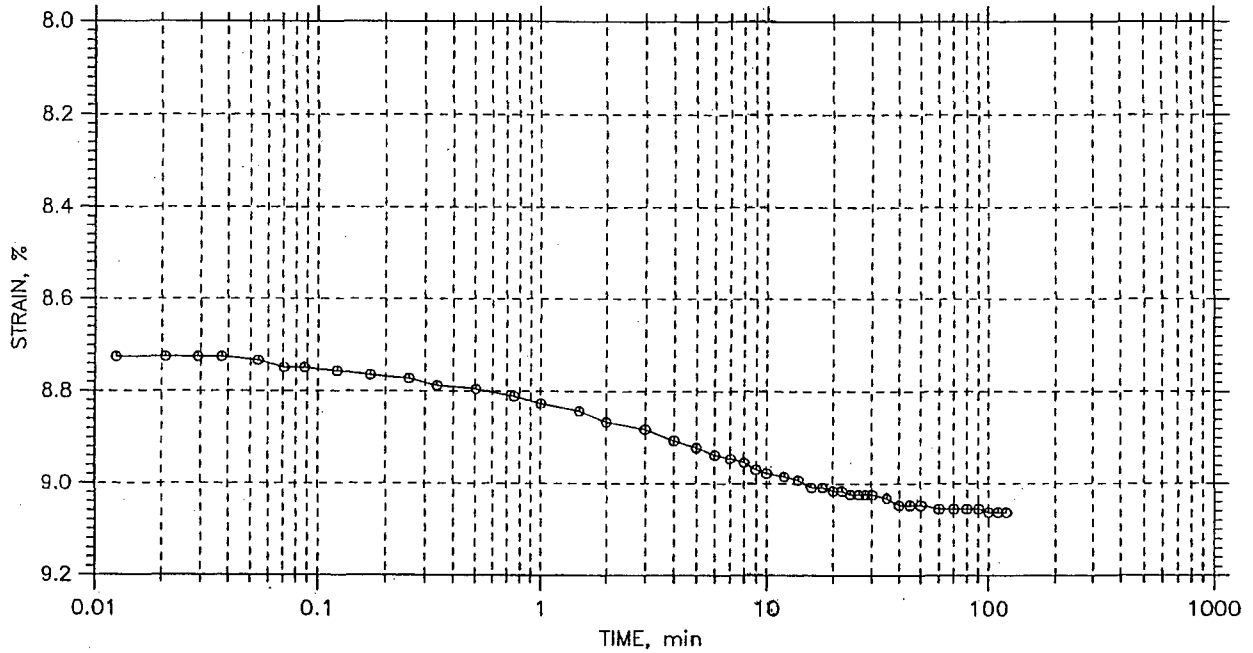
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.00936	1.111	0.94	0.1	0.1	1.18e-002	1.11e-002	1.14e-002
2	1	0.01795	1.093	1.79	1.3	0.0	6.16e-004	0.00e+000	6.16e-004
3	2	0.03429	1.058	3.43	1.9	0.0	4.14e-004	0.00e+000	4.14e-004
4	4	0.05913	1.005	5.91	2.5	3.4	3.05e-004	2.21e-004	2.56e-004
5	8	0.09697	0.924	9.70	5.0	7.6	1.39e-004	9.23e-005	1.11e-004
6	4	0.09512	0.928	9.51	1.9	2.4	3.60e-004	2.79e-004	3.14e-004
7	2	0.08842	0.942	8.84	5.6	0.0	1.22e-004	0.00e+000	1.22e-004
8	4	0.09063	0.938	9.06	1.9	3.0	3.54e-004	2.27e-004	2.77e-004
9	8	0.1008	0.916	10.08	3.2	3.7	2.07e-004	1.81e-004	1.93e-004
10	16	0.151	0.809	15.10	10.5	12.2	5.97e-005	5.16e-005	5.53e-005
11	32	0.2122	0.679	21.22	20.9	19.8	2.63e-005	2.78e-005	2.71e-005
12	8	0.2038	0.697	20.38	4.4	0.0	1.18e-004	0.00e+000	1.18e-004
13	2	0.181	0.745	18.10	33.0	34.3	1.63e-005	1.56e-005	1.59e-005
14	0.5	0.1606	0.789	16.06	58.8	0.0	9.61e-006	0.00e+000	9.61e-006

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



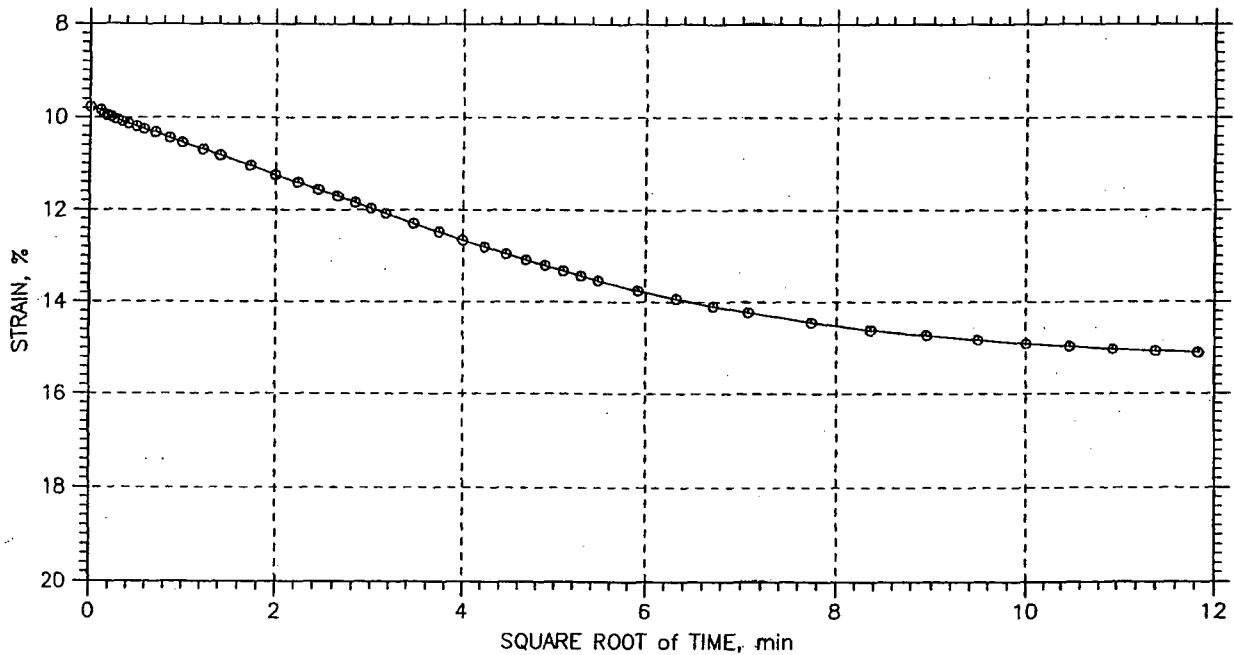
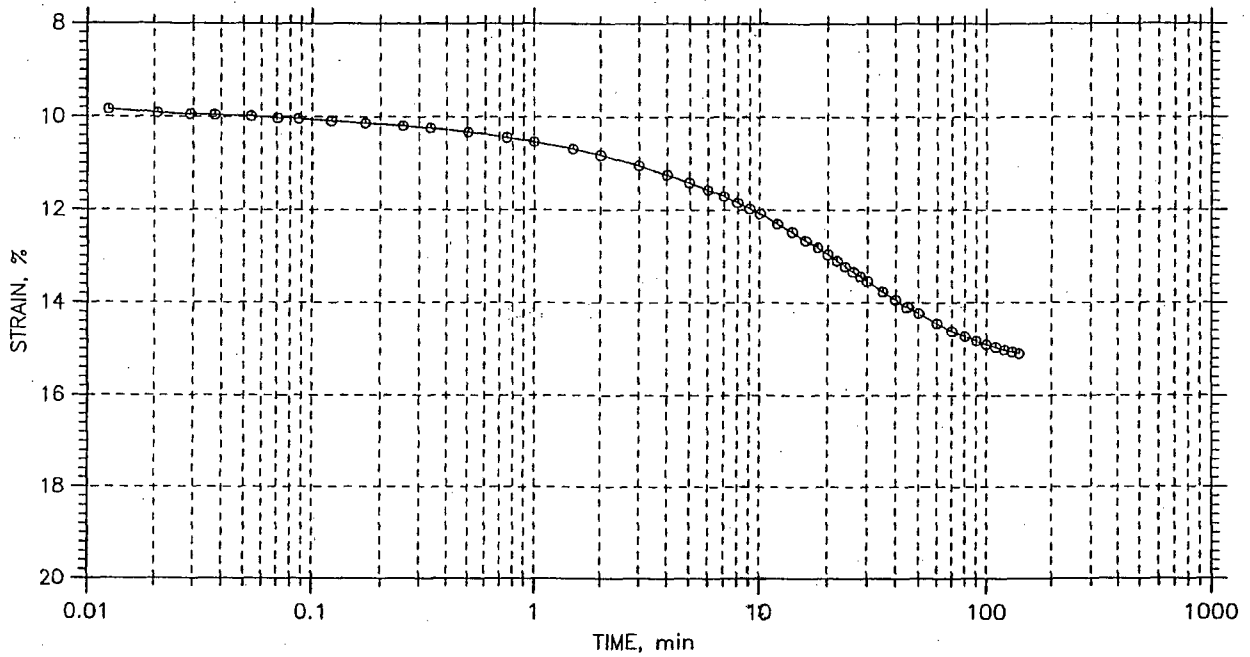
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-737	Tested By: rmd	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/16/06	Depth: 10.5-12.5ft
	Test No.: C-15	Sample Type: tube	Elevation: ---
	Description: Moist, very pale brown clay (CH), 93% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System R - Compression Ratio: 0.20, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA

TIME CURVES

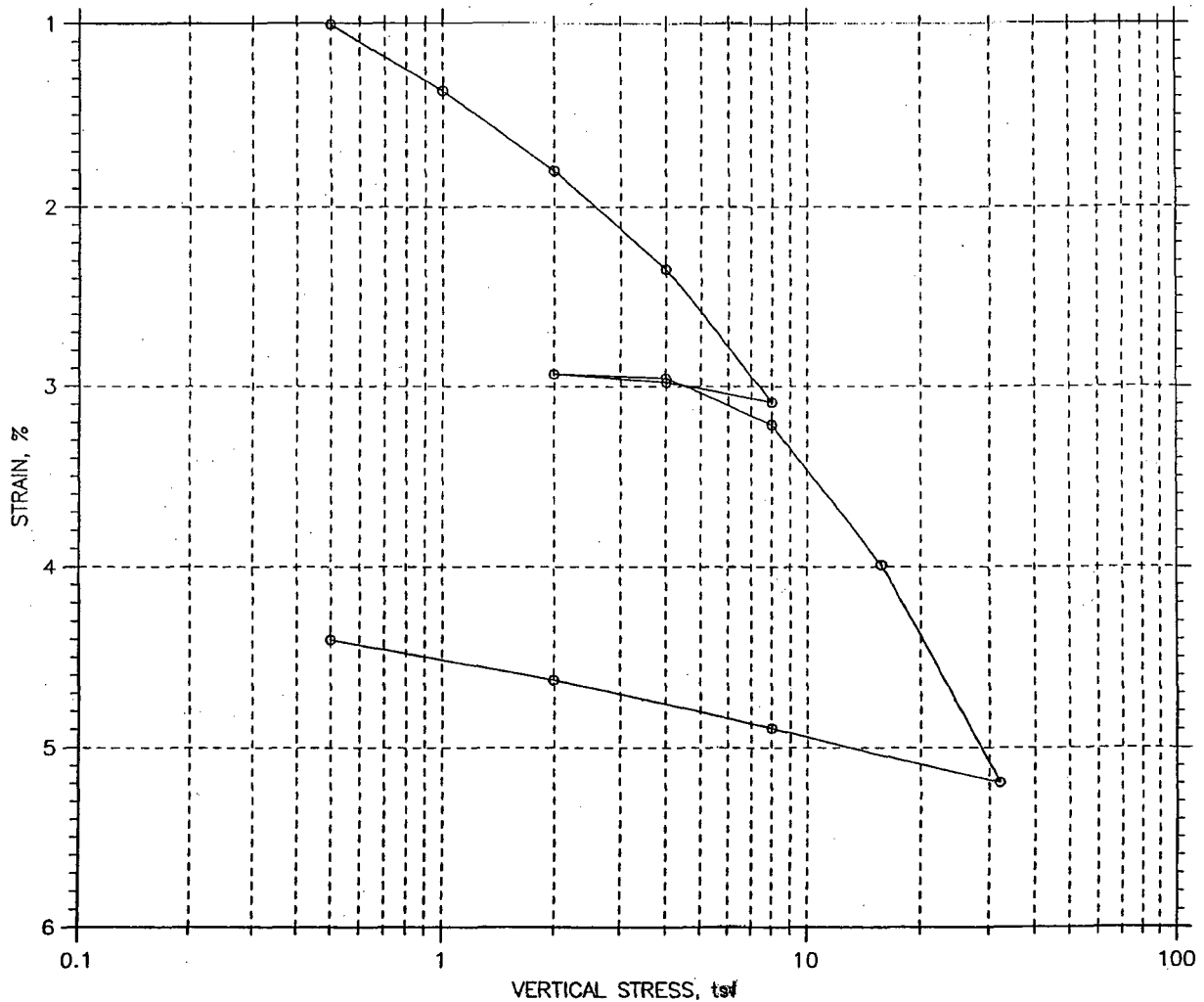
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-737	Tested By: md	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/16/06	Depth: 10.5-12.5ft
	Test No.: C-15	Sample Type: tube	Elevation: ---
	Description: Moist, very pale brown clay (CH), 93% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System R - Compression Ratio: 0.20, Recompression Ratio: 0.03		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test
Overburden Pressure: ---				29.81	26.37
Preconsolidation Pressure: 8 tsf				93.51	97.82
Compression Index: ---				101.72	100.00
Diameter: 2.5 in		Height: 1 in		Void Ratio	0.78
LL: 26	PL: 22	PI: 4	GS: 2.67		

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-738	Tested By: md	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/16/06	Depth: 35-37
	Test No.: C-16	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray silty, clayey sand (SC-SM), 25% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.04, Recompression Ratio: <0.01		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-738
Sample No.: UD-1
Test No.: C-16

Location: Calvert County, MD
Tested By: md
Test Date: 09/16/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 35-37
Elevation: ---

Soil Description: Moist, dark olive gray silty, clayey sand (SC-SM), 25% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System C - Compression Ratio: 0.04, Recompression Ratio: <0.01

Measured Specific Gravity: 2.67
Initial Void Ratio: 0.78
Final Void Ratio: 0.70

Liquid Limit: 26
Plastic Limit: 22
Plasticity Index: 4

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID	1834	RING		1459
Wt. Container + Wet Soil, gm	149.21	373.29	369.14	162.62
Wt. Container + Dry Soil, gm	119.77	337.37	337.37	130.43
Wt. Container, gm	8.34	216.88	216.88	8.35
Wt. Dry Soil, gm	111.43	120.49	120.49	122.08
Water Content, %	26.42	29.81	26.37	26.37
Void Ratio	---	0.78	0.70	---
Degree of Saturation, %	---	101.72	100.00	---
Dry Unit Weight, pcf	---	93.51	97.816	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-738
Sample No.: UD-1
Test No.: C-16

Location: Calvert County, MD
Tested By: md
Test Date: 09/16/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 35-37
Elevation: ---

Soil Description: Moist, dark olive gray silty, clayey sand (SC-SM), 25% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System C - Compression Ratio: 0.04, Recompression Ratio: <0.01

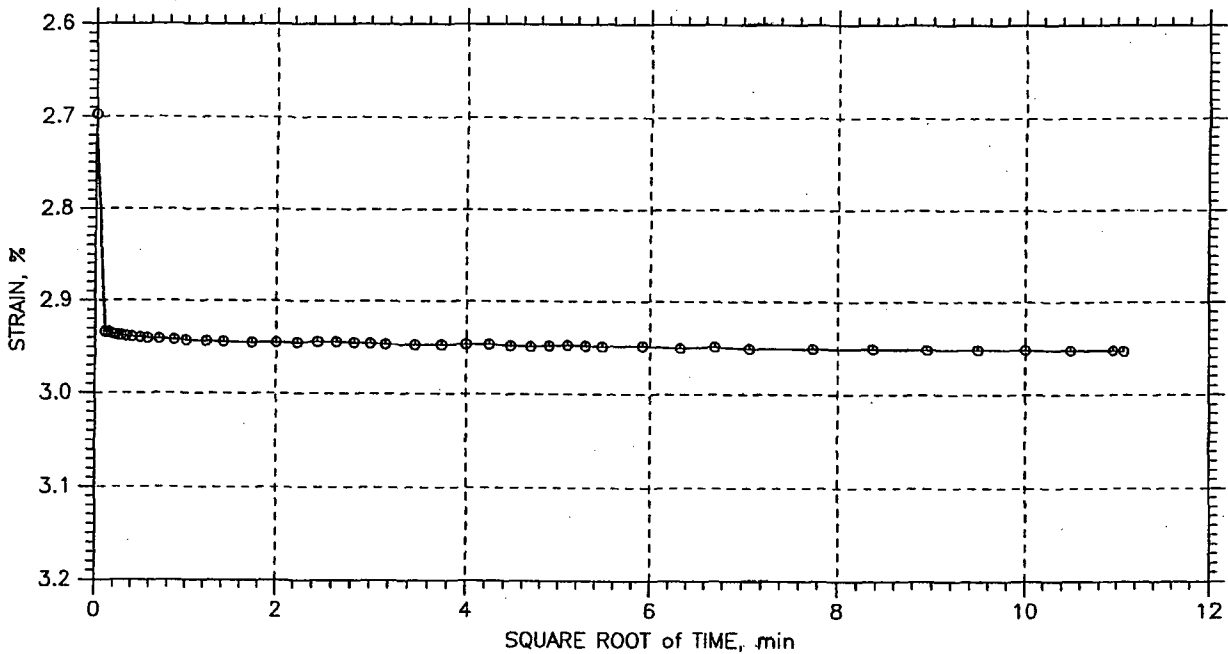
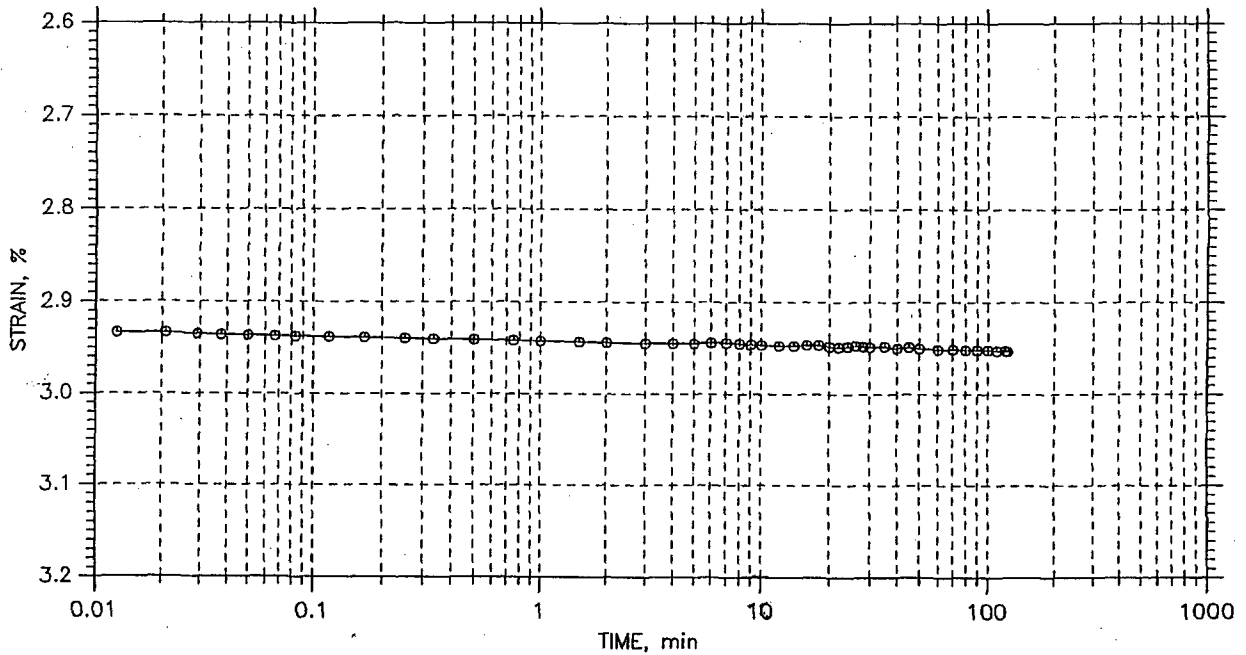
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.01007	0.765	1.01	0.0	0.0	2.90e-002	0.00e+000	2.90e-002
2	1	0.01367	0.758	1.37	0.0	0.0	5.14e-002	3.70e-002	4.31e-002
3	2	0.01803	0.750	1.80	0.0	0.0	7.25e-002	0.00e+000	7.25e-002
4	4	0.02345	0.741	2.34	0.0	0.0	9.17e-002	0.00e+000	9.17e-002
5	8	0.03088	0.727	3.09	0.0	0.0	1.30e-001	0.00e+000	1.30e-001
6	4	0.02977	0.729	2.98	0.0	0.0	1.37e-001	0.00e+000	1.37e-001
7	2	0.02931	0.730	2.93	0.0	0.0	1.36e-001	0.00e+000	1.36e-001
8	4	0.02953	0.730	2.95	0.0	0.0	1.34e-001	0.00e+000	1.34e-001
9	8	0.03211	0.725	3.21	0.0	0.0	1.34e-001	0.00e+000	1.34e-001
10	16	0.03987	0.711	3.99	0.0	0.0	1.14e-001	0.00e+000	1.14e-001
11	32	0.05195	0.690	5.19	0.0	0.0	1.36e-001	0.00e+000	1.36e-001
12	8	0.04892	0.695	4.89	0.0	0.0	1.17e-001	0.00e+000	1.17e-001
13	2	0.04626	0.700	4.63	0.0	0.0	1.51e-001	0.00e+000	1.51e-001
14	0.5	0.04402	0.704	4.40	0.0	0.0	9.65e-002	0.00e+000	9.65e-002

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



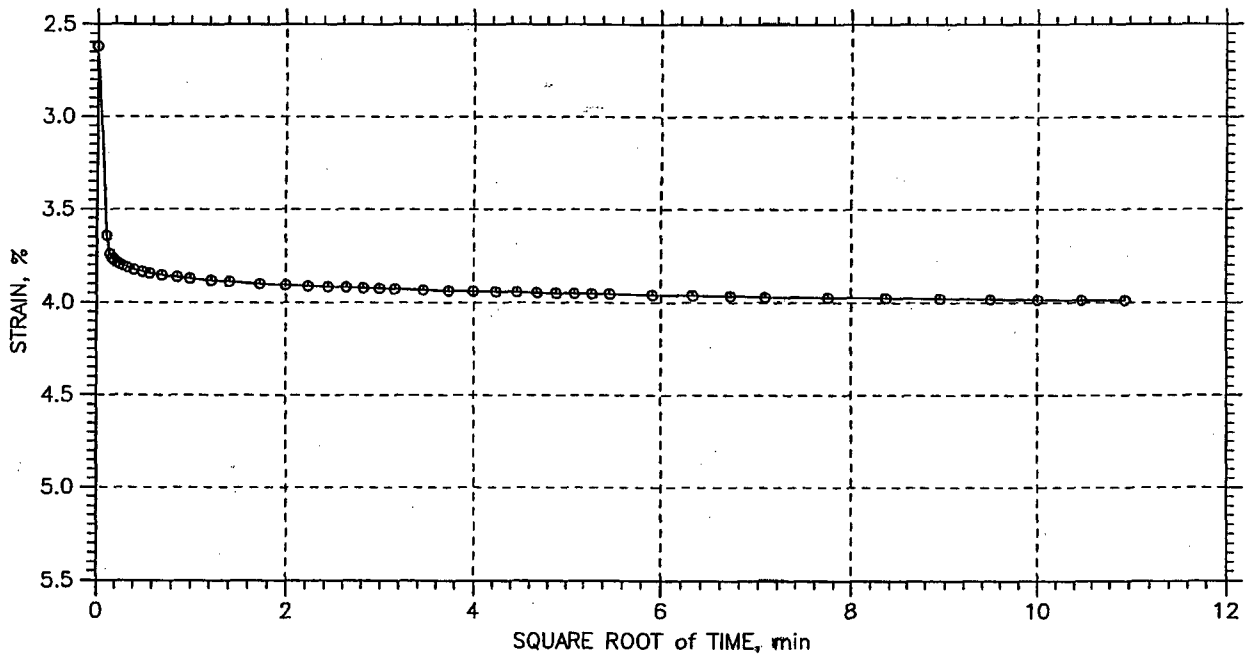
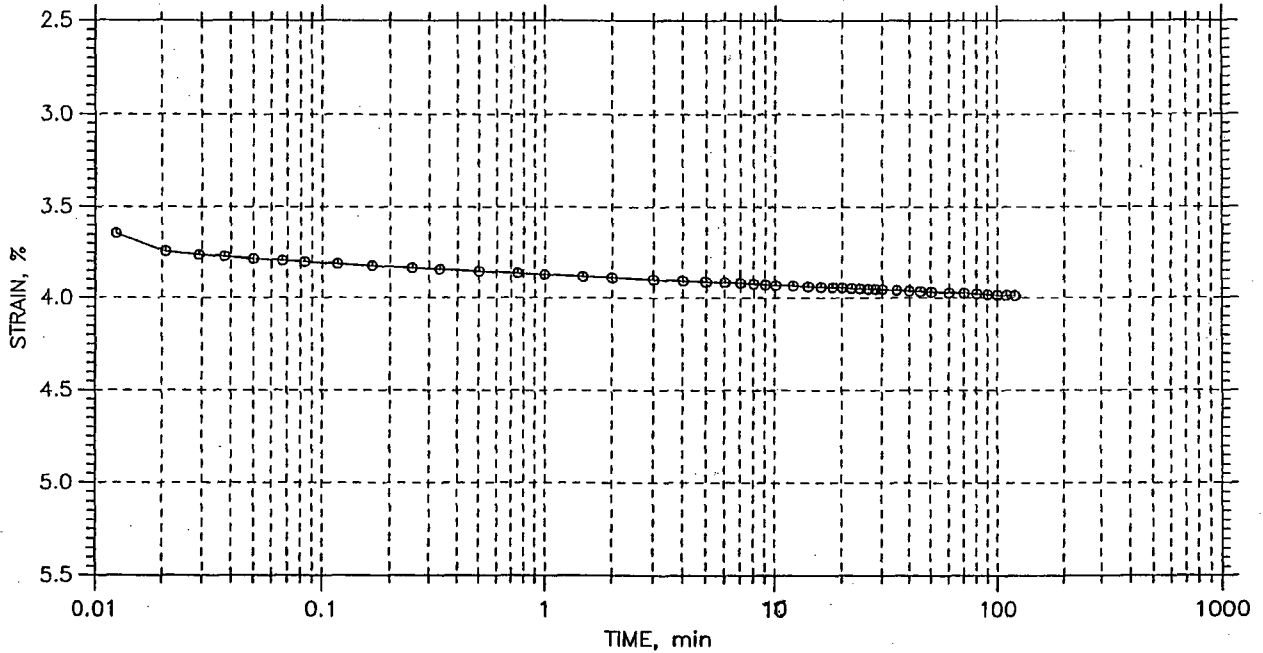
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-738	Tested By: md	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/16/06	Depth: 35-37
	Test No.: C-16	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray silty, clayey sand (SC-SM), 25% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.04, Recompression Ratio: <0.01		

CONSOLIDATION TEST DATA

TIME CURVES

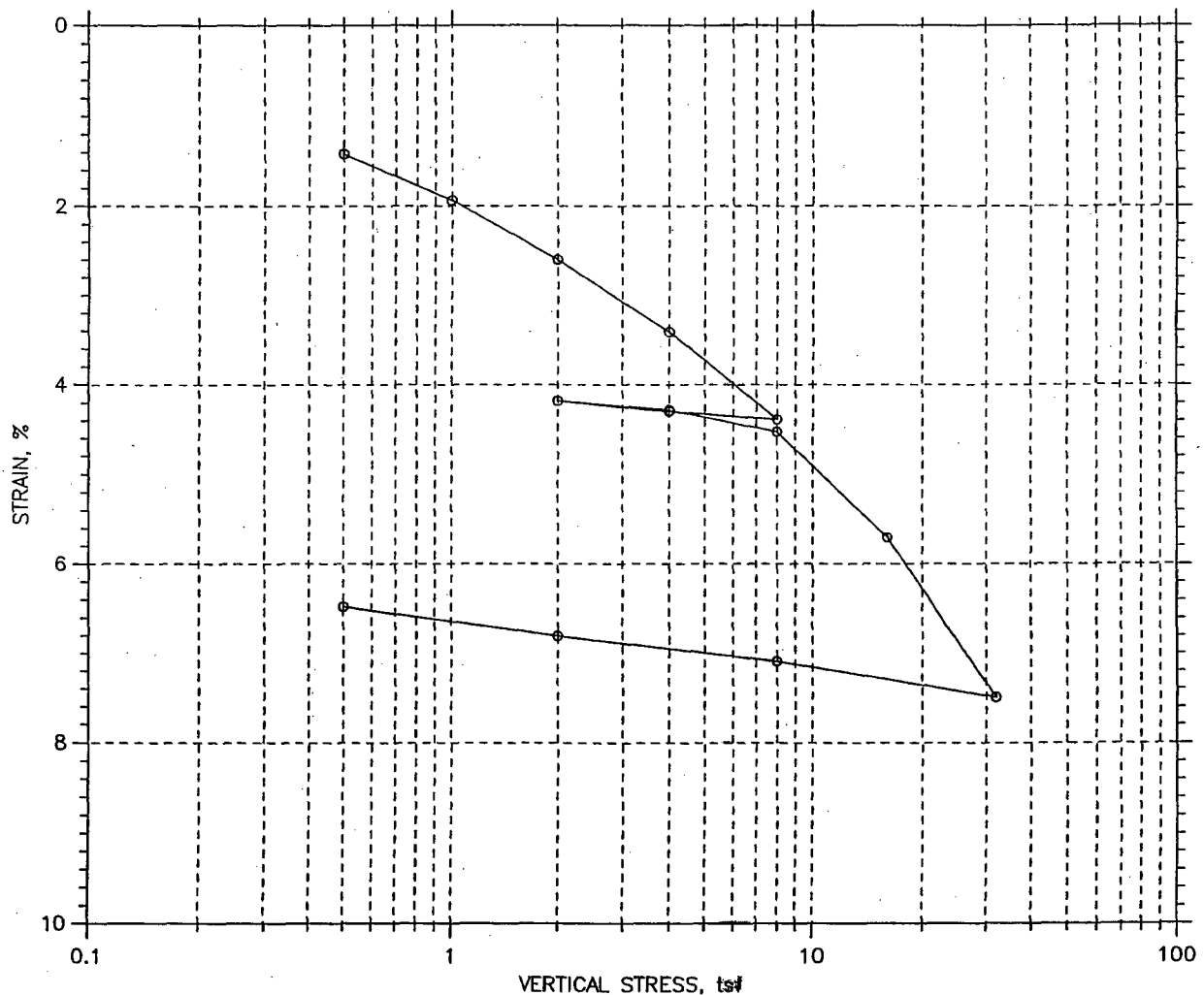
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-738	Tested By: md	Checked By: jdt
	Sample No.: UD-1	Test Date: 09/16/06	Depth: 35-37
	Test No.: C-16	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray silty, clayey sand (SC-SM), 25% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System C - Compression Ratio: 0.04, Recompression Ratio: <0.01		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test
Overburden Pressure: ---				29.90	25.78
Preconsolidation Pressure: 10.8 tsf				94.15	100.7
Compression Index: ---				99.43	100.00
Diameter: 2.5 in		Height: 1 in		Void Ratio	
LL: 25		PL: 21		0.83	
PI: 4		GS: 2.76		0.71	

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-746	Tested By: md	Checked By: jdt
	Sample No.: S-6	Test Date: 11/04/06	Depth: 13.5-15.5
	Test No.: C-53	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray silty, clayey sand (SC-SM), 29% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: .06, Recompression Ratio: 0.01		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-746
Sample No.: S-6
Test No.: C-53

Location: Calvert County, MD
Tested By: md
Test Date: 11/04/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 13.5-15.5
Elevation: ---

Soil Description: Moist, dark olive gray silty, clayey sand (SC-SM), 29% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: .06, Recompression Ratio: 0.01

Measured Specific Gravity: 2.76
Initial Void Ratio: 0.83
Final Void Ratio: 0.71

Liquid Limit: 25
Plastic Limit: 21
Plasticity Index: 4

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
	322B	RING		i-shear
Wt. Container + Wet Soil, gm	187.67	374.08	369.08	162.03
Wt. Container + Dry Soil, gm	148.33	337.8	337.8	130.61
Wt. Container, gm	8.27	216.49	216.49	8.74
Wt. Dry Soil, gm	140.06	121.31	121.31	121.87
Water Content, %	28.09	29.90	25.78	25.78
Void Ratio	---	0.83	0.71	---
Degree of Saturation, %	---	99.43	100.00	---
Dry Unit Weight, pcf	---	94.149	100.67	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-746
Sample No.: S-6
Test No.: C-53

Location: Calvert County, MD
Tested By: md
Test Date: 11/04/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 13.5-15.5
Elevation: ---

Soil Description: Moist, dark olive gray silty, clayey sand (SC-SM), 29% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System G - Compression Ratio: .06, Recompression Ratio: 0.01

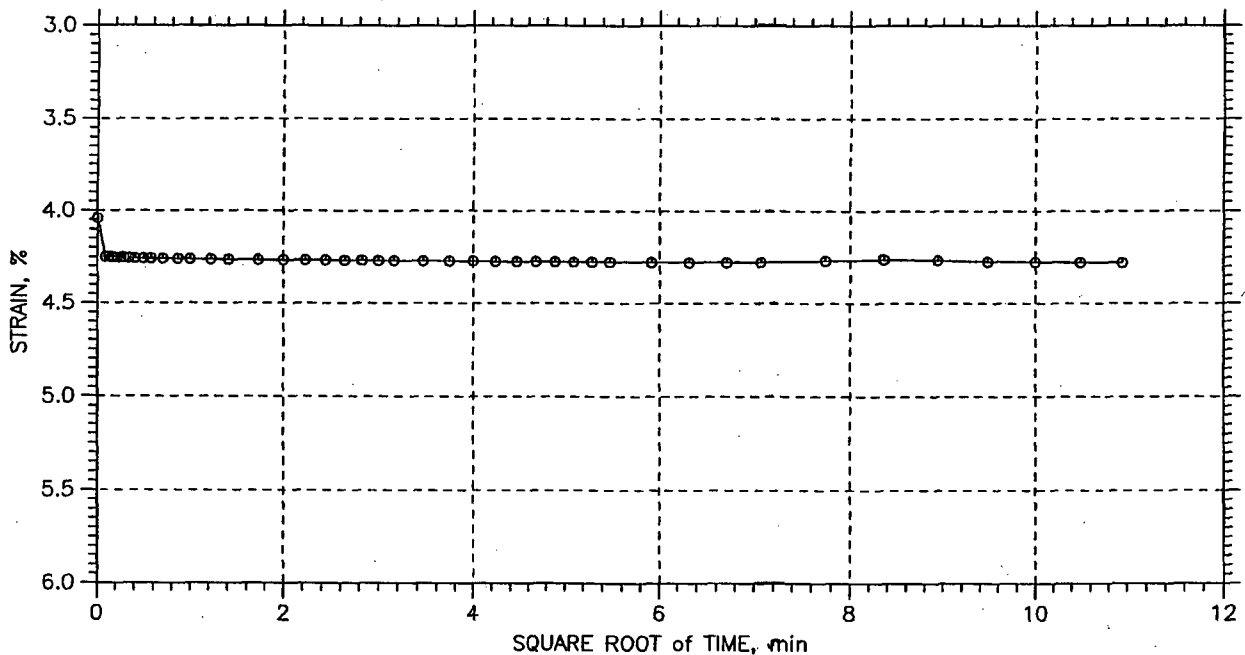
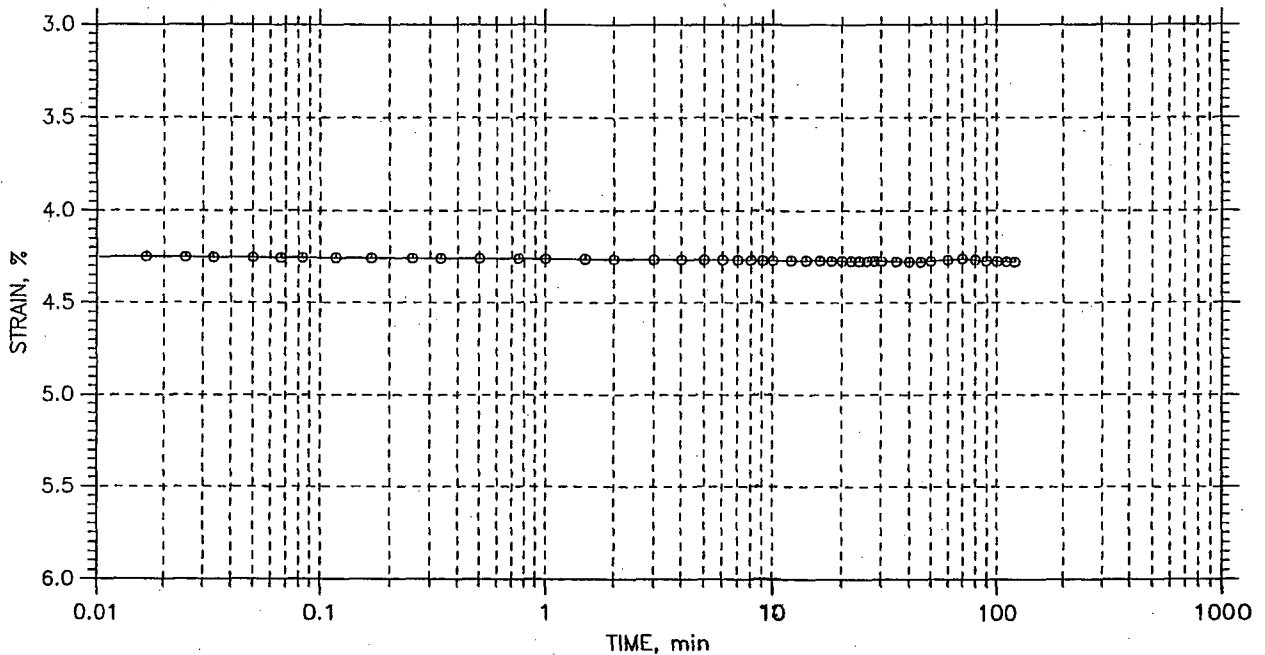
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq. Rt. min	Log min	Sq. Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.01418	0.804	1.42	0.0	0.0	2.80e-002	0.00e+000	2.80e-002
2	1	0.01938	0.795	1.94	0.0	0.0	2.44e-002	3.02e-002	2.70e-002
3	2	0.02598	0.783	2.60	0.0	0.0	5.13e-002	4.11e-002	4.57e-002
4	4	0.03407	0.768	3.41	0.0	0.0	6.66e-002	5.68e-002	6.13e-002
5	8	0.04386	0.750	4.39	0.0	0.0	6.86e-002	0.00e+000	6.86e-002
6	4	0.04298	0.751	4.30	0.0	0.0	1.50e-001	0.00e+000	1.50e-001
7	2	0.04179	0.754	4.18	0.0	0.0	1.18e-001	0.00e+000	1.18e-001
8	4	0.04279	0.752	4.28	0.0	0.0	1.75e-001	0.00e+000	1.75e-001
9	8	0.04526	0.747	4.53	0.0	0.0	1.32e-001	0.00e+000	1.32e-001
10	16	0.05702	0.726	5.70	0.0	0.0	8.37e-002	0.00e+000	8.37e-002
11	32	0.07495	0.693	7.49	0.0	0.0	6.90e-002	0.00e+000	6.90e-002
12	8	0.07088	0.700	7.09	0.0	0.0	1.20e-001	0.00e+000	1.20e-001
13	2	0.06804	0.706	6.80	0.0	0.0	1.43e-001	0.00e+000	1.43e-001
14	0.5	0.06474	0.712	6.47	0.0	0.0	5.47e-002	0.00e+000	5.47e-002

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



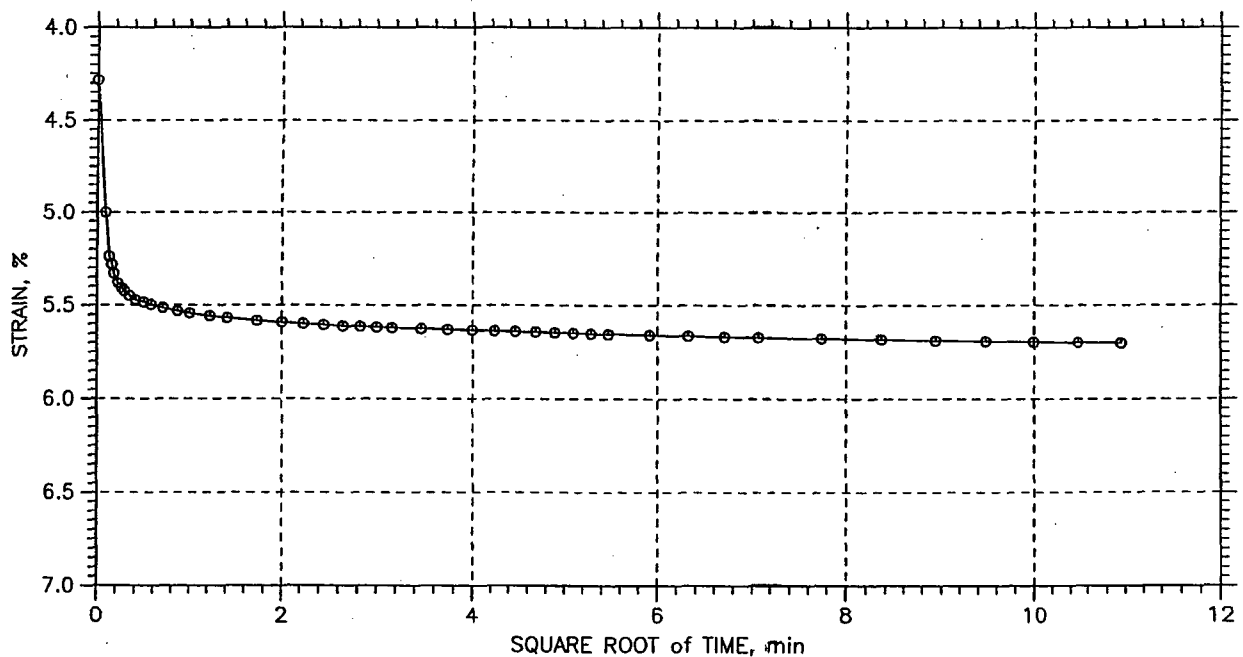
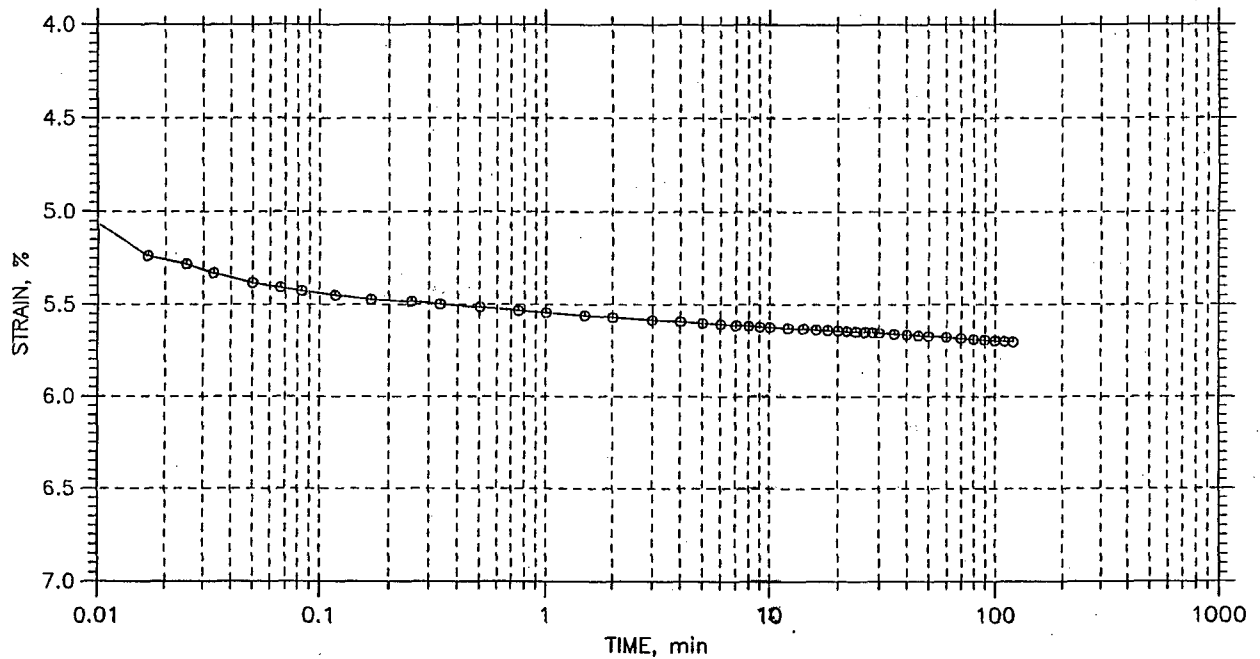
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-746	Tested By: md	Checked By: jdt
	Sample No.: S-6	Test Date: 11/04/06	Depth: 13.5-15.5
	Test No.: C-53	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray silty, clayey sand (SC-SM), 29% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System G - Compression Ratio: .06, Recompression Ratio: 0.01		

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 10 of 14

Stress: 16. tsf

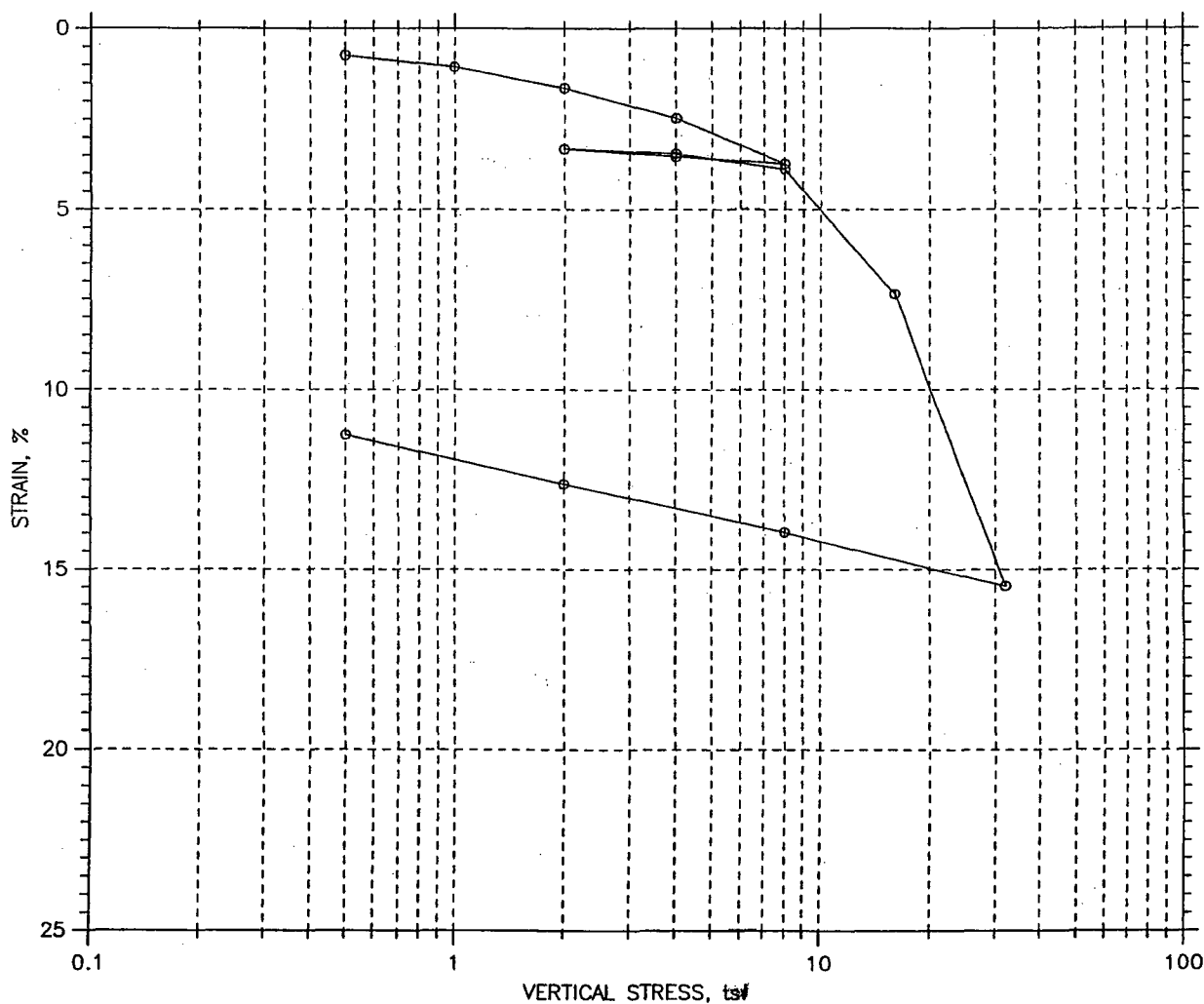


**GeoTesting
express**

a subsidiary of Geocomp Corporation

Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
Boring No.: B-746	Tested By: md	Checked By: jdt
Sample No.: S-6	Test Date: 11/04/06	Depth: 13.5-15.5
Test No.: C-53	Sample Type: tube	Elevation: ---
Description: Moist, dark olive gray silty, clayey sand (SC-SM), 29% passing #200 sieve, inundated @ 0.5 tsf		
Remarks: System G - Compression Ratio: .06, Recompression Ratio: 0.01		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	36.26	31.22
Preconsolidation Pressure: 11.3 tsf				Dry Unit Weight, pcf	81.65	92.01
Compression Index: ---				Saturation, %	91.05	99.99
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.09	0.85
LL: 53	PL: 16	PI: 37	GS: 2.73			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-747	Tested By: md	Checked By: jdt
	Sample No.: S-15 UD-1	Test Date: 09/16/06	Depth: 25.8-60.0 58.0-60.0
	Test No.: C-18	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray clay with sand (CH), 74% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System K - Compression Ratio: 0.26, Recompression Ratio: 0.02		

PP
11/16/06

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-747
Sample No.: S-15 UD-1
Test No.: C-18

Location: Calvert County, MD
Tested By: md
Test Date: 09/16/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 25.8-60.0
Elevation: ---

Soil Description: Moist, dark olive gray clay with sand (CH), 74% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System K - Compression Ratio: 0.26, Recompression Ratio: 0.02

Measured Specific Gravity: 2.73
Initial Void Ratio: 1.09
Final Void Ratio: 0.85

Liquid Limit: 53
Plastic Limit: 16
Plasticity Index: 37

Initial Height: 1.00 in
Specimen Diameter: 2.50 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID	1395	RING		1311
Wt. Container + Wet Soil, gm	132.49	351.02	345.71	146.05
Wt. Container + Dry Soil, gm	100.24	312.87	312.87	113.3
Wt. Container, gm	8.46	207.66	207.66	8.39
Wt. Dry Soil, gm	91.78	105.21	105.21	104.91
Water Content, %	35.14	36.26	31.22	31.22
Void Ratio	---	1.09	0.85	---
Degree of Saturation, %	---	91.05	99.99	---
Dry Unit Weight, pcf	---	81.65	92.008	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-747
Sample No.: S-15 UD-1
Test No.: C-18

Location: Calvert County, MD
Tested By: md
Test Date: 09/16/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 25.8-60.0
Elevation: ---

Soil Description: Moist, dark olive gray clay with sand (CH), 74% passing #200 sieve, inundated @ 0.5 tsf
Remarks: System K - Compression Ratio: 0.26, Recompression Ratio: 0.02

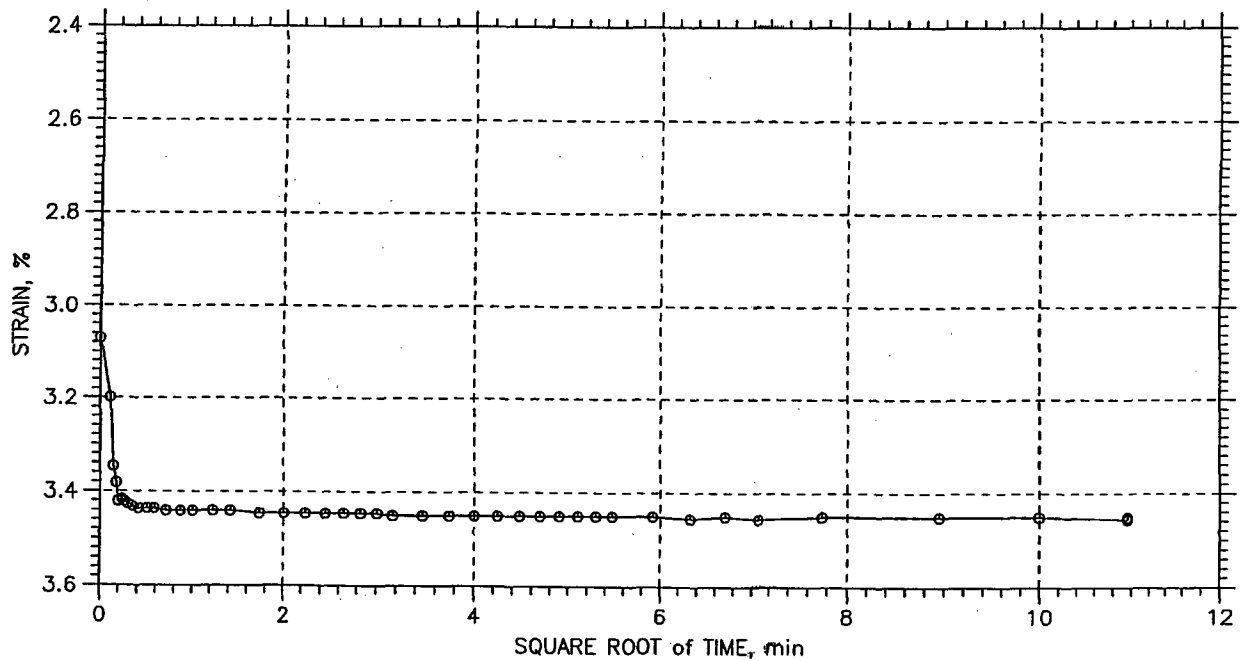
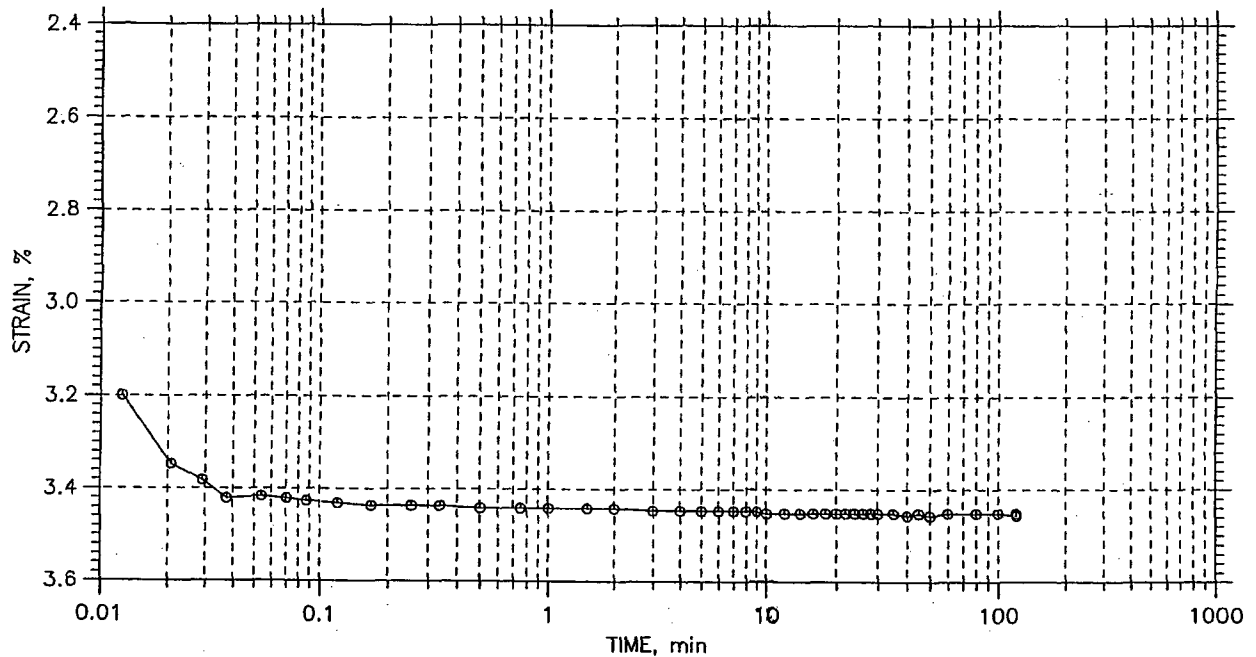
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. ft ² /sec	Log ft ² /sec	Ave. ft ² /sec
1	0.5	0.007364	1.072	0.74	0.1	0.0	9.35e-005	0.00e+000	9.35e-005
2	1	0.01062	1.065	1.06	0.0	0.0	1.33e-004	1.57e-004	1.44e-004
3	2	0.01631	1.053	1.63	0.0	0.0	1.35e-004	1.53e-004	1.43e-004
4	4	0.02467	1.036	2.47	0.0	0.0	1.85e-004	1.76e-004	1.80e-004
5	8	0.03728	1.009	3.73	0.0	0.0	1.12e-004	1.79e-004	1.38e-004
6	4	0.0353	1.014	3.53	0.0	0.0	3.27e-004	0.00e+000	3.27e-004
7	2	0.03317	1.018	3.32	0.0	0.0	2.76e-004	0.00e+000	2.76e-004
8	4	0.03451	1.015	3.45	0.0	0.0	3.25e-004	0.00e+000	3.25e-004
9	8	0.03876	1.006	3.88	0.0	0.0	3.09e-004	0.00e+000	3.09e-004
10	16	0.07357	0.934	7.36	0.4	0.0	1.45e-005	0.00e+000	1.45e-005
11	32	0.1546	0.765	15.46	0.4	0.2	1.10e-005	2.05e-005	1.43e-005
12	8	0.1397	0.796	13.97	0.0	0.0	1.92e-004	0.00e+000	1.92e-004
13	2	0.1262	0.824	12.62	0.2	0.0	2.13e-005	0.00e+000	2.13e-005
14	0.5	0.1126	0.852	11.26	2.7	2.5	1.63e-006	1.74e-006	1.68e-006

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



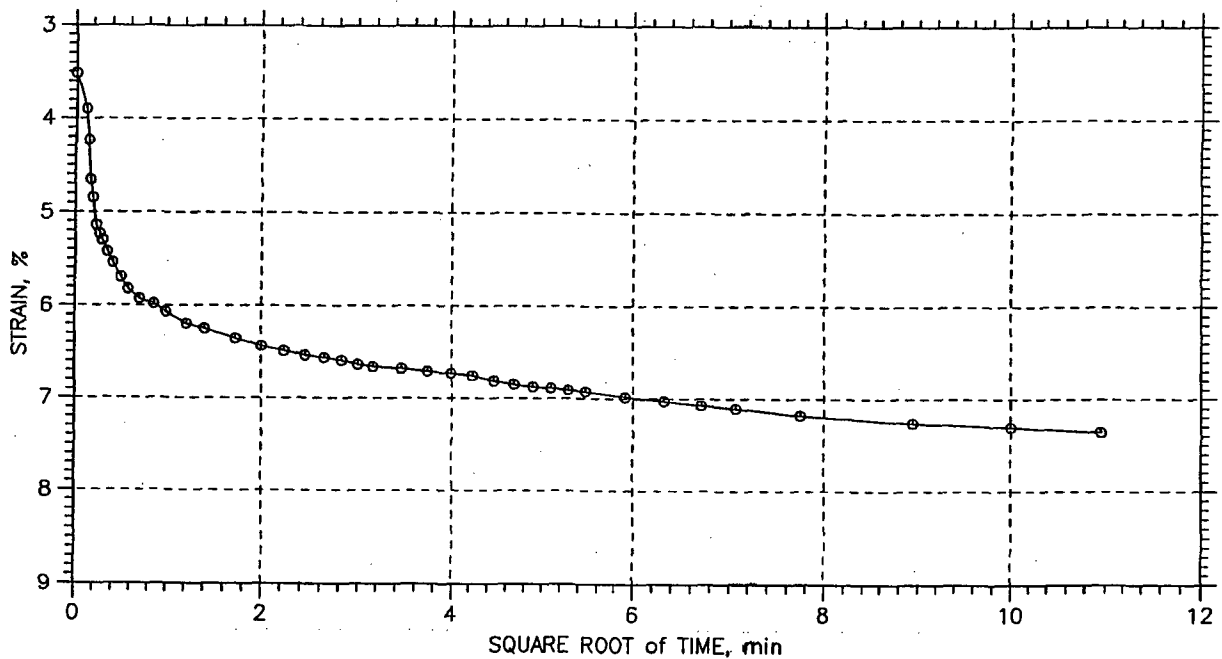
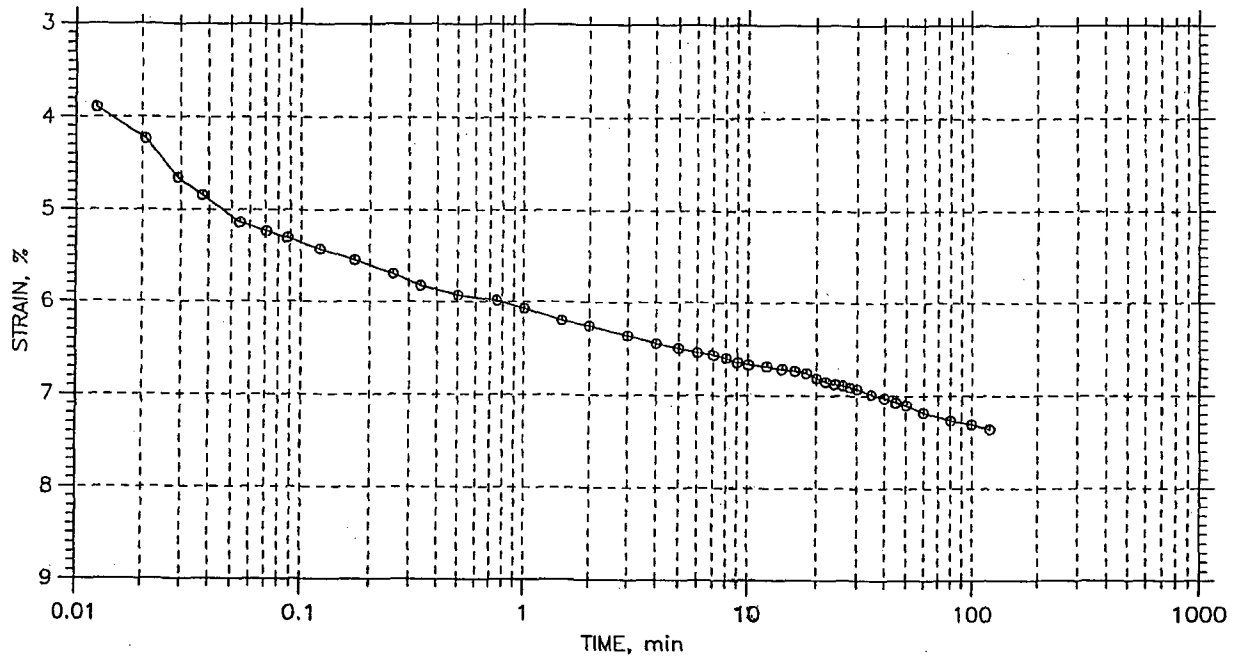
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-747	Tested By: md	Checked By: jdt
	Sample No.: S-15 UD-1	Test Date: 09/16/06	Depth: 25.8-60.0
	Test No.: C-18	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray clay with sand (CH), 74% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System K - Compression Ratio: 0.26, Recompression Ratio: 0.02		

CONSOLIDATION TEST DATA

TIME CURVES

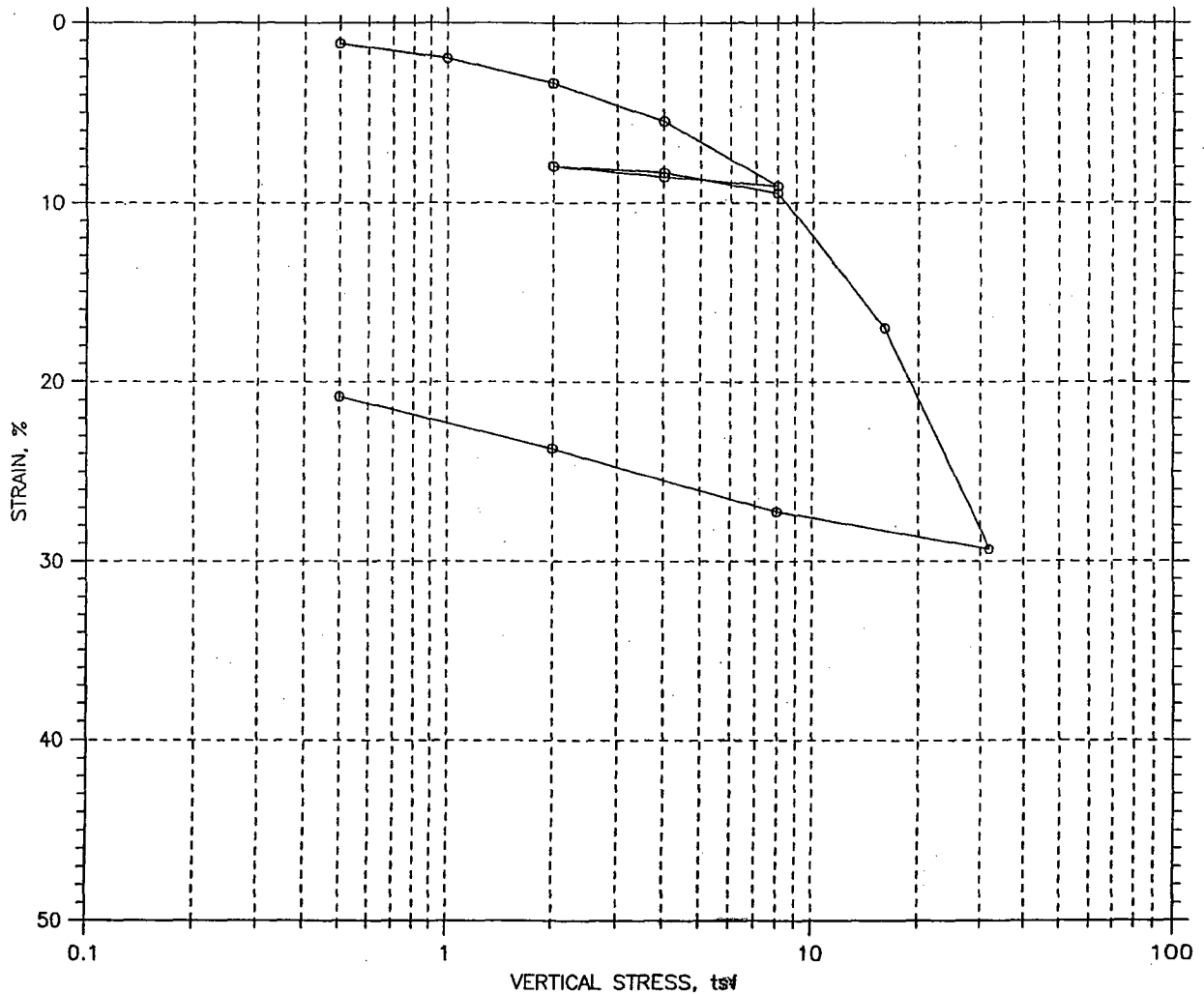
Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-747	Tested By: md	Checked By: jdt
	Sample No.: S-15 UD-1	Test Date: 09/16/06	Depth: 25.8-60.0
	Test No.: C-18	Sample Type: tube	Elevation: ---
	Description: Moist, dark olive gray clay with sand (CH), 74% passing #200 sieve, inundated @ 0.5 tsf		
	Remarks: System K - Compression Ratio: 0.26, Recompression Ratio: 0.02		

CONSOLIDATION TEST DATA SUMMARY REPORT



				Before Test	After Test	
Overburden Pressure: ---				Water Content, %	55.60	41.62
Preconsolidation Pressure: 10.3 tsf				Dry Unit Weight, pcf	63.82	80.59
Compression Index: ---				Saturation, %	89.72	99.99
Diameter: 2.5 in		Height: 1 in		Void Ratio	1.73	1.16
LL: 65	PL: 17	PI: 48	GS: 2.79			

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-752	Tested By: md	Checked By: jdt
	Sample No.: S-15	Test Date: 09/18/06	Depth: 26-60 ft S8-60 ft
	Test No.: C-20	Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray organic clay (OH), 98% passing #200 sieve, inundated @0.5 tsf		
	Remarks: System G - Compression Ratio: 0.40, Recompression Ratio: 0.05		

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
 Boring No.: B-752
 Sample No.: S-15
 Test No.: C-20

Location: Calvert County, MD
 Tested By: md
 Test Date: 09/18/06
 Sample Type: tube

Project No.: GTX-6880
 Checked By: jdt
 Depth: 28-60 ft
 Elevation: ---

Soil Description: Moist, dark greenish gray organic clay (OH), 98% passing #200 sieve, inundated @0.5 tsf
 Remarks: System G - Compression Ratio: 0.40, Recompression Ratio: 0.05

Measured Specific Gravity: 2.79
 Initial Void Ratio: 1.73
 Final Void Ratio: 1.16

Liquid Limit: 65
 Plastic Limit: 17
 Plasticity Index: 48

Initial Height: 1.00 in
 Specimen Diameter: 2.50 in

Container ID	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
	13	RING		1534
Wt. Container + Wet Soil, gm	113.58	344.45	332.95	126.87
Wt. Container + Dry Soil, gm	79.31	298.72	298.72	91.96
Wt. Container, gm	8.24	216.49	216.49	8.08
Wt. Dry Soil, gm	71.07	82.235	82.235	83.88
Water Content, %	48.22	55.60	41.62	41.62
Void Ratio	---	1.73	1.16	---
Degree of Saturation, %	---	89.72	99.99	---
Dry Unit Weight, pcf	---	63.821	80.59	---

CONSOLIDATION TEST DATA

Project: Calvert Cliffs Nuclear PP
Boring No.: B-752
Sample No.: S-15
Test No.: C-20

Location: Calvert County, MD
Tested By: md
Test Date: 09/18/06
Sample Type: tube

Project No.: GTX-6880
Checked By: jdt
Depth: 28-60 ft
Elevation: ---

Soil Description: Moist, dark greenish gray organic clay (OH), 98% passing #200 sieve, inundated @0.5 tsf
Remarks: System G - Compression Ratio: 0.40, Recompression Ratio: 0.05

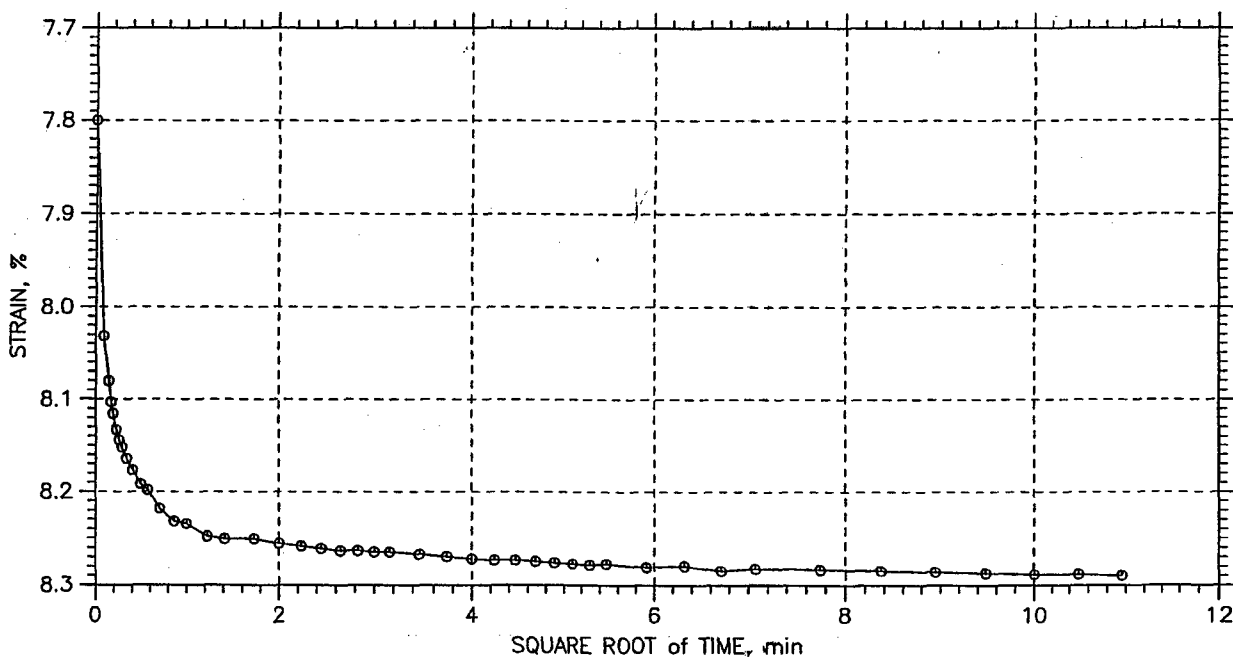
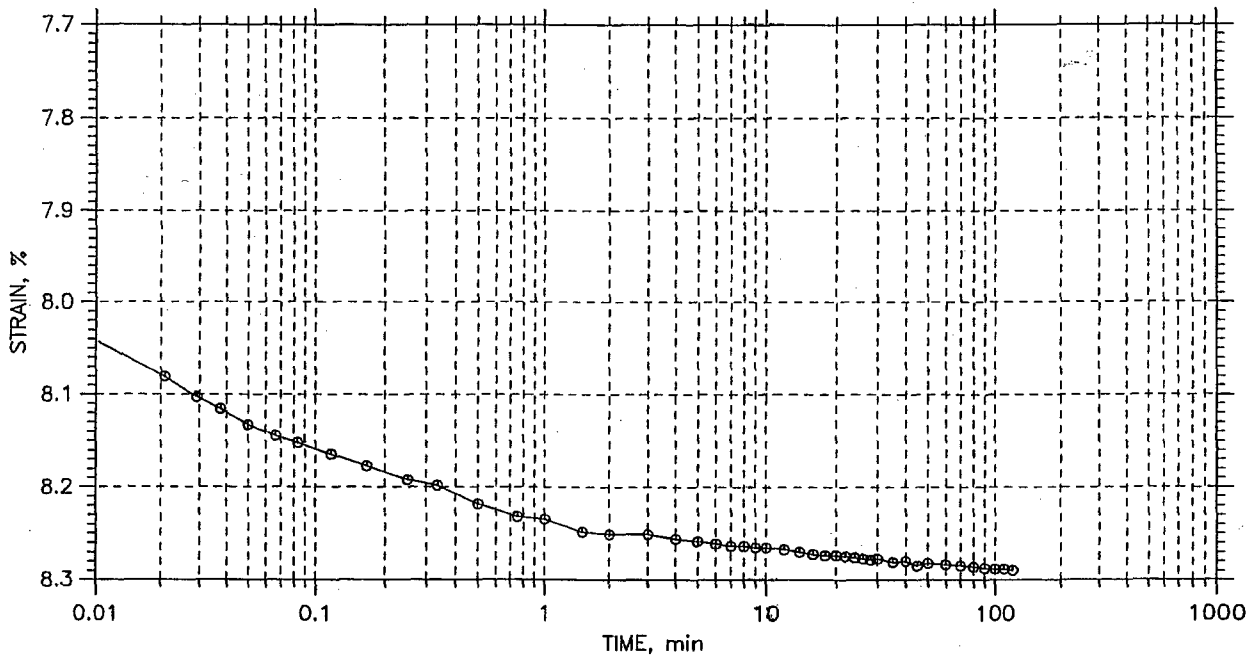
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	T50 Fitting		Coefficient of Consolidation		
					Sq.Rt. min	Log min	Sq.Rt. in ² /sec	Log in ² /sec	Ave. in ² /sec
1	0.5	0.01133	1.698	1.13	0.0	0.0	3.58e-002	0.00e+000	3.58e-002
2	1	0.01957	1.676	1.96	0.0	0.0	3.28e-002	3.11e-002	3.20e-002
3	2	0.03336	1.638	3.34	0.0	0.0	3.43e-002	3.50e-002	3.47e-002
4	4	0.05444	1.581	5.44	0.0	0.0	1.95e-002	3.88e-002	2.59e-002
5	8	0.09037	1.482	9.04	0.2	0.0	4.63e-003	2.53e-002	7.83e-003
6	4	0.08536	1.496	8.54	0.0	0.0	2.85e-002	5.74e-001	5.43e-002
7	2	0.0794	1.512	7.94	0.2	0.0	4.45e-003	0.00e+000	4.45e-003
8	4	0.0829	1.503	8.29	0.0	0.0	2.85e-002	7.41e-002	4.12e-002
9	8	0.09435	1.472	9.44	0.2	0.0	4.49e-003	3.80e-002	8.03e-003
10	16	0.17	1.265	17.00	2.1	1.8	2.88e-004	3.41e-004	3.12e-004
11	32	0.2932	0.929	29.32	11.8	14.7	4.11e-005	3.30e-005	3.66e-005
12	8	0.2721	0.987	27.21	3.2	0.0	1.32e-004	0.00e+000	1.32e-004
13	2	0.237	1.082	23.70	23.3	25.9	1.96e-005	1.76e-005	1.86e-005
14	0.5	0.2081	1.161	20.81	53.2	0.0	9.34e-006	0.00e+000	9.34e-006

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 8 of 14

Stress: 4. tsf



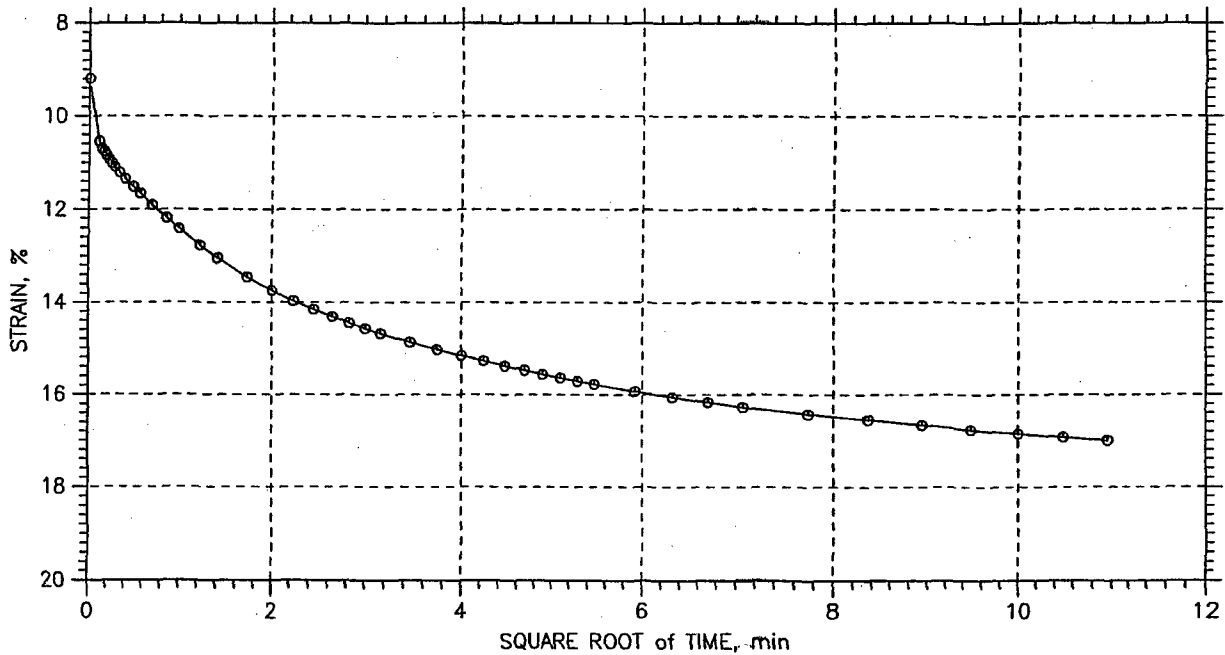
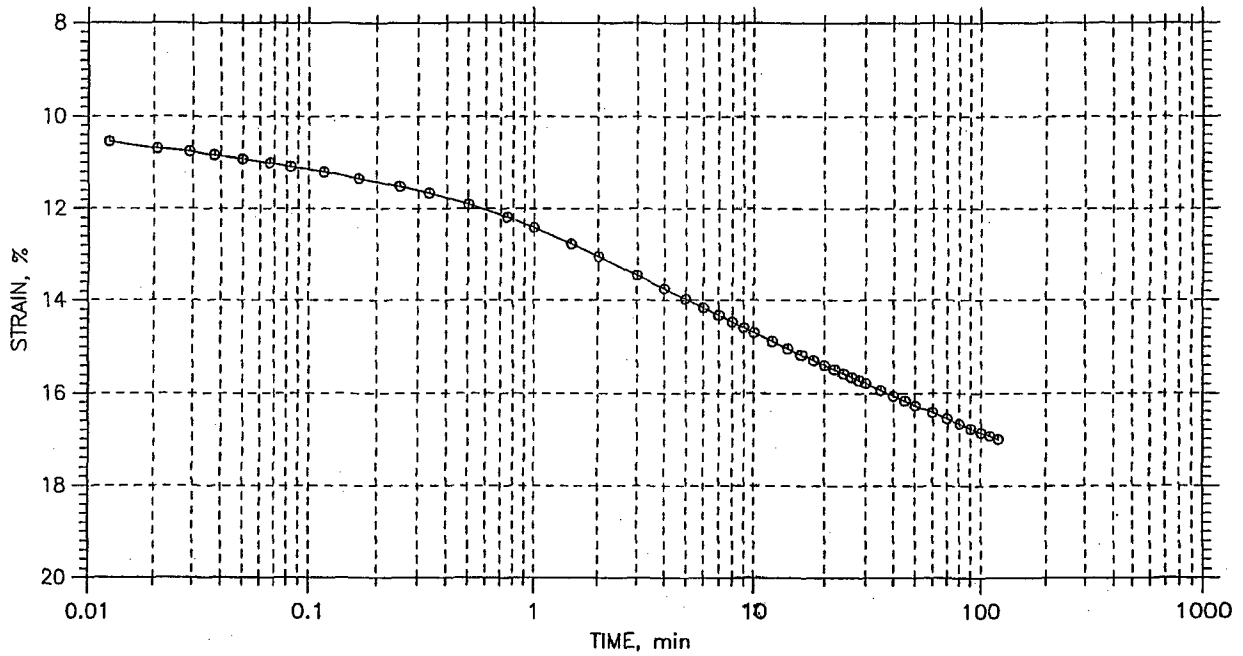
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-752	Tested By: md	Checked By: jdt
	Sample No.: S-15	Test Date: 09/18/06	Depth: 28-60 ft
	Test No.: C-20	Sample Type: tube	Elevation: ---
	Description: Moist, dark greenish gray organic clay (OH), 98% passing #200 sieve, inundated @0.5 tsf		
	Remarks: System G - Compression Ratio: 0.40, Recompression Ratio: 0.05		

CONSOLIDATION TEST DATA

TIME CURVES

Constant Load Step: 10 of 14

Stress: 16. tsf



GeoTesting
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Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
Boring No.: B-752	Tested By: md	Checked By: jdt
Sample No.: S-15	Test Date: 09/18/08	Depth: 28-60 ft
Test No.: C-20	Sample Type: tube	Elevation: ---
Description: Moist, dark greenish gray organic clay (OH), 98% passing #200 sieve, inundated @0.5 tsf		
Remarks: System G - Compression Ratio: 0.40, Recompression Ratio: 0.05		

06120048 Calvert Cliffs Nuclear Power Plant

3/22/07

Coefficient of Consolidation, C_v (square root of time method)

Boring	Depth (ft)	Applied Pressure (tsf)	Prior Pressure (tsf)	Average Pressure (tsf)	H_o (in)	H_{D50} (in)	t_{90} (min)	C_v (ft ² /yr)
B-301	158.5	8	4	6	0.7499	0.3665	0.2	2448
		16	8	12		0.3628	0.7	591
		32	16	24		0.3540	0.2	1764
B-301	168.5	4	2	3	0.7611	0.3705	0.1	3037
		16	8	12		0.3658	0.6	754
		32	16	24		0.3481	3.4	110
B-304	98.5	4	2	3	0.7522	0.3675	0.1	2988
		32	16	24		0.3495	0.1	2703
B-304	138.5	4	2	3	0.7468	0.3647	0.1	2943
		16	8	12		0.3621	0.1	5076
B-313	93.5	4	2	3	0.7496	**	**	**
		32	16	24		0.3511	0.2	2010
B-313	123.5	4	2	3	0.7506	**	**	**
		32	16	24		0.3558	0.3	1265
B-316	43.5	4	2	3	0.7490	0.3616	1.2	338
		16	8	12		0.3505	11.7	33
B-321	23.5	4	2	3	0.7500	0.3691	0.8	563
		32	16	24		0.3479	41.2	9
B-321	73.5	4	2	3	0.7315	**	**	**
		16	8	12		0.3514	0.2	2013
B-327	113.5	4	2	3	0.7538	**	**	**
		32	16	24		0.3489	0.1	2693
B-333	28.5	4	2	3	0.7497	0.3558	2.0	196
		16	8	12		0.3455	22.0	17
B-333	38.5	4	2	3	0.7504	0.3678	1.5	279
		16	16	16		0.3504	11.1	34
B-401	243.5	4	2	3	0.7512	**	**	**
		32	16	24		0.3571	0.8	476
B-434	53.5	4	2	3	0.7505	0.3702	2.1	202
		16	8	12		0.3638	15.3	27
B-434	63.5	4	2	3	0.7514	**	**	**
		16	8	12		0.3614	0.2	2023

** Specimen deformation during loading increment either zero or at the instrument's readability; time curve not interpretable.

UNCONFINED COMPRESSION RESULTS



Unconfined Compression Test Report ASTM D2166

Date: 10/20/2006

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

Schnabel No.: 06120048

Boring No.: B-304

Depth: 98.5-99.5

Elevation: -30.5 to -31.5

Test Specimen Data	
Initial Diameter, in:	2.897
Initial Area, in ² :	6.594
Initial Height, in:	5.787
Height/Diameter Ratio:	2.0
Moisture Content, %:	42.1
Wet Unit Weight, pcf:	110.5
Dry Unit Weight, pcf:	77.7

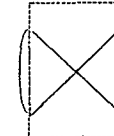
Testing Information	
Test Procedure:	ASTM D2166
Type of Specimen:	Tube Sample
Load Cell No.:	1018253
Strain Rate, %/min.:	1.0

Remarks:

Specimen Type:	Tube Sample
Strength Data	
Strain at Failure, %:	3.9
Unconfined Strength (Qu), tsf:	3.73
Shear Strength (Su), tsf:	1.87

Reviewed by: CJS

Failure Sketch

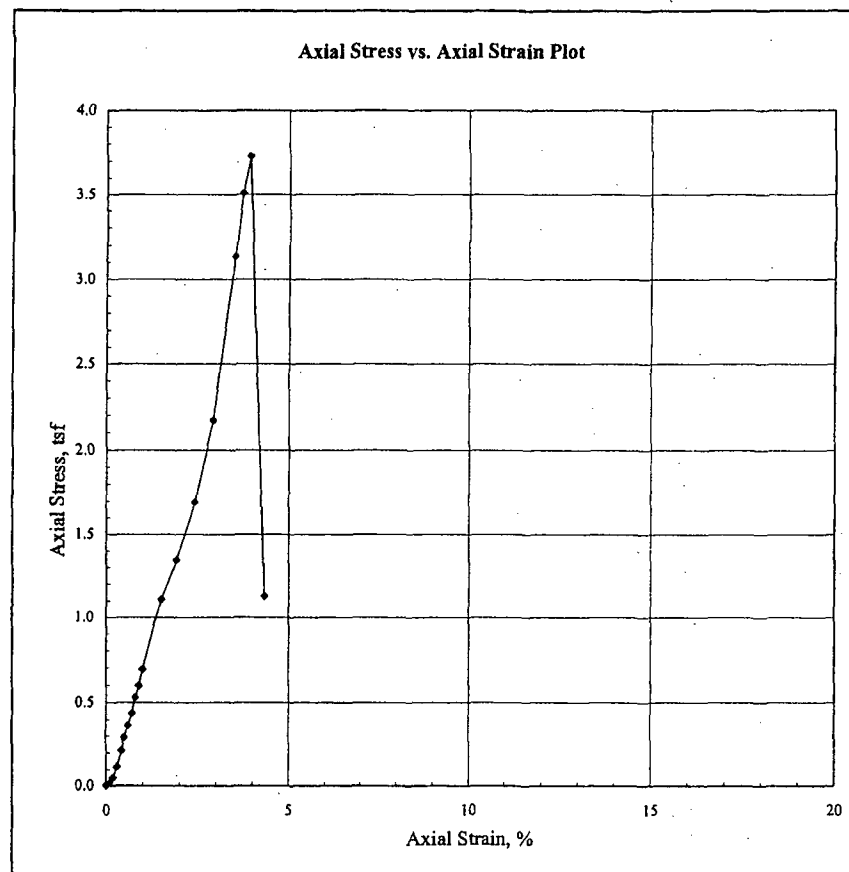


Soil Desc.: Fine CLAYEY SAND (SC), contains shell fragments - light gray

LL, %:	79	% < 200:	47.3
PL, %:	51	Gs:	2.65

Test Data						
Reading No.	Axial Load (lbs)	Axial Displ. (in.)	Axial Strain (%)	Corrected Area ¹ (in ²)	Axial Stress (psi)	Axial Stress (tsf)
Zero	0.0	0.000	0.0	6.59	0.0	0.00
1	1.5	0.006	0.1	6.60	0.2	0.02
2	4.3	0.011	0.2	6.61	0.7	0.05
3	10.7	0.017	0.3	6.61	1.6	0.12
4	19.5	0.024	0.4	6.62	2.9	0.21
5	26.8	0.029	0.5	6.63	4.0	0.29
6	33.5	0.035	0.6	6.63	5.0	0.36
7	40.1	0.041	0.7	6.64	6.0	0.43
8	48.7	0.046	0.8	6.65	7.3	0.53
9	55.1	0.052	0.9	6.65	8.3	0.60
10	64.0	0.058	1.0	6.66	9.6	0.69
11	103.0	0.087	1.5	6.69	15.4	1.11
12	125.5	0.111	1.9	6.72	18.7	1.34
13	159.0	0.140	2.4	6.76	23.5	1.69
14	204.9	0.169	2.9	6.79	30.2	2.17
15	297.3	0.204	3.5	6.84	43.5	3.13
16	333.7	0.216	3.7	6.85	48.7	3.51
17	355.5	0.227	3.9	6.86	51.8	3.73
18	107.8	0.251	4.3	6.89	15.6	1.13
19	0.0	0.000	0.0	6.59	0.0	0.00
20	0.0	0.000	0.0	6.59	0.0	0.00
21	0.0	0.000	0.0	6.59	0.0	0.00
22	0.0	0.000	0.0	6.59	0.0	0.00
23	0.0	0.000	0.0	6.59	0.0	0.00
24	0.0	0.000	0.0	6.59	0.0	0.00
25	0.0	0.000	0.0	6.59	0.0	0.00
26	0.0	0.000	0.0	6.59	0.0	0.00

Notes: 1. Right Cylinder Area Correction Method





Unconfined Compression Test Report ASTM D2166

Date: 10/20/2006

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

Schnabel No.: 06120048.00

Boring No.: B-304

Depth: 138.5-139.3 ft

Elevation: -70.5 to -71.3

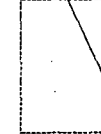
Test Specimen Data	
Initial Diameter, in:	2.898
Initial Area, in ² :	6.596
Initial Height, in:	5.680
Height/Diameter Ratio:	2.0
Moisture Content, %:	36.4
Wet Unit Weight, pcf:	112.2
Dry Unit Weight, pcf:	82.3

Testing Information	
Test Procedure:	ASTM D2166
Type of Specimen:	Tube Sample
Load Cell No.:	1018253
Strain Rate, %/min.:	1.0

Remarks:

Specimen Type:	Tube Sample
Strength Data	
Strain at Failure, %:	3.7
Unconfined Strength (Qu), tsf:	5.23
Shear Strength (Su), tsf:	2.62

Failure Sketch



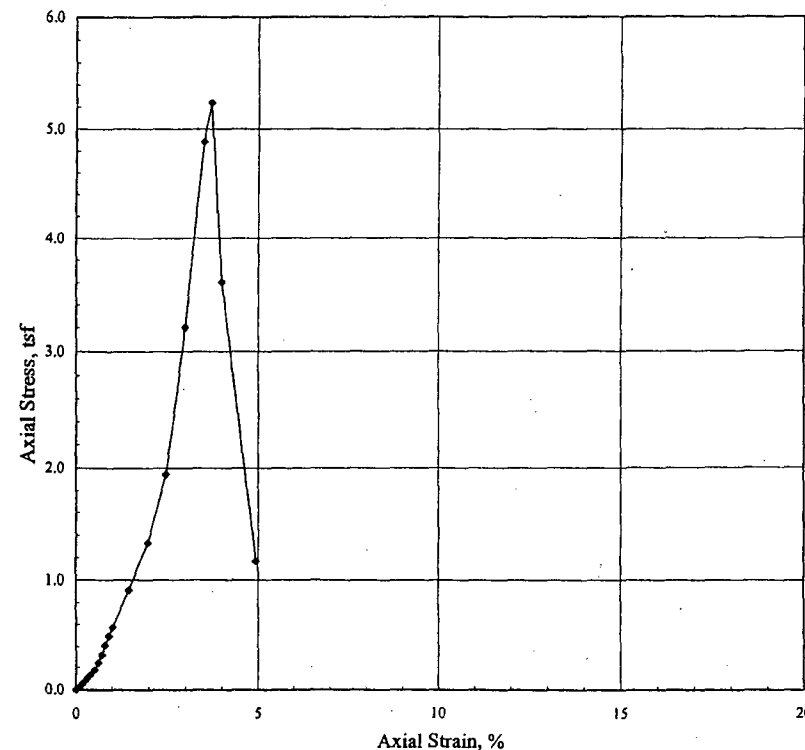
Reviewed by: CJS

Soil Desc.: Fine CLAYEY SAND (SC) - dark gray

LL, %:	43	% < 200:	45.7
PI, %:	17	Gs:	2.65

Test Data						
Reading No.	Axial Load (lbs)	Axial Displ. (in.)	Axial Strain (%)	Corrected Area ¹ (in ²)	Axial Stress (psi)	Axial Stress (tsf)
Zero	0.0	0.000	0.0	6.60	0.0	0.00
1	1.7	0.005	0.1	6.60	0.3	0.02
2	4.9	0.011	0.2	6.61	0.7	0.05
3	8.4	0.017	0.3	6.62	1.3	0.09
4	12.0	0.023	0.4	6.62	1.8	0.13
5	16.2	0.029	0.5	6.63	2.4	0.18
6	22.6	0.035	0.6	6.64	3.4	0.25
7	29.7	0.041	0.7	6.64	4.5	0.32
8	37.6	0.046	0.8	6.65	5.7	0.41
9	45.6	0.052	0.9	6.66	6.8	0.49
10	53.1	0.058	1.0	6.66	8.0	0.57
11	84.6	0.083	1.5	6.69	12.6	0.91
12	124.4	0.112	2.0	6.73	18.5	1.33
13	182.2	0.140	2.5	6.76	26.9	1.94
14	302.5	0.170	3.0	6.80	44.5	3.20
15	463.3	0.198	3.5	6.83	67.8	4.88
16	498.0	0.210	3.7	6.85	72.7	5.23
17	343.7	0.227	4.0	6.87	50.0	3.60
18	112.4	0.281	4.9	6.94	16.2	1.17
19	0.0	0.000	0.0	6.60	0.0	0.00
20	0.0	0.000	0.0	6.60	0.0	0.00
21	0.0	0.000	0.0	6.60	0.0	0.00
22	0.0	0.000	0.0	6.60	0.0	0.00
23	0.0	0.000	0.0	6.60	0.0	0.00
24	0.0	0.000	0.0	6.60	0.0	0.00
25	0.0	0.000	0.0	6.60	0.0	0.00
26	0.0	0.000	0.0	6.60	0.0	0.00

Axial Stress vs. Axial Strain Plot



Notes: 1. Right Cylinder Area Correction Method

UC 8/2006 Rev. 0



Unconfined Compression Test Report ASTM D2166

Date: 10/26/2006

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

Schnabel No.: 06120048

Boring No.: B-316

Depth: 43.5-45.5 ft.

Elevation: 64.6 to 62.6

Test Specimen Data	
Initial Diameter, in:	2.884
Initial Area, in ² :	6.535
Initial Height, in:	5.847
Height/Diameter Ratio:	2.0
Moisture Content, %:	28.6
Wet Unit Weight, pcf:	119.4
Dry Unit Weight, pcf:	92.8

Testing Information	
Test Procedure:	ASTM D2166
Type of Specimen:	Tube Sample
Load Cell No.:	1018253
Strain Rate, %/min.:	1.0

Specimen Type: Tube Sample

Strength Data	
Strain at Failure, %:	3.4
Unconfined Strength (Qu), tsf:	1.13
Shear Strength (Su), tsf:	0.57

Failure Sketch



Remarks:

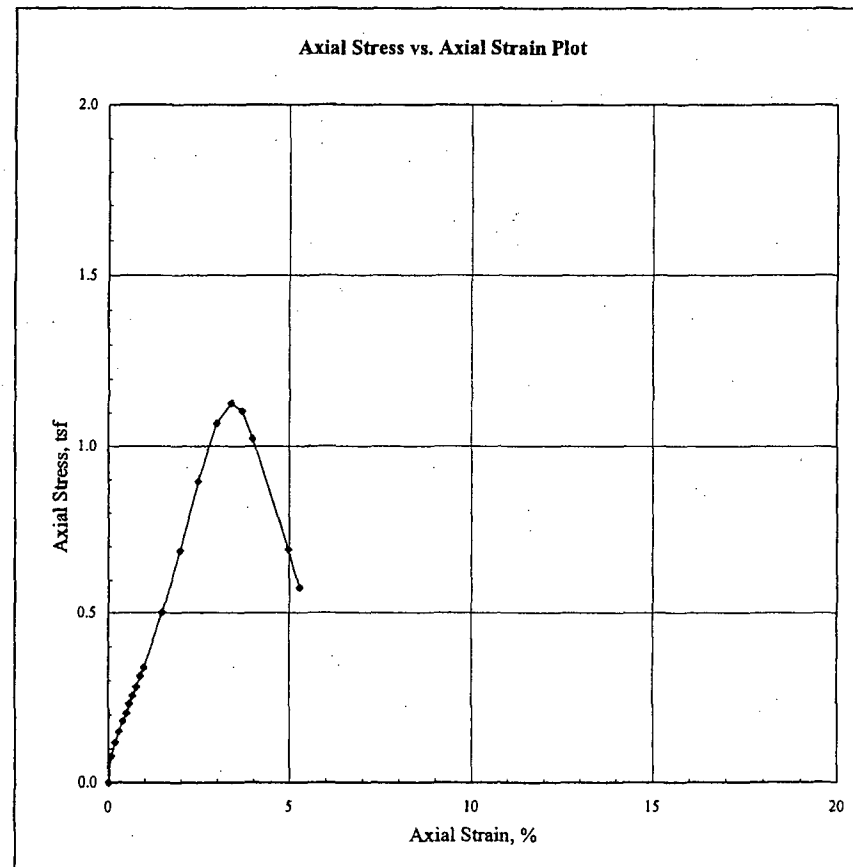
Reviewed by: CJS

Soil Desc.: LEAN CLAY with sand (CL) - gray

LL, %:	44	% < 200:	71.0
PI, %:	28	Gs:	2.79

Test Data						
Reading No.	Axial Load (lbs)	Axial Displ. (in.)	Axial Strain (%)	Corrected Area ¹ (in ²)	Axial Stress (psi)	Axial Stress (tsf)
Zero	0.0	0.000	0.0	6.54	0.0	0.00
1	7.0	0.005	0.1	6.54	1.1	0.08
2	10.6	0.011	0.2	6.55	1.6	0.12
3	13.6	0.017	0.3	6.55	2.1	0.15
4	16.4	0.023	0.4	6.56	2.5	0.18
5	18.7	0.029	0.5	6.57	2.8	0.21
6	21.2	0.035	0.6	6.57	3.2	0.23
7	23.4	0.040	0.7	6.58	3.6	0.26
8	25.7	0.046	0.8	6.59	3.9	0.28
9	28.6	0.052	0.9	6.59	4.3	0.31
10	30.9	0.058	1.0	6.60	4.7	0.34
11	46.2	0.087	1.5	6.63	7.0	0.50
12	63.5	0.116	2.0	6.67	9.5	0.69
13	83.2	0.145	2.5	6.70	12.4	0.89
14	99.9	0.175	3.0	6.74	14.8	1.07
15	106.0	0.198	3.4	6.76	15.7	1.13
16	104.1	0.216	3.7	6.79	15.3	1.10
17	96.6	0.233	4.0	6.81	14.2	1.02
18	65.9	0.291	5.0	6.88	9.6	0.69
19	55.2	0.309	5.3	6.90	8.0	0.58
20						
21						
22						
23						
24						
25						
26						

Notes: 1. Right Cylinder Area Correction Method

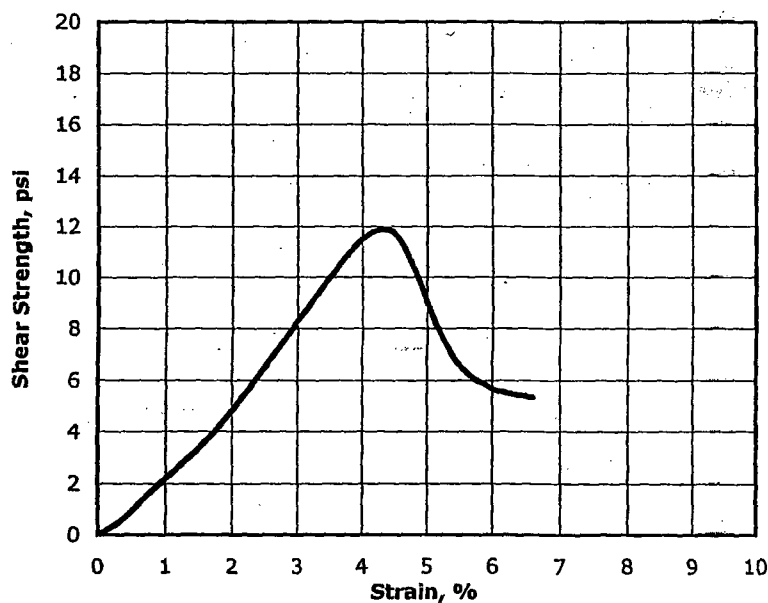


GeoTesting express

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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	10/18/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-326
Sample ID:	S-10
Depth, ft:	33.5-35.5
Visual Description:	Moist, dark gray sandy clay
Test No.:	UC9

Unconfined Compressive Strength of Cohesive Soil by ASTM D 2166-00



Failure Sketch

Initial Diameter, in:	2.87	Shear Strength, psi:	11.9
Initial Height, in:	6.05	Strain Rate, %/min:	1
Height to Diameter Ratio:	2.11	Strain at Failure, %;	4.3
Initial Mass, grams:	1237	Sample Type:	Tube
Initial Bulk Density, pcf:	120.4	Liquid Limit:	41
Initial Moisture Content, %:	26.6	Plastic Limit:	16
Initial Dry Density, pcf:	95.1	Plasticity Index:	25
Initial Degree of Saturation:	90.4	% Passing #200 sieve:	62
Initial Void Ratio:	0.81	Soil Classification:	Sandy Lean Clay
Measured Specific Gravity:	2.76	Group Symbol:	CL

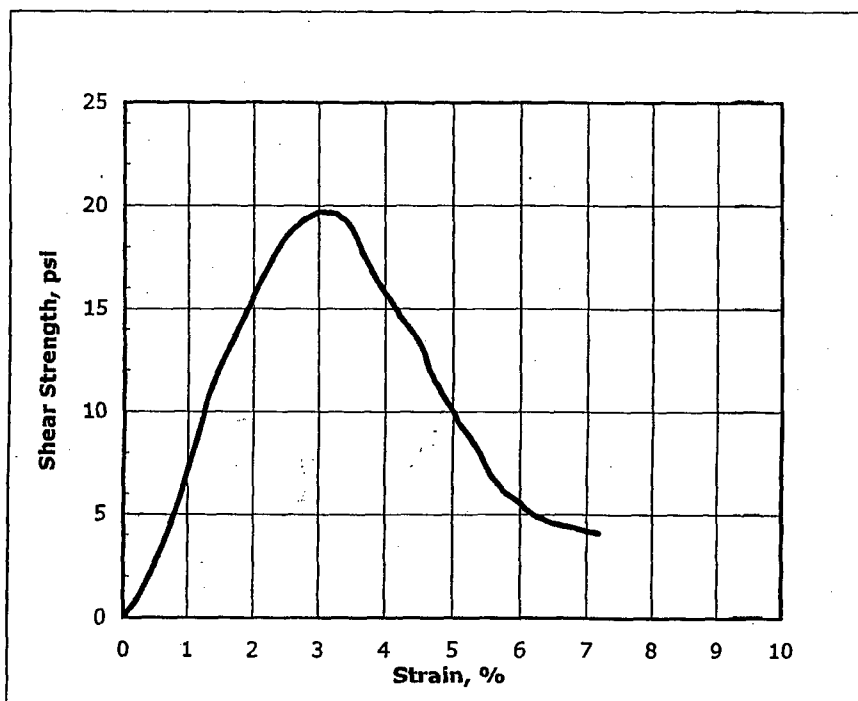
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/27/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-326
Sample ID:	S-12
Depth, ft:	43.5-45.5
Visual Description:	Moist, very dark gray organic clay
Test No.:	UC8

Unconfined Compressive Strength of Cohesive Soil by ASTM D 2166-00



Failure Sketch

Initial Diameter, in:	2.87	Shear Strength, psi:	19.7
Initial Height, in:	6	Strain Rate, %/min:	1
Height to Diameter Ratio:	2.09	Strain at Failure, %;	3.1
Initial Mass, grams:	1134	Sample Type:	Tube
Initial Bulk Density, pcf:	111.3	Liquid Limit:	63
Initial Moisture Content, %:	32.3	Plastic Limit:	22
Initial Dry Density, pcf:	84.1	Plasticity Index:	41
Initial Degree of Saturation:	87.0	% Passing #200 sieve:	89
Initial Void Ratio:	1.00	Soil Classification:	Organic Clay
Measured Specific Gravity:	2.70	Group Symbol:	OH

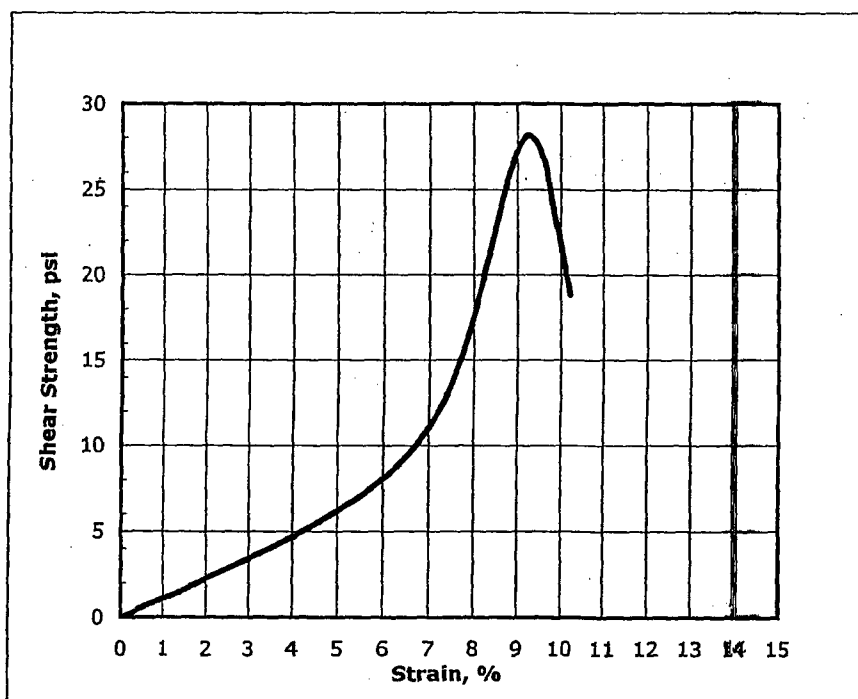
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/27/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-331
Sample ID:	S-7
Depth, ft:	18.5-20.5
Visual Description:	Moist, mottled dark greenish gray, dusky red, and reddish brown clay
Test No.:	UCB

Unconfined Compressive Strength of Cohesive Soil by ASTM D 2166-00



Failure Sketch

Initial Diameter, in:	2.87	Shear Strength, psi:	28.2
Initial Height, in:	5.75	Strain Rate, %/min:	1
Height to Diameter Ratio:	2.00	Strain at Failure, %;	9.3
Initial Mass, grams:	1084	Sample Type:	Tube
Initial Bulk Density, pcf:	111.0	Liquid Limit:	57
Initial Moisture Content, %:	31.3	Plastic Limit:	23
Initial Dry Density, pcf:	84.5	Plasticity Index:	34
Initial Degree of Saturation:	84.9	% Passing #200 sieve:	97
Initial Void Ratio:	1.00	Soil Classification:	Fat Clay
Measured Specific Gravity:	2.71	Group Symbol:	CH

Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422



Unconfined Compression Test Report
ASTM D2166

Project: Calvert Cliffs Nuclear Power Plant

Schnabel No.: 06120048

Boring No.: B-333

Depth: 28.5-30.5 ft.

Elevation: 61 to 59 ft

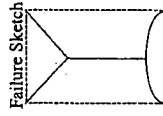
Location: Calvert County, MD

Date: 10/30/2006

Test Specimen Data	
Initial Diameter, in.	2.892
Initial Area, in. ²	6.569
Initial Height, in.	5.825
Height/Diameter Ratio:	2.0
Moisture Content, %:	38.9
Wet Unit Weight, pcf.	112.8
Dry Unit Weight, pcf.	81.2

Testing Information	
Test Procedure:	ASTM D2166
Type of Specimen:	Tube Sample
Load Cell No.:	1018253
Strain Rate, %/min.:	1.0

Specimen Type: Tube Sample	
Strength Data	
Strain at Failure, %:	3.4
Unconfined Strength (Qu), tsf:	1.49
Shear Strength (Su), tsf:	0.73



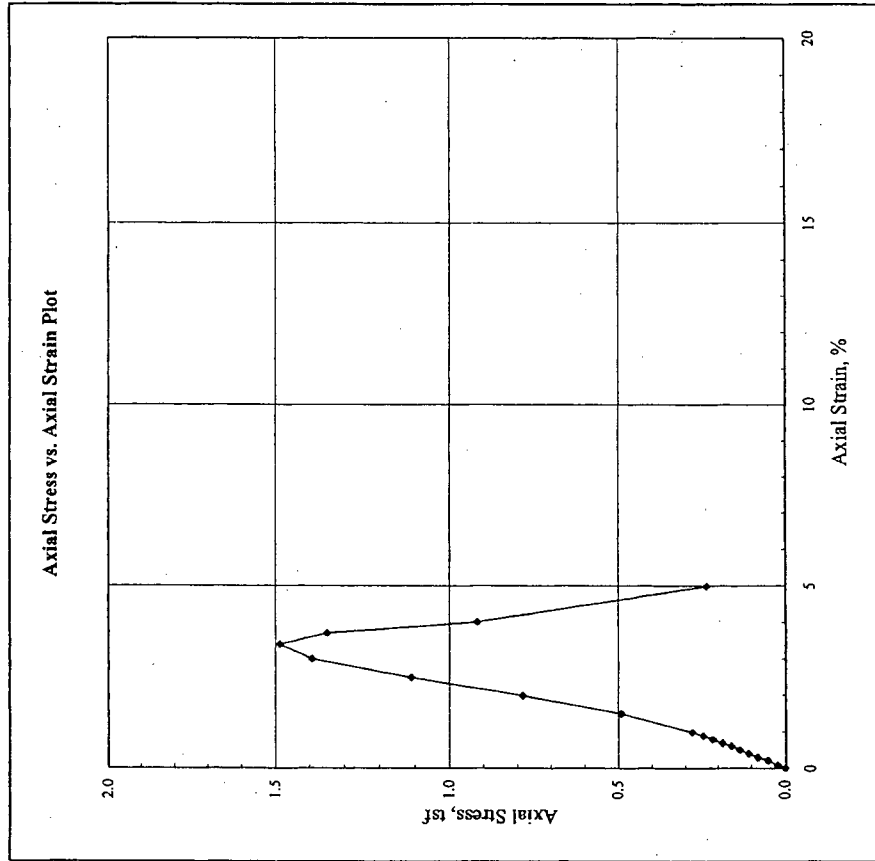
Remarks:

Reviewed by: CJS

Soil Desc.: FAT CLAY with sand (CH) - gray

LL, %:	52	% < 200:	85.3
PL, %:	33	Gs:	2.82

Test Data				
Reading No.	Axial Load (lbs)	Axial Displ. (in.)	Axial Strain (%)	Corrected Area (in. ²)
Zero	0.0	0.000	0.0	6.57
1	2.0	0.005	0.1	6.57
2	4.6	0.012	0.2	6.58
3	7.3	0.017	0.3	6.59
4	9.8	0.023	0.4	6.60
5	12.3	0.029	0.5	6.60
6	14.5	0.035	0.6	6.61
7	17.1	0.040	0.7	6.61
8	19.8	0.046	0.8	6.62
9	22.6	0.052	0.9	6.63
10	25.7	0.058	1.0	6.64
11	45.4	0.087	1.5	6.67
12	72.9	0.116	2.0	6.70
13	103.8	0.145	2.5	6.74
14	130.9	0.175	3.0	6.77
15	140.3	0.198	3.4	6.80
16	127.8	0.216	3.7	6.82
17	87.2	0.234	4.0	6.84
18	22.4	0.291	5.0	6.91
19				
20				
21				
22				
23				
24				
25				
26				



Notes: 1. Right Cylinder Area Correction Method



Unconfined Compression Test Report ASTM D2166

Date: 11/27/2006

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

Schnabel No.: 06120048

Boring No.: B-333

Depth: 38.5-40.5ft.

Elevation: 51 to 49 ft

Test Specimen Data	
Initial Diameter, in:	2.885
Initial Area, in ² :	6.540
Initial Height, in:	5.889
Height/Diameter Ratio:	2.0
Moisture Content, %:	35.7
Wet Unit Weight, pcf:	118.0
Dry Unit Weight, pcf:	87.0

Testing Information	
Test Procedure:	ASTM D2166
Type of Specimen:	Tube Sample
Load Cell No.:	1018253
Strain Rate, %/min.:	1.0

Remarks:

Specimen Type: Tube Sample

Strength Data	
Strain at Failure, %:	2.4
Unconfined Strength (Qu), tsf:	2.98
Shear Strength (Su), tsf:	1.49

Failure Sketch



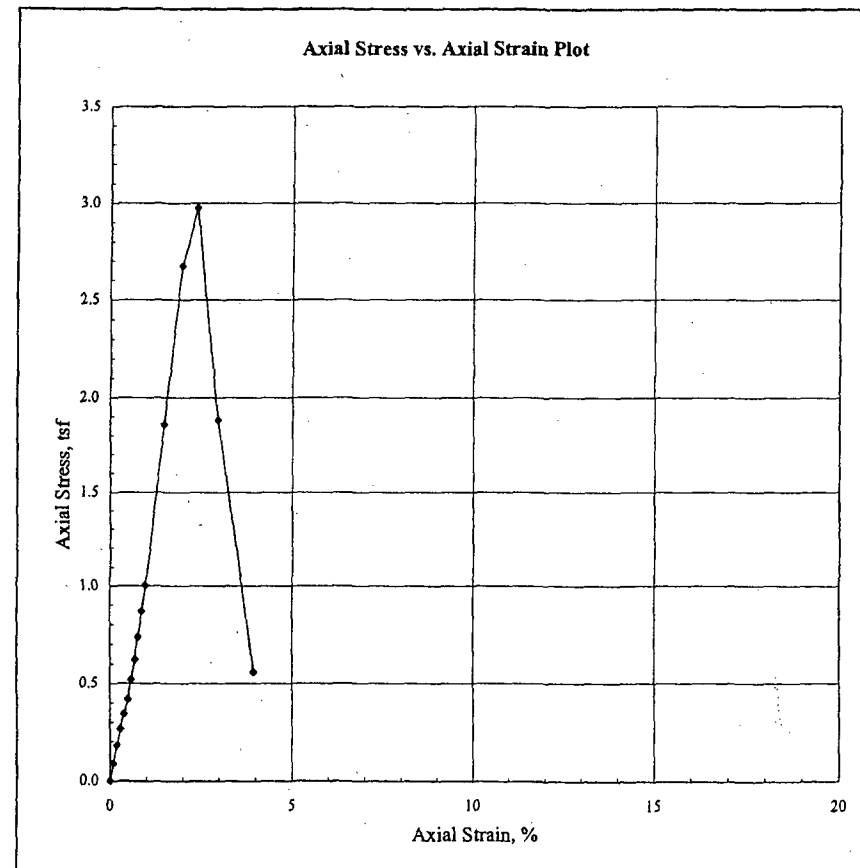
Reviewed by: CJS

Soil Desc.: FAT CLAY (CH) - gray

LL, %:	61	% < 200:	98.8
PI, %:	38	Gs:	2.85

Test Data						
Reading No.	Axial Load (lbs)	Axial Displ. (in.)	Axial Strain (%)	Corrected Area ¹ (in ²)	Axial Stress (psi)	Axial Stress (tsf)
Zero	0.0	0.000	0.0	6.54	0.0	0.00
1	8.1	0.006	0.1	6.55	1.2	0.09
2	16.4	0.011	0.2	6.55	2.5	0.18
3	24.2	0.017	0.3	6.56	3.7	0.27
4	31.4	0.023	0.4	6.57	4.8	0.34
5	38.2	0.029	0.5	6.57	5.8	0.42
6	47.5	0.035	0.6	6.58	7.2	0.52
7	56.8	0.041	0.7	6.59	8.6	0.62
8	67.4	0.046	0.8	6.59	10.2	0.74
9	79.5	0.052	0.9	6.60	12.0	0.87
10	91.8	0.058	1.0	6.60	13.9	1.00
11	171.2	0.087	1.5	6.64	25.8	1.86
12	247.6	0.116	2.0	6.67	37.1	2.67
13	276.8	0.140	2.4	6.70	41.3	2.98
14	176.1	0.175	3.0	6.74	26.1	1.88
15	52.9	0.233	4.0	6.81	7.8	0.56
16						
17						
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26						

Notes: 1. Right Cylinder Area Correction Method

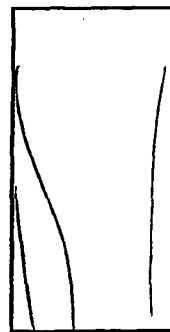
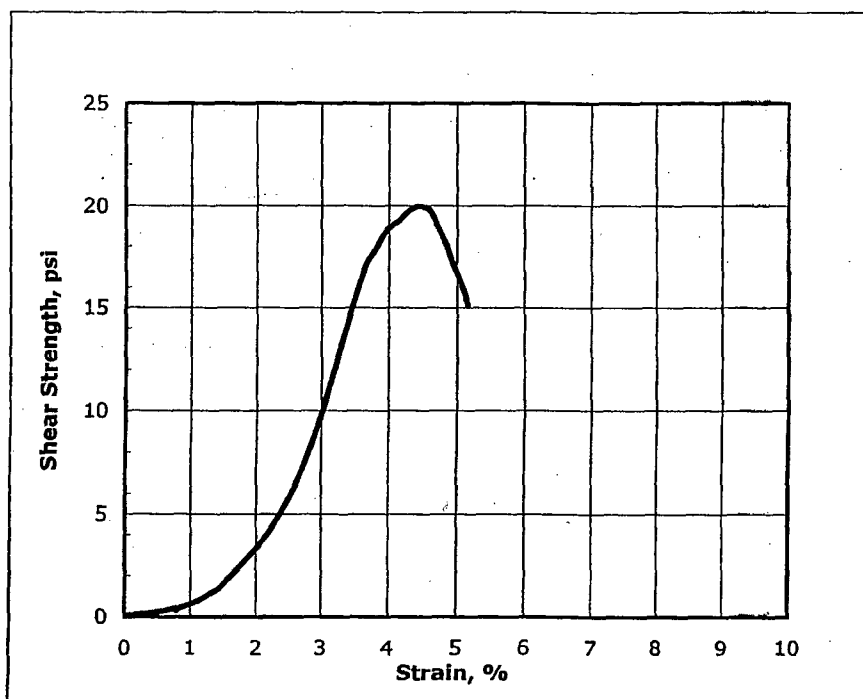


GeoTesting express

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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	10/19/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-406
Sample ID:	S-16
Depth, ft:	63.5-65.5
Visual Description:	Moist, very dark gray organic clay with sand
Test No.:	UC13

Unconfined Compressive Strength of Cohesive Soil by ASTM D 2166-00



Failure Sketch

Initial Diameter, in:	2.87	Shear Strength, psi:	20.0
Initial Height, in:	5.9	Strain Rate, %/min:	1
Height to Diameter Ratio:	2.06	Strain at Failure, %;	4.5
Initial Mass, grams:	1126	Sample Type:	Tube
Initial Bulk Density, pcf:	112.4	Liquid Limit:	63
Initial Moisture Content, %:	38.3	Plastic Limit:	19
Initial Dry Density, pcf:	81.2	Plasticity Index:	44
Initial Degree of Saturation:	95.1	% Passing #200 sieve:	90
Initial Void Ratio:	1.10	Soil Classification:	Organic Clay
Measured Specific Gravity:	2.74	Group Symbol:	OH

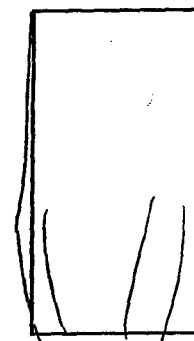
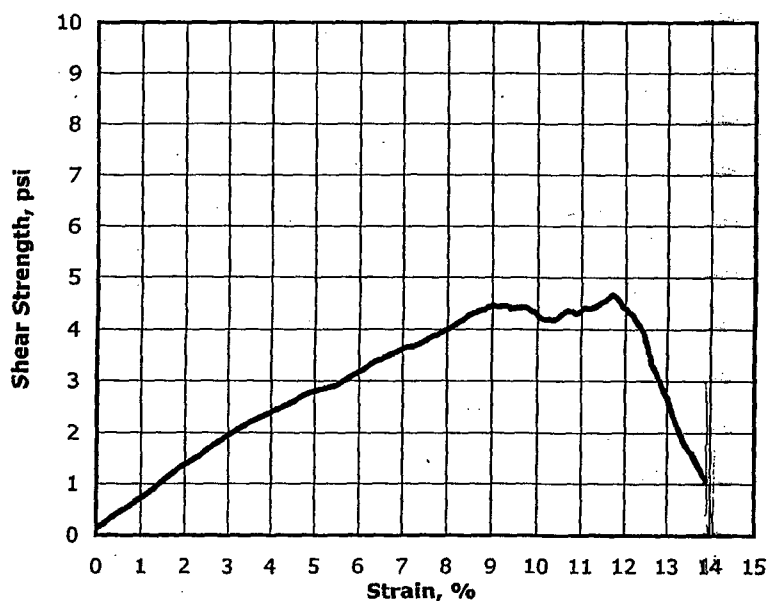
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	10/19/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-414
Sample ID:	S-17
Depth, ft:	68-70
Visual Description:	Moist, dark greenish gray clay
Test No.:	UC11

Unconfined Compressive Strength of Cohesive Soil by ASTM D 2166-00



Failure Sketch

Initial Diameter, in:	2.87	Shear Strength, psi:	4.7
Initial Height, in:	6.05	Strain Rate, %/min:	1
Height to Diameter Ratio:	2.11	Strain at Failure, %;	11.7
Initial Mass, grams:	1059	Sample Type:	Tube
Initial Bulk Density, pcf:	103.1	Liquid Limit:	51
Initial Moisture Content, %:	36.6	Plastic Limit:	15
Initial Dry Density, pcf:	75.4	Plasticity Index:	36
Initial Degree of Saturation:	78.6	% Passing #200 sieve:	97
Initial Void Ratio:	1.29	Soil Classification:	Fat Clay
Measured Specific Gravity:	2.77	Group Symbol:	CH

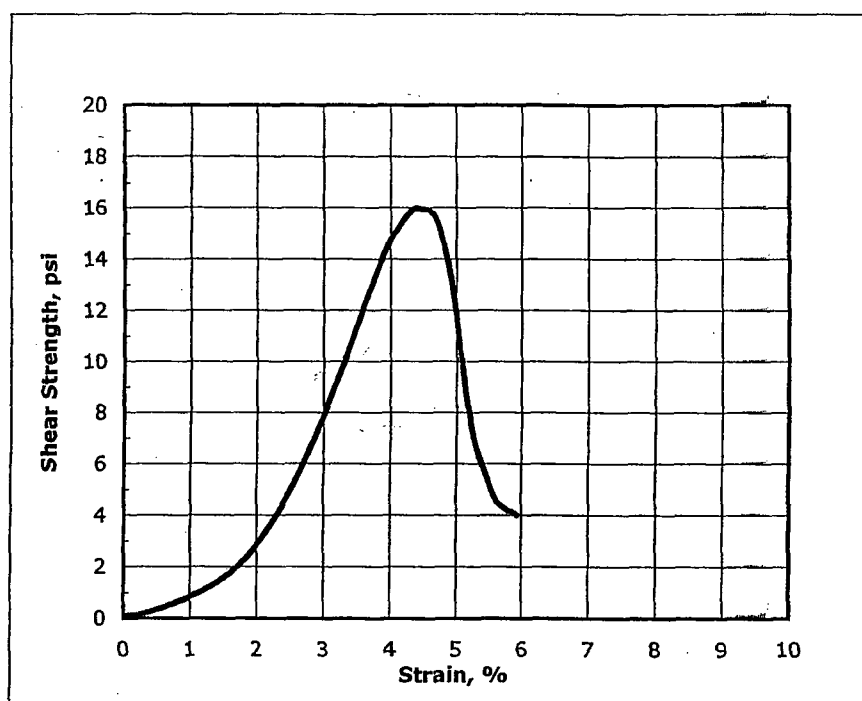
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/12/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-420
Sample ID:	S-16
Depth, ft:	63.5-65.5
Visual Description:	Moist, olive gray clayey sand
Test No.:	UC1

Unconfined Compressive Strength of Cohesive Soil by ASTM D 2166-00



Failure Sketch

Initial Diameter, in:	2.87	Shear Strength, psi:	16.0
Initial Height, in:	6.05	Strain Rate, %/min:	1
Height to Diameter Ratio:	2.11	Strain at Failure, %;	4.4
Initial Mass, grams:	1204	Sample Type:	Tube
Initial Bulk Density, pcf:	117.2	Liquid Limit:	49
Initial Moisture Content, %:	31.6	Plastic Limit:	38
Initial Dry Density, pcf:	89.0	Plasticity Index:	11
Initial Degree of Saturation:	93.8	% Passing #200 sieve:	19
Initial Void Ratio:	0.93	Soil Classification:	Clayey Sand
Measured Specific Gravity:	2.75	Group Symbol:	SC

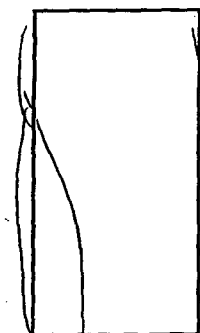
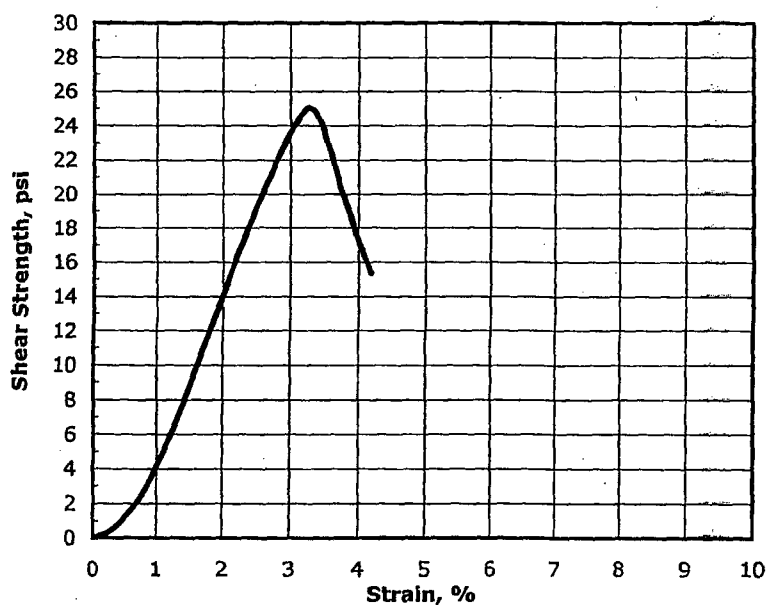
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	10/19/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-427
Sample ID:	S-16
Depth, ft:	63.5-65.5
Visual Description:	Moist, black sandy organic clay
Test No.:	UC12

Unconfined Compressive Strength of Cohesive Soil by ASTM D 2166-00



Failure Sketch

Initial Diameter, in:	2.87	Shear Strength, psi:	25.0
Initial Height, in:	5.83	Strain Rate, %/min:	1
Height to Diameter Ratio:	2.03	Strain at Failure, %:	3.3
Initial Mass, grams:	1158	Sample Type:	Tube
Initial Bulk Density, pcf:	117.0	Liquid Limit:	56
Initial Moisture Content, %:	36.4	Plastic Limit:	18
Initial Dry Density, pcf:	85.7	Plasticity Index:	38
Initial Degree of Saturation:	100.7	% Passing #200 sieve:	61
Initial Void Ratio:	0.99	Soil Classification:	Organic Clay
Measured Specific Gravity:	2.73	Group Symbol:	OH

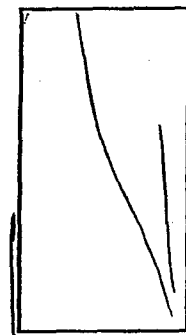
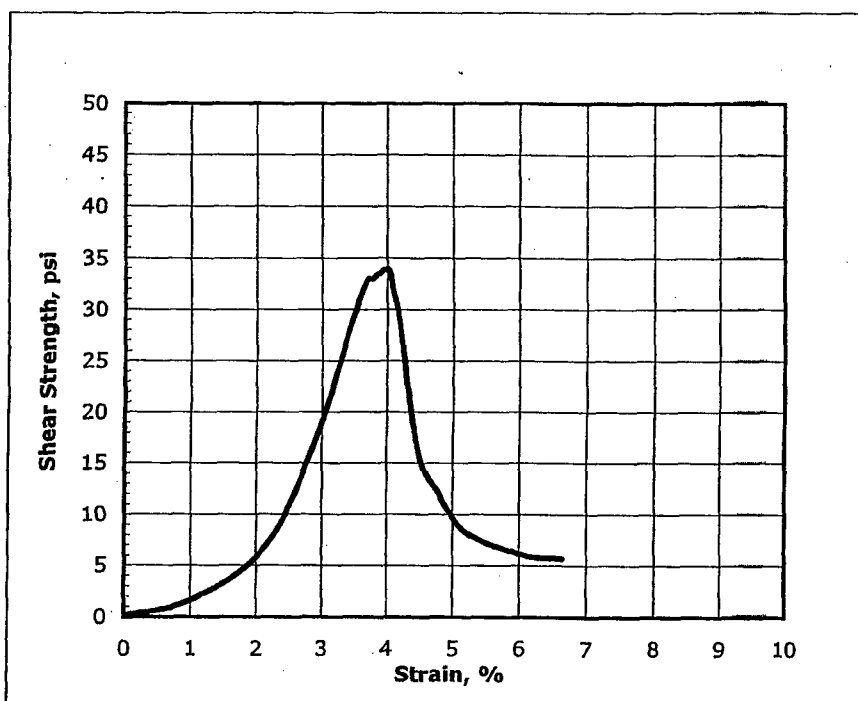
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	10/27/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-428
Sample ID:	---
Depth, ft:	60-62
Visual Description:	Moist, dark greenish gray ^{fat} organic clay with sand BB/4/6/07
Test No.:	UC14

Unconfined Compressive Strength of Cohesive Soil by ASTM D 2166-00



Failure Sketch

Initial Diameter, in:	2.87	Shear Strength, psi:	33.9
Initial Height, in:	6	Strain Rate, %/min:	1
Height to Diameter Ratio:	2.09	Strain at Failure, %;	4.0
Initial Mass, grams:	1227	Sample Type:	Tube
Initial Bulk Density, pcf:	120.4	Liquid Limit:	61
Initial Moisture Content, %:	32.2	Plastic Limit:	17
Initial Dry Density, pcf:	91.1	Plasticity Index:	44
Initial Degree of Saturation:	99.3	% Passing #200 sieve:	93
Initial Void Ratio:	0.90	Soil Classification:	^{fat} Organic Clay w/ Sand
Measured Specific Gravity:	2.77	Group Symbol:	OH CH

Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

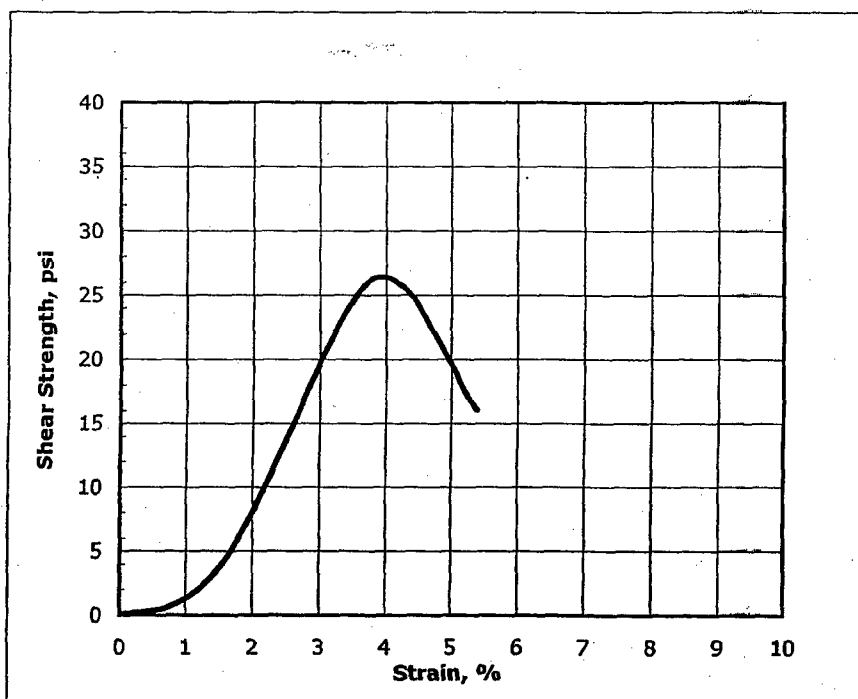
BB/4/6/07

GeoTesting express

a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/27/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-433
Sample ID:	S-11
Depth, ft:	38.5-40.5
Visual Description:	Moist, very dark gray clay
Test No.:	UC6

Unconfined Compressive Strength of Cohesive Soil by ASTM D 2166-00



Failure Sketch

Initial Diameter, in:	2.87	Shear Strength, psi:	26.4
Initial Height, in:	6.00	Strain Rate, %/min:	1
Height to Diameter Ratio:	2.09	Strain at Failure, %;	4.0
Initial Mass, grams:	1232	Sample Type:	Tube
Initial Bulk Density, pcf:	120.9	Liquid Limit:	61
Initial Moisture Content, %:	30.5	Plastic Limit:	14
Initial Dry Density, pcf:	92.6	Plasticity Index:	47
Initial Degree of Saturation:	97.7	% Passing #200 sieve:	91
Initial Void Ratio:	0.87	Soil Classification:	Fat Clay
Measured Specific Gravity:	2.77	Group Symbol:	CH

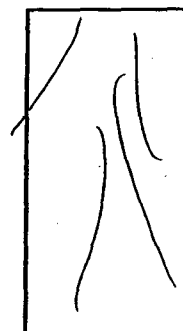
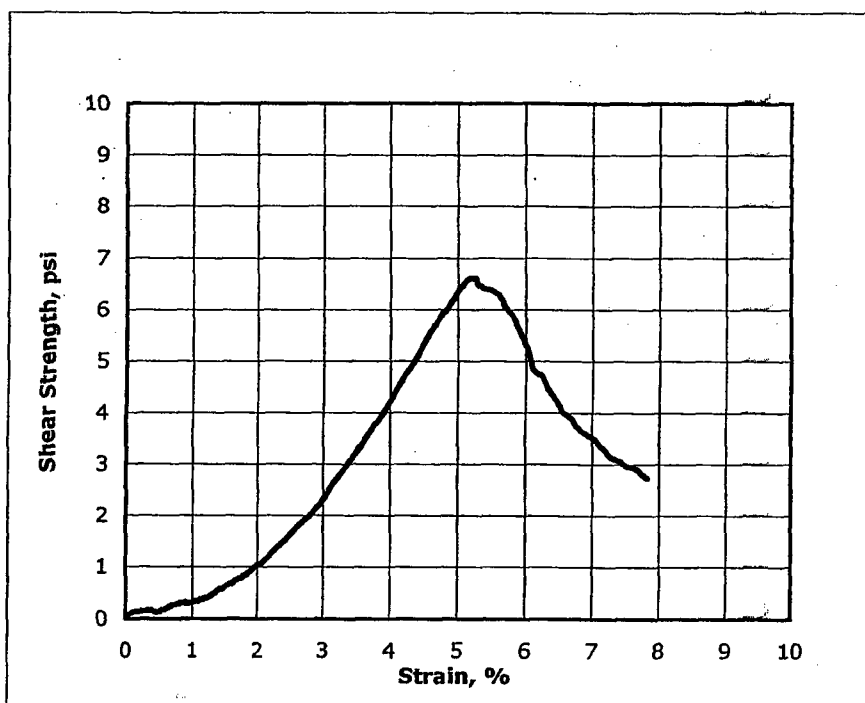
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	10/27/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-433
Sample ID:	S-13
Depth, ft:	48.5-50.5
Visual Description:	Moist, black clay with sand
Test No.:	UC7

Unconfined Compressive Strength of Cohesive Soil by ASTM D 2166-00



Failure Sketch

Initial Diameter, in:	2.87	Shear Strength, psi:	6.6
Initial Height, in:	6.3	Strain Rate, %/min:	1
Height to Diameter Ratio:	2.20	Strain at Failure, %;	5.2
Initial Mass, grams:	1207	Sample Type:	Tube
Initial Bulk Density, pcf:	112.8	Liquid Limit:	64
Initial Moisture Content, %:	36.8	Plastic Limit:	23
Initial Dry Density, pcf:	82.4	Plasticity Index:	41
Initial Degree of Saturation:	96.7	% Passing #200 sieve:	95
Initial Void Ratio:	1.01	Soil Classification:	Clay with Sand
Measured Specific Gravity:	2.66	Group Symbol:	CH

Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422



Unconfined Compression Test Report ASTM D2166

Date: 11/27/2006

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

Schnabel No.: 06120048

Boring No.: B-434

Depth: 53.5-55.5ft.

Elevation: 51.7 to 49.7 ft

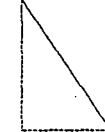
Test Specimen Data	
Initial Diameter, in:	2.889
Initial Area, in ² :	6.558
Initial Height, in:	5.843
Height/Diameter Ratio:	2.0
Moisture Content, %:	34.4
Wet Unit Weight, pcf:	116.4
Dry Unit Weight, pcf:	86.6

Testing Information	
Test Procedure:	ASTM D2166
Type of Specimen:	Tube Sample
Load Cell No.:	1018253
Strain Rate, %/min.:	1.0

Specimen Type: Tube Sample

Strength Data	
Strain at Failure, %:	2.0
Unconfined Strength (Qu), tsf:	4.10
Shear Strength (Su), tsf:	2.05

Failure Sketch



Remarks:

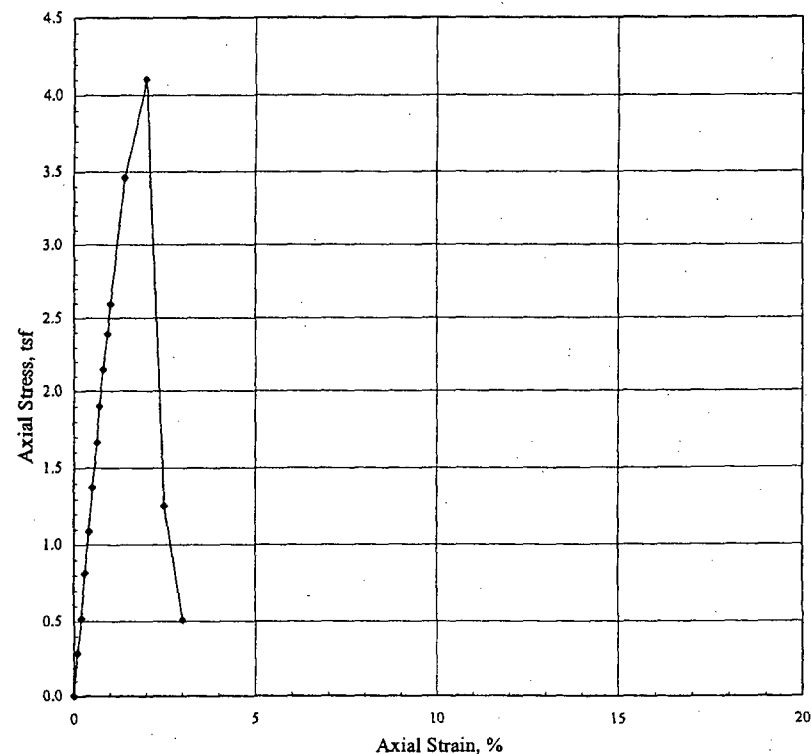
Reviewed by: C/S

Soil Desc.: FAT CLAY (CH) trace sand - gray

LL, %:	56	% < 200:	94.9
PL, %:	32	Gs:	2.84

Test Data						
Reading No.	Axial Load (lbs)	Axial Displ. (in.)	Axial Strain (%)	Corrected Area ¹ (in ²)	Axial Stress (psi)	Axial Stress (tsf)
Zero	0.0	0.000	0.0	6.56	0.0	0.00
1	26.4	0.006	0.1	6.56	4.0	0.29
2	47.3	0.012	0.2	6.57	7.2	0.52
3	74.3	0.018	0.3	6.58	11.3	0.81
4	99.4	0.024	0.4	6.58	15.1	1.09
5	125.8	0.030	0.5	6.59	19.1	1.37
6	152.7	0.037	0.6	6.60	23.1	1.67
7	174.4	0.041	0.7	6.60	26.4	1.90
8	197.0	0.047	0.8	6.61	29.8	2.15
9	219.8	0.054	0.9	6.62	33.2	2.39
10	238.7	0.059	1.0	6.62	36.0	2.59
11	319.4	0.082	1.4	6.65	48.0	3.46
12	381.3	0.117	2.0	6.69	57.0	4.10
13	117.2	0.146	2.5	6.73	17.4	1.25
14	47.9	0.176	3.0	6.76	7.1	0.51
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						

Axial Stress vs. Axial Strain Plot



Notes: 1. Right Cylinder Area Correction Method

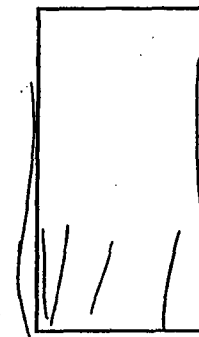
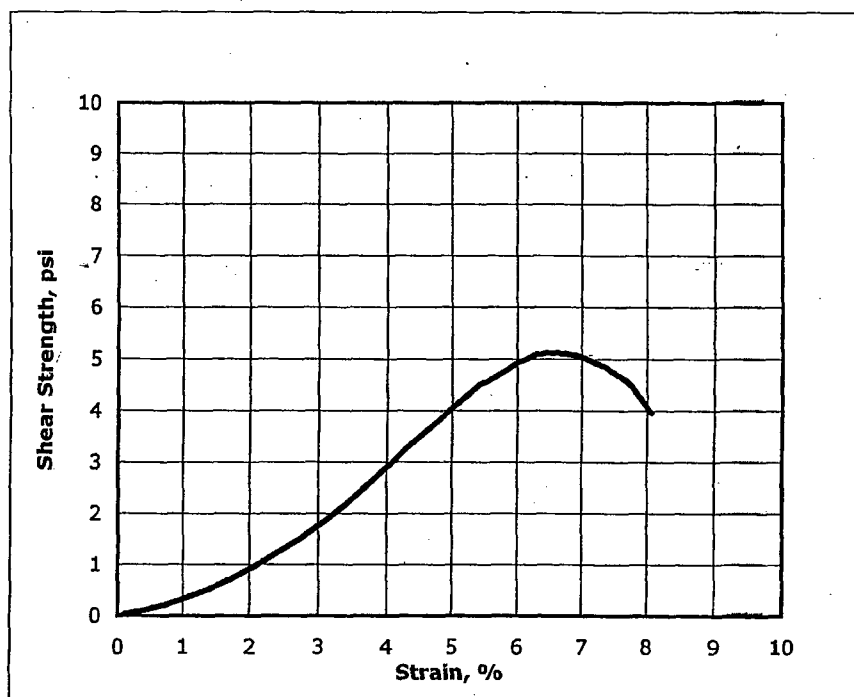
UC 8/2006 Rev. 0

GeoTesting express

a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	10/27/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-440
Sample ID:	S-14
Depth, ft:	51-53
Visual Description:	Moist, dark greenish gray organic clay with sand
Test No.:	UC14

Unconfined Compressive Strength of Cohesive Soil by ASTM D 2166-00



Failure Sketch

Initial Diameter, in:	2.87	Shear Strength, psi:	5.1
Initial Height, in:	5.8	Strain Rate, %/min:	1
Height to Diameter Ratio:	2.02	Strain at Failure, %:	6.5
Initial Mass, grams:	1163	Sample Type:	Tube
Initial Bulk Density, pcf:	118.1	Liquid Limit:	30
Initial Moisture Content, %:	30.2	Plastic Limit:	21
Initial Dry Density, pcf:	90.7	Plasticity Index:	9
Initial Degree of Saturation:	93.4	% Passing #200 sieve:	18
Initial Void Ratio:	0.88	Soil Classification:	Clayey Sand
Measured Specific Gravity:	2.74	Group Symbol:	SC

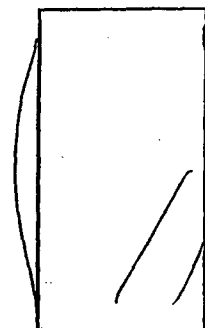
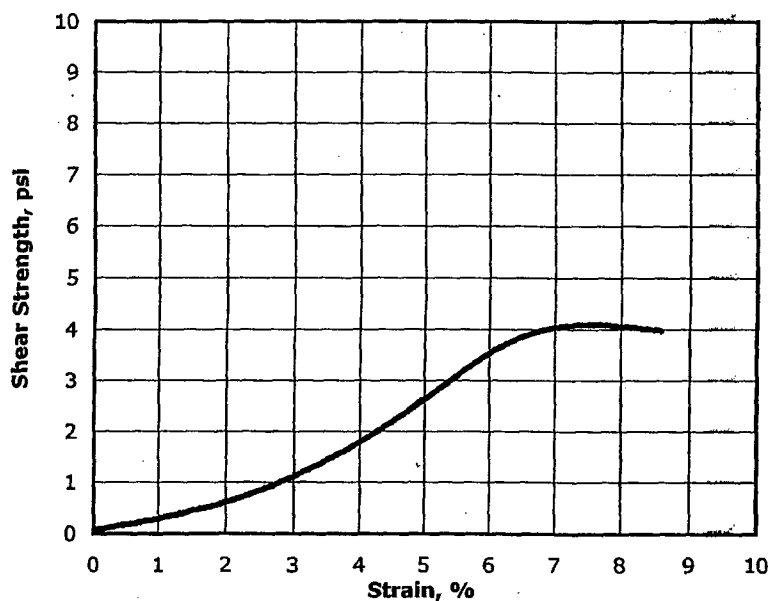
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/23/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-722
Sample ID:	UD-1
Depth, ft:	33.5-35.5
Visual Description:	Moist, brownish yellow silty sand
Test No.:	UC3

Unconfined Compressive Strength of Cohesive Soil by ASTM D 2166-00



Failure Sketch

Initial Diameter, in:	2.87	Shear Strength, psi:	4.1
Initial Height, in:	5.87	Strain Rate, %/min:	1
Height to Diameter Ratio:	2.05	Strain at Failure, %:	7.6
Initial Mass, grams:	1183	Sample Type:	Tube
Initial Bulk Density, pcf:	118.7	Liquid Limit:	---
Initial Moisture Content, %:	29.1	Plastic Limit:	---
Initial Dry Density, pcf:	91.9	Plasticity Index:	Non-Plastic
Initial Degree of Saturation:	91.9	% Passing #200 sieve:	20
Initial Void Ratio:	0.87	Soil Classification:	Silty Sand
Measured Specific Gravity:	2.76	Group Symbol:	SM

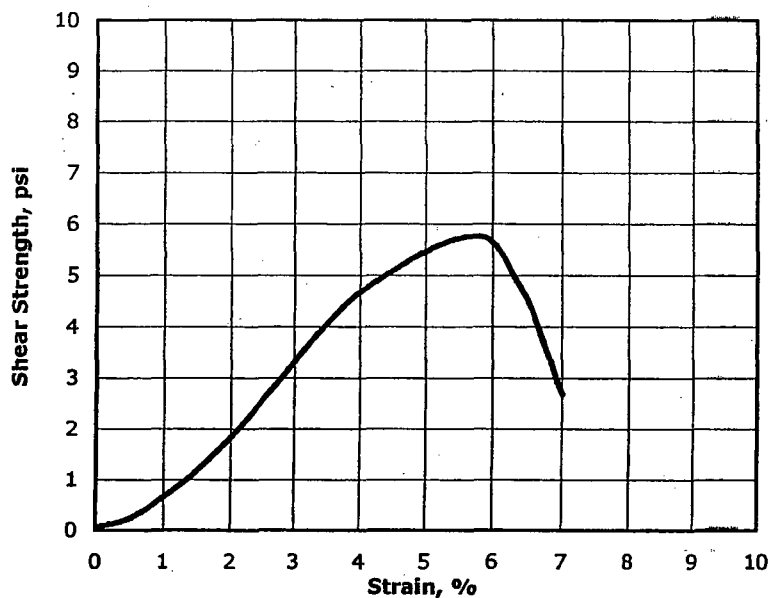
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	11/15/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-723
Sample ID:	UD-2
Depth, ft:	28.5-30.5
Visual Description:	Moist, dark olive gray clay
Test No.:	UC16

Unconfined Compressive Strength of Cohesive Soil by ASTM D 2166-00



Failure Sketch

Initial Diameter, in:	2.87	Shear Strength, psi:	5.8
Initial Height, in:	5.80	Strain Rate, %/min:	1
Height to Diameter Ratio:	2.02	Strain at Failure, %;	5.7
Initial Mass, grams:	1151	Sample Type:	Tube
Initial Bulk Density, pcf:	116.9	Liquid Limit:	56
Initial Moisture Content, %:	27.2	Plastic Limit:	15
Initial Dry Density, pcf:	91.9	Plasticity Index:	41
Initial Degree of Saturation:	87.7	% Passing #200 sieve:	90
Initial Void Ratio:	0.84	Soil Classification:	Fat Clay
Measured Specific Gravity:	2.71	Group Symbol:	CH

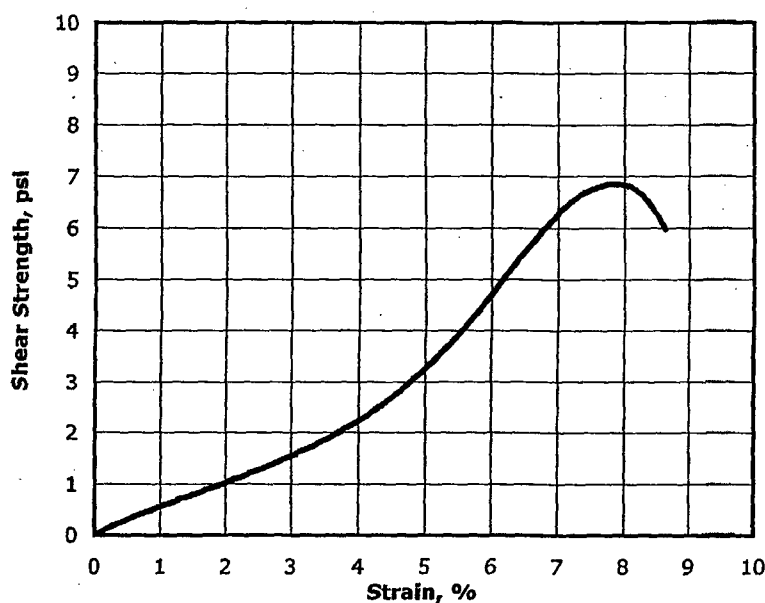
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear-PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/23/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-732
Sample ID:	UD-1
Depth, ft:	15-17
Visual Description:	Moist, mottled pale yellow and brownish yellow clayey sand
Test No.:	UC5

Unconfined Compressive Strength of Cohesive Soil by ASTM D 2166-00



Failure Sketch

Initial Diameter, in:	2.87	Shear Strength, psi:	6.9
Initial Height, in:	6.2	Strain Rate, %/min:	1
Height to Diameter Ratio:	2.16	Strain at Failure, %;	7.9
Initial Mass, grams:	1237	Sample Type:	Tube
Initial Bulk Density, pcf:	117.5	Liquid Limit:	26
Initial Moisture Content, %:	21.2	Plastic Limit:	19
Initial Dry Density, pcf:	96.9	Plasticity Index:	7
Initial Degree of Saturation:	75.8	% Passing #200 sieve:	32
Initial Void Ratio:	0.77	Soil Classification:	Clayey Sand
Measured Specific Gravity:	2.75	Group Symbol:	SC

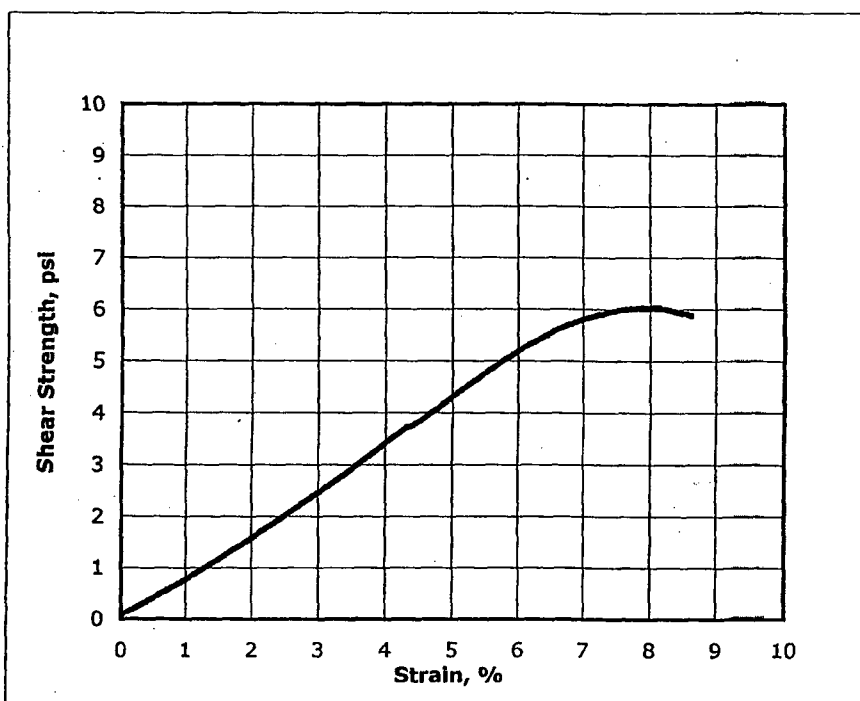
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/18/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-733
Sample ID:	UD-1
Depth, ft:	23.5-25.5
Visual Description:	Moist, dark olive gray clay with sand
Test No.:	UC4

Unconfined Compressive Strength of Cohesive Soil by ASTM D 2166-00



Failure Sketch

Initial Diameter, in:	2.87	Shear Strength, psi:	6.0
Initial Height, in:	6.1	Strain Rate, %/min:	1
Height to Diameter Ratio:	2.13	Strain at Failure, %:	7.9
Initial Mass, grams:	1245	Sample Type:	Tube
Initial Bulk Density, pcf:	120.2	Liquid Limit:	51
Initial Moisture Content, %:	28.1	Plastic Limit:	15
Initial Dry Density, pcf:	93.8	Plasticity Index:	36
Initial Degree of Saturation:	96.7	% Passing #200 sieve:	78
Initial Void Ratio:	0.78	Soil Classification:	Clay with sand
Measured Specific Gravity:	2.67	Group Symbol:	CH

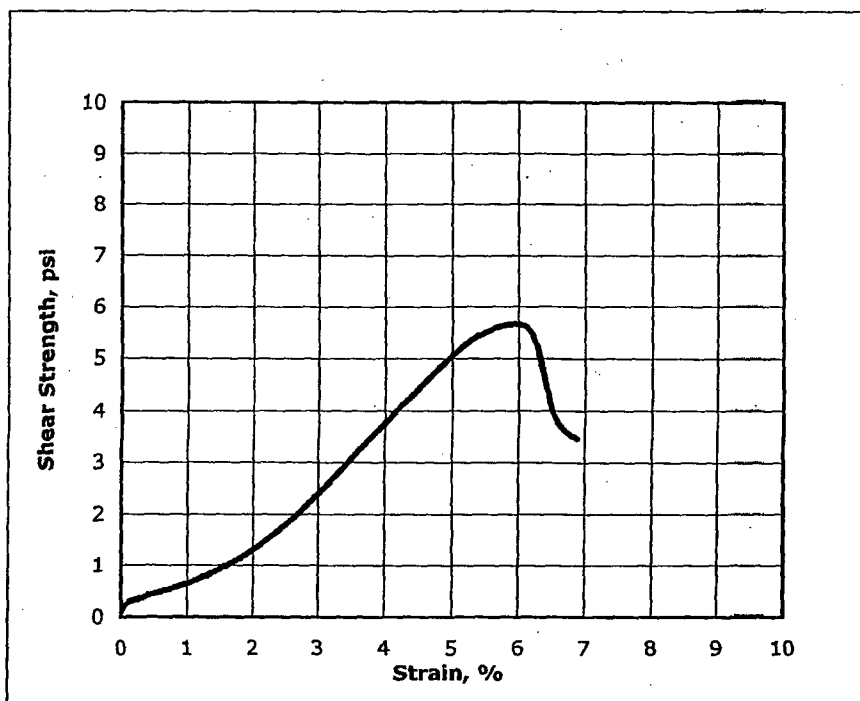
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/18/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-737
Sample ID:	UD-1
Depth, ft:	35-37
Visual Description:	Moist, dark olive gray silty clayey sand
Test No.:	UC2

Unconfined Compressive Strength of Cohesive Soil by ASTM D 2166-00



Failure Sketch

Initial Diameter, in:	2.87	Shear Strength, psi:	5.7
Initial Height, in:	6.2	Strain Rate, %/min:	1
Height to Diameter Ratio:	2.16	Strain at Failure, %:	5.7
Initial Mass, grams:	1245	Sample Type:	Tube
Initial Bulk Density, pcf:	118.2	Liquid Limit:	26
Initial Moisture Content, %:	26.9	Plastic Limit:	22
Initial Dry Density, pcf:	93.2	Plasticity Index:	4
Initial Degree of Saturation:	91.2	% Passing #200 sieve:	25
Initial Void Ratio:	0.79	Soil Classification:	silty clayey sand
Measured Specific Gravity:	2.67	Group Symbol:	SC

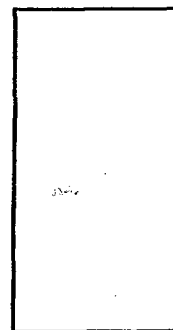
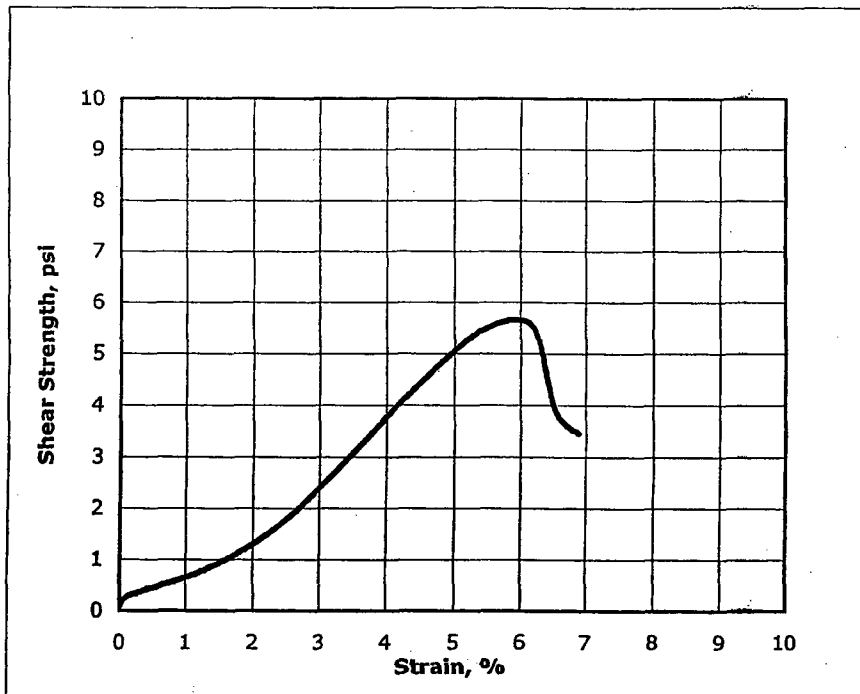
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/18/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-738
Sample ID:	UD-1
Depth, ft:	35-37
Visual Description:	Moist, dark olive gray silty clayey sand
Test No.:	UC2

Unconfined Compressive Strength of Cohesive Soil by ASTM D 2166-00



Failure Sketch

Initial Diameter, in:	2.87	Shear Strength, psi:	5.7
Initial Height, in:	6.2	Strain Rate, %/min:	1
Height to Diameter Ratio:	2.16	Strain at Failure, %;	5.7
Initial Mass, grams:	1245	Sample Type:	Tube
Initial Bulk Density, pcf:	118.2	Liquid Limit:	26
Initial Moisture Content, %:	26.9	Plastic Limit:	22
Initial Dry Density, pcf:	93.2	Plasticity Index:	4
Initial Degree of Saturation:	91.2	% Passing #200 sieve:	25
Initial Void Ratio:	0.79	Soil Classification:	silty clayey sand
Measured Specific Gravity:	2.67	Group Symbol:	SC

Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

UU TRIAXIAL COMPRESSION RESULTS



Unconsolidated Undrained Triaxial Compression Test

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

ASTM D2850

Schnabel Contract: 06120048

Date: 10/13/2006

Boring No.: B-301

Depth: 158.5-159.6ft.

Reviewed by: CJS

Elevation: -61.7 to -62.8

Confining Stress (psi): 70.0

Specimen Conditions	
Diameter (in)	2.865
Height (in)	5.829
Area (in ²)	6.45
Moisture (%)	38.1
Weight (lbs)	2.45
P _{wet} (pcf)	112.6
P _{dry} (pcf)	81.5
Void Ratio	1.05
Saturation, %	97

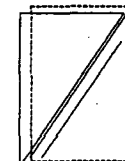
Shear Testing Conditions	
Cell Pressure (psi)	70.0
Rate of Strain (%/min)	1.0

Specimen Type: Tube Sample

Axial Strain at Failure (%): 1.01
Compressive Strength (psi): 122.3
Major Principal Stress (psi): 192.3
Minor Principal Stress (psi): 70.0

Soil Description: FAT CLAY (CH), contains mica - gray

Failure Sketch



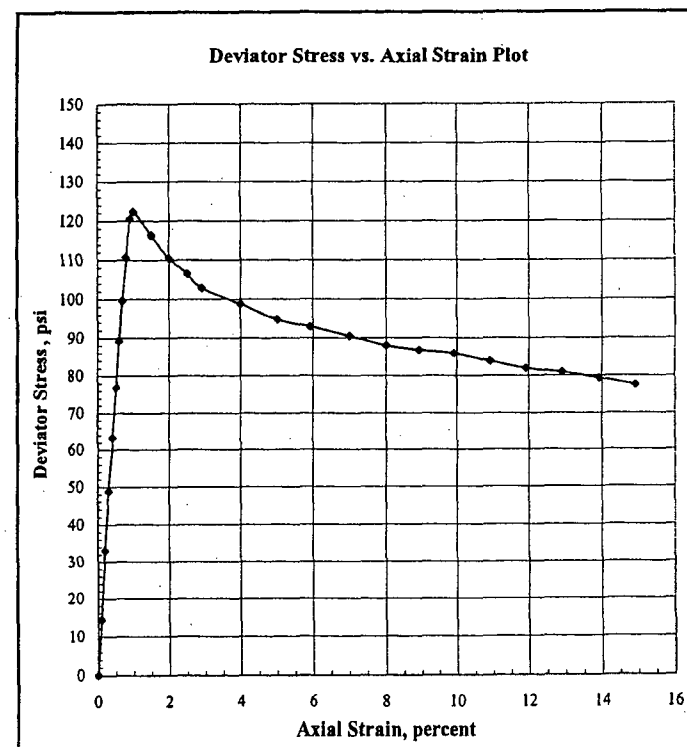
Liquid Limit: 76
Plasticity Index: 46
% finer than No. 200: 99.5
Specific Gravity: 2.68

Remarks:

Reading No.	Deviator Load (lbs)	Corrected Dev. Load ¹ (lbs.)	Axial Displacement (in.)	Axial Strain (%)	Corrected Area ² (in ²)	σ ₁ (psi)	σ ₃ (psi)	Deviator Stress (psi)
Initial	0.0	0.0	0.000	0.00	6.45	70.0	70.0	0.0
1	92.0	92.0	0.006	0.10	6.46	84.2	70.0	14.2
2	213.7	213.7	0.012	0.21	6.46	103.1	70.0	33.1
3	315.7	315.6	0.018	0.31	6.47	118.8	70.0	48.8
4	410.1	410.0	0.025	0.43	6.48	133.3	70.0	63.3
5	497.8	497.7	0.030	0.51	6.48	146.8	70.0	76.8
6	578.2	578.1	0.035	0.60	6.49	159.1	70.0	89.1
7	646.7	646.5	0.041	0.70	6.50	169.5	70.0	99.5
8	719.6	719.4	0.047	0.81	6.50	180.7	70.0	110.7
9	784.3	784.1	0.053	0.91	6.51	190.5	70.0	120.5
10	796.9	796.7	0.059	1.01	6.52	192.3	70.0	122.3
11	761.9	761.6	0.088	1.51	6.55	186.3	70.0	116.3
12	727.1	726.7	0.117	2.01	6.58	180.4	70.0	110.4
13	705.1	704.6	0.146	2.50	6.62	176.5	70.0	106.5
14	683.9	683.3	0.170	2.92	6.64	172.9	70.0	102.9
15	664.5	663.6	0.234	4.01	6.72	168.8	70.0	98.8
16	644.7	643.6	0.292	5.01	6.79	164.8	70.0	94.8
17	638.3	637.0	0.345	5.92	6.86	162.9	70.0	92.9
18	629.1	627.6	0.409	7.02	6.94	160.5	70.0	90.5
19	617.9	616.2	0.467	8.01	7.01	157.9	70.0	87.9
20	615.7	613.8	0.520	8.92	7.08	156.7	70.0	86.7
21	616.5	614.4	0.578	9.92	7.16	155.8	70.0	85.8
22	609.1	606.7	0.637	10.93	7.24	153.8	70.0	83.8
23	602.2	599.6	0.695	11.92	7.32	151.9	70.0	81.9
24	601.9	599.1	0.753	12.92	7.41	150.9	70.0	80.9
25	597.1	594.1	0.812	13.93	7.49	149.3	70.0	79.3
26	590.1	586.9	0.870	14.93	7.58	147.4	70.0	77.4

Notes:

1. Deviator load corrected for membrane effects.
2. Right Cylinder Correction Method





Unconsolidated Undrained Triaxial Compression Test

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

Specimen Conditions	
Diameter (in)	2.905
Height (in)	5.826
Area (in ²)	6.63
Moisture (%)	35.6
Weight (lbs)	2.52
ρ_{wet} (pcf)	112.6
ρ_{dry} (pcf)	83.1
Void Ratio	1.02
Saturation, %	94

Shear Testing Conditions	
Cell Pressure (psi)	40.0
Rate of Strain (%/min)	1.0

Specimen Type: Tube Sample

Axial Strain at Failure (%): 5.29
Compressive Strength (psi): 77.6
Major Principal Stress (psi): 117.6
Minor Principal Stress (psi): 40.0

ASTM D2850

Schnabel Contract: 06120048

Boring No.: B-313

Depth: 93.5-94.7 ft

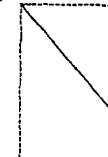
Elevation: -42.8 to -44.0 ft

Confining Stress (psi): 40.0

Date: 11/27/2006

Reviewed by: CJS

Soil Description: Sandy LEAN CLAY (CL), contains shell fragments - Failure Sketch
gray

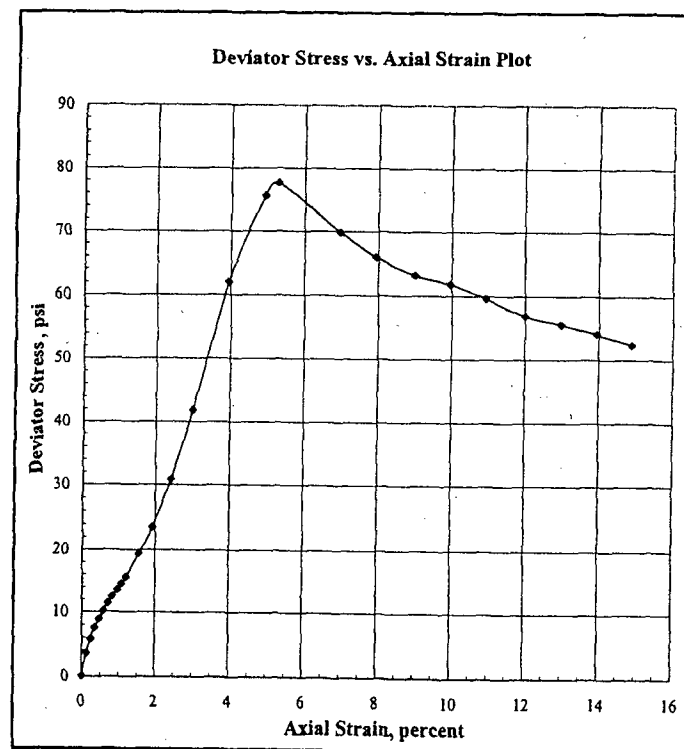


Liquid Limit: 49
Plasticity Index: 24
% finer than No. 200: NA
Specific Gravity: 2.69

Remarks:

Reading No.	Deviator Load (lbs)	Corrected Dev. Load ¹ (lbs)	Axial Displacement (in.)	Axial Strain (%)	Corrected Area ² (in ²)	σ_1 (psi)	σ_3 (psi)	Deviator Stress (psi)
Initial	0.0	0.0	0.000	0.00	6.63	40.0	40.0	0.0
1	23.6	23.6	0.008	0.14	6.64	43.6	40.0	3.6
2	38.3	38.2	0.014	0.24	6.64	45.8	40.0	5.8
3	50.0	49.9	0.021	0.36	6.65	47.5	40.0	7.5
4	59.5	59.4	0.028	0.48	6.66	48.9	40.0	8.9
5	67.8	67.7	0.035	0.60	6.67	50.1	40.0	10.1
6	75.7	75.5	0.042	0.72	6.68	51.3	40.0	11.3
7	83.2	83.0	0.049	0.84	6.68	52.4	40.0	12.4
8	90.6	90.4	0.057	0.98	6.69	53.5	40.0	13.5
9	97.7	97.5	0.063	1.08	6.70	54.5	40.0	14.5
10	104.8	104.5	0.070	1.20	6.71	55.6	40.0	15.6
11	130.7	130.4	0.091	1.56	6.73	59.4	40.0	19.4
12	159.4	159.0	0.112	1.92	6.76	63.5	40.0	23.5
13	210.1	209.6	0.141	2.42	6.79	70.9	40.0	30.9
14	286.5	285.8	0.175	3.00	6.83	81.8	40.0	41.8
15	428.7	427.8	0.231	3.97	6.90	102.0	40.0	62.0
16	528.1	527.0	0.287	4.93	6.97	115.6	40.0	75.6
17	544.3	543.1	0.308	5.29	7.00	117.6	40.0	77.6
18	499.7	498.2	0.406	6.97	7.12	109.9	40.0	69.9
19	476.4	474.7	0.462	7.93	7.20	105.9	40.0	65.9
20	461.9	459.9	0.525	9.01	7.28	103.1	40.0	63.1
21	457.1	454.9	0.581	9.97	7.36	101.8	40.0	61.8
22	446.0	443.6	0.637	10.93	7.44	99.6	40.0	59.6
23	431.3	428.7	0.700	12.02	7.53	96.9	40.0	56.9
24	426.2	423.4	0.756	12.98	7.62	95.6	40.0	55.6
25	419.8	416.7	0.812	13.94	7.70	94.1	40.0	54.1
26	411.2	407.9	0.868	14.90	7.79	92.4	40.0	52.4

Notes: 1. Deviator load corrected for membrane effects.
2. Light Cylinder Correction Method





Unconsolidated Undrained Triaxial Compression Test

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

Specimen Conditions	
Diameter (in)	2.889
Height (in)	5.838
Area (in ²)	6.56
Moisture (%)	33.1
Weight (lbs)	2.52
P _{wet} (pcf)	113.9
P _{dry} (pcf)	85.6
Void Ratio	0.95
Saturation, %	93

Shear Testing Conditions	
Cell Pressure (psi)	50.0
Rate of Strain (%/min)	1.0

Specimen Type: Tube Sample

Axial Strain at Failure (%)	5.00
Compressive Strength (psi)	82.6
Major Principal Stress (psi)	132.6
Minor Principal Stress (psi)	50.0

ASTM D2850

Schnabel Contract: 06120048

Boring No.: B-313

Depth: 123.5-124.3 ft.

Elevation: -72.8 to -73.6

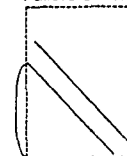
Confining Stress (psi): 50.0

Date: 11/27/2006

Reviewed by: CJS

Soil Description: Fine clayey SAND (SC) - dark green gray

Failure Sketch

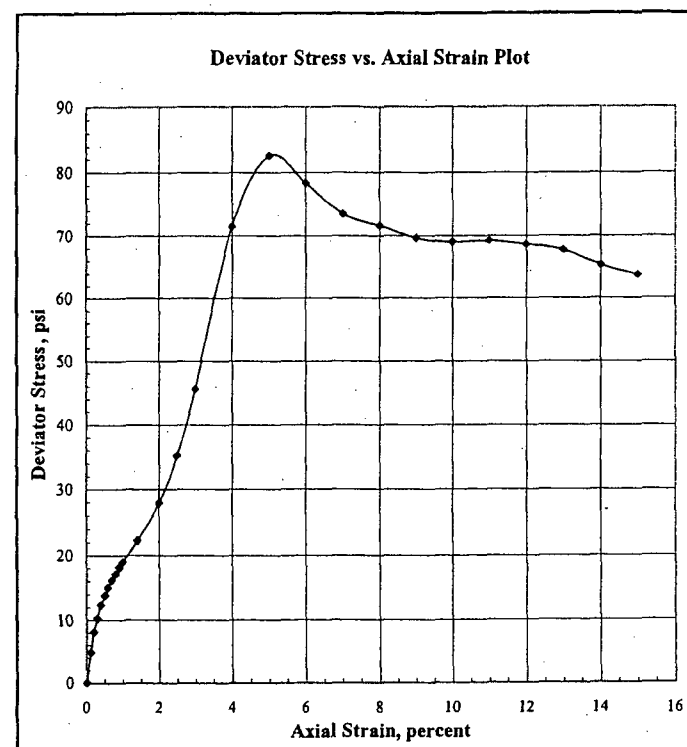


Liquid Limit:	44
Plasticity Index:	18
% finer than No. 200:	NA
Specific Gravity:	2.67

Remarks:

Reading No.	Deviator Load (lbs)	Corrected Dev. Load ¹ (lbs.)	Axial Displacement (in.)	Axial Strain (%)	Corrected Area ² (in ²)	σ ₁ (psi)	σ ₃ (psi)	Deviator Stress (psi)
Initial	0.0	0.0	0.000	0.00	6.56	50.0	50.0	0.0
1	32.0	32.0	0.007	0.12	6.57	54.9	50.0	4.9
2	53.7	53.7	0.012	0.21	6.57	58.2	50.0	8.2
3	67.5	67.4	0.018	0.31	6.58	60.2	50.0	10.2
4	81.7	81.6	0.024	0.41	6.59	62.4	50.0	12.4
5	91.5	91.4	0.030	0.51	6.59	63.9	50.0	13.9
6	99.5	99.4	0.035	0.60	6.60	65.1	50.0	15.1
7	106.8	106.6	0.041	0.70	6.61	66.1	50.0	16.1
8	113.1	112.9	0.047	0.81	6.61	67.1	50.0	17.1
9	119.9	119.7	0.053	0.91	6.62	68.1	50.0	18.1
10	125.5	125.3	0.059	1.01	6.63	68.9	50.0	18.9
11	148.2	147.9	0.082	1.40	6.65	72.2	50.0	22.2
12	187.2	186.8	0.117	2.00	6.69	77.9	50.0	27.9
13	237.3	236.8	0.146	2.50	6.73	85.2	50.0	35.2
14	308.6	307.9	0.175	3.00	6.76	95.5	50.0	45.5
15	489.1	488.2	0.234	4.01	6.83	121.5	50.0	71.5
16	571.2	570.1	0.292	5.00	6.90	132.6	50.0	82.6
17	547.9	546.6	0.351	6.01	6.98	128.3	50.0	78.3
18	519.7	518.2	0.409	7.01	7.05	123.5	50.0	73.5
19	512.4	510.7	0.467	8.00	7.13	121.6	50.0	71.6
20	503.9	501.9	0.526	9.01	7.21	119.6	50.0	69.6
21	505.0	502.8	0.584	10.00	7.29	119.0	50.0	69.0
22	512.2	509.8	0.642	11.00	7.37	119.2	50.0	69.2
23	514.2	511.6	0.701	12.01	7.45	118.8	50.0	68.6
24	513.4	510.6	0.759	13.00	7.54	117.7	50.0	67.7
25	501.0	497.9	0.818	14.01	7.63	115.3	50.0	65.3
26	494.9	491.6	0.876	15.00	7.72	113.7	50.0	63.7

Notes:
1. Deviator load corrected for membrane effects.
2. Right Cylinder Correction Method

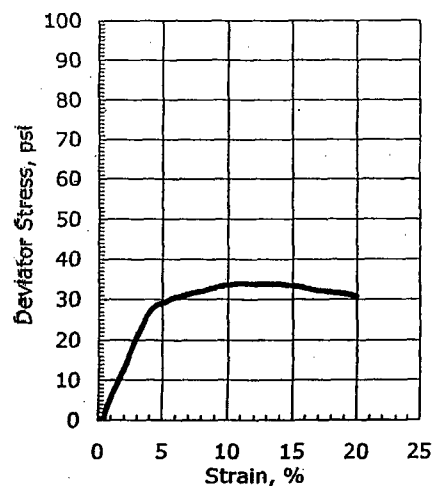
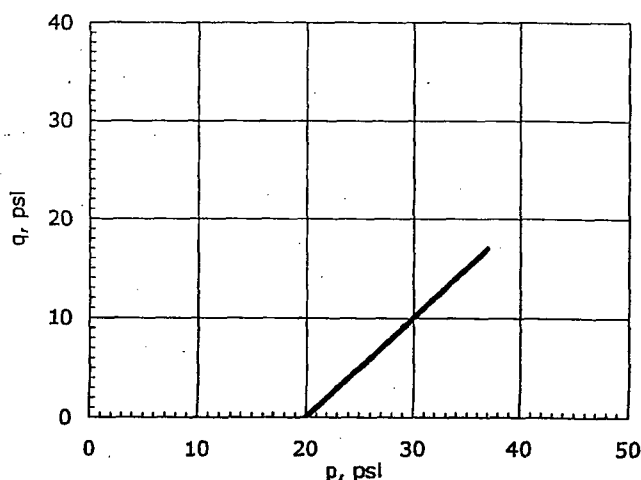


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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/5/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-315
Sample ID:	S-8
Depth, ft:	23.5-24.9
Visual Description:	Moist, dark olive gray clayey sand
Test No.:	UU1

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	20
Initial Height, in:	6.01	Undrained Shear Strength, psi:	17.0
Height to Diameter Ratio:	2.09	Maximum Deviator Stress, psi:	33.9
Initial Mass, grams:	1285	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	125.9	Strain at Failure, %:	11.5
Initial Moisture Content, %:	24.4		
Initial Dry Density, pcf:	101.2		
Initial Degree of Saturation:	138.2		
Initial Void Ratio:	0.68		
Measured Specific Gravity:	2.73		
Sample Type:	Tube		
Liquid Limit:	41		
Plastic Limit:	11		
Plasticity Index:	30		
% Passing #200 sieve:	35		
Soil Classification:	Clayey Sand		
Group Symbol:	SC		



Failure Sketch

Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422



Unconsolidated Undrained Triaxial Compression Test

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

Specimen Conditions	
Diameter (in)	2.880
Height (in)	5.839
Area (in ²)	6.52
Moisture (%)	32.1
Weight (lbs)	2.62
ρ_{wet} (pcf)	118.9
ρ_{dry} (pcf)	90.0
Void Ratio	0.93
Saturation, %	96

Shear Testing Conditions	
Cell Pressure (psi)	30.0
Rate of Strain (%/min)	1.0

Specimen Type: Tube Sample

Axial Strain at Failure (%)	9.98
Compressive Strength (psi)	19.8
Major Principal Stress (psi)	49.8
Minor Principal Stress (psi)	30.0

ASTM D2850

Schnabel Contract: 06120048

Boring No.: B-316

Depth: 43.5-45.5 ft.

Elevation: 64.6 to 62.6

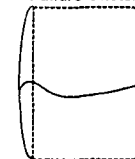
Confining Stress (psi): 30.0

Date: 10/26/2006

Reviewed by: CJS

Soil Description: LEAN CLAY with sand (CL) - gray

Failure Sketch

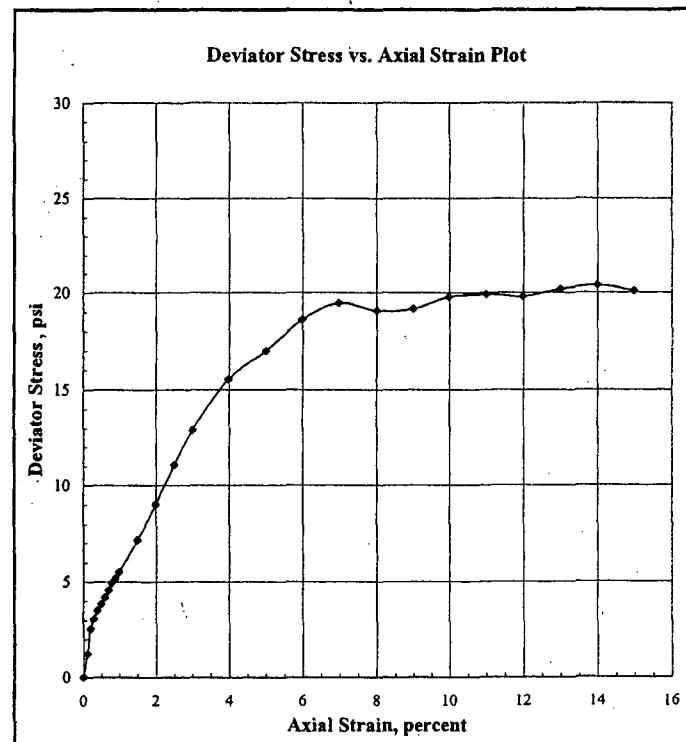


Liquid Limit:	44
Plasticity Index:	28
% finer than No. 200:	71.0
Specific Gravity:	2.79

Remarks:

Reading No.	Deviator Load (lbs)	Corrected Dev. Load ¹ (lbs.)	Axial Displacement (in.)	Axial Strain (%)	Corrected Area ² (in ²)	σ_1 (psi)	σ_3 (psi)	Deviator Stress (psi)
Initial	0.0	0.0	0.000	0.00	6.52	30.0	30.0	0.0
1	8.1	8.1	0.006	0.10	6.52	31.2	30.0	1.2
2	16.6	16.6	0.011	0.19	6.53	32.5	30.0	2.5
3	20.1	20.0	0.017	0.29	6.53	33.1	30.0	3.1
4	23.0	22.9	0.023	0.39	6.54	33.5	30.0	3.5
5	25.3	25.2	0.029	0.50	6.55	33.8	30.0	3.8
6	27.6	27.5	0.035	0.60	6.56	34.2	30.0	4.2
7	30.0	29.8	0.041	0.70	6.56	34.5	30.0	4.5
8	32.5	32.3	0.046	0.79	6.57	34.9	30.0	4.9
9	34.2	34.0	0.052	0.89	6.57	35.2	30.0	5.2
10	36.5	36.3	0.058	0.99	6.58	35.5	30.0	5.5
11	47.6	47.3	0.087	1.49	6.61	37.1	30.0	7.1
12	60.4	60.0	0.116	1.99	6.65	39.0	30.0	9.0
13	74.5	74.0	0.146	2.50	6.68	41.1	30.0	11.1
14	87.3	86.6	0.175	3.00	6.72	42.9	30.0	12.9
15	106.3	105.4	0.233	3.99	6.79	45.5	30.0	15.5
16	117.6	116.5	0.292	5.00	6.86	47.0	30.0	17.0
17	130.2	128.9	0.350	5.99	6.93	48.6	30.0	18.6
18	137.8	136.3	0.408	6.99	7.01	49.5	30.0	19.5
19	136.8	135.1	0.467	8.00	7.08	49.1	30.0	19.1
20	139.1	137.1	0.525	8.99	7.16	49.2	30.0	19.2
21	145.2	143.0	0.583	9.98	7.24	49.8	30.0	19.8
22	148.1	145.7	0.642	10.99	7.32	49.9	30.0	19.9
23	149.2	148.6	0.700	11.99	7.40	49.8	30.0	19.8
24	153.9	151.1	0.759	13.00	7.49	50.2	30.0	20.2
25	157.4	154.4	0.817	13.99	7.58	50.4	30.0	20.4
26	157.2	153.9	0.875	14.99	7.66	50.1	30.0	20.1

Notes:
1. Deviator load corrected for membrane effects.
2. Right Cylinder Correction Method

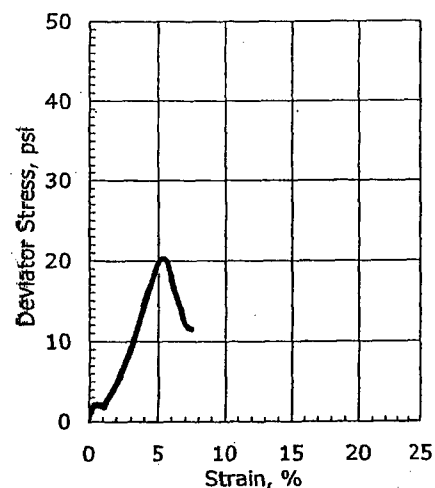
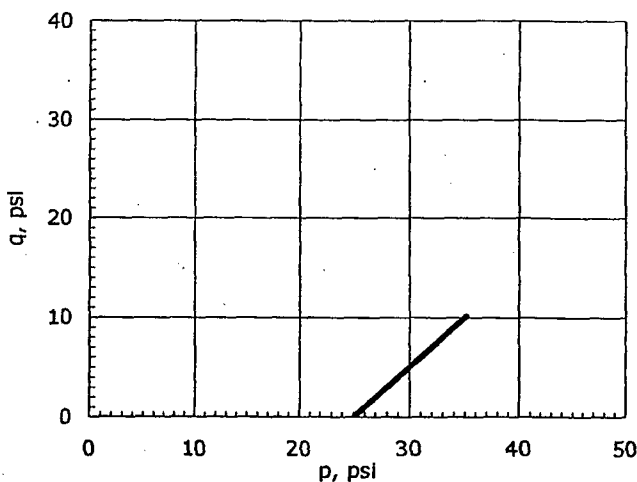


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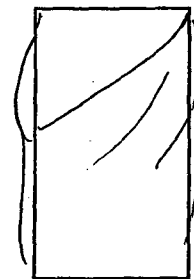
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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/12/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-319
Sample ID:	S-10
Depth, ft:	33.5-35.5
Visual Description:	Moist, dark gray clay with sand
Test No.:	UU3

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	25
Initial Height, in:	5.88	Undrained Shear Strength, psi:	10.1
Height to Diameter Ratio:	2.05	Maximum Deviator Stress, psi:	20.3
Initial Mass, grams:	1238	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	124.0	Strain at Failure, %:	5.3
Initial Moisture Content, %:	25.0		
Initial Dry Density, pcf:	99.2		
Initial Degree of Saturation:	98.1		
Initial Void Ratio:	0.68		
Measured Specific Gravity:	2.67		
Sample Type:	Tube		
Liquid Limit:	49		
Plastic Limit:	12		
Plasticity Index:	37		
% Passing #200 sieve:	72		
Soil Classification:	Lean Clay		
Group Symbol:	CL		



Failure Sketch

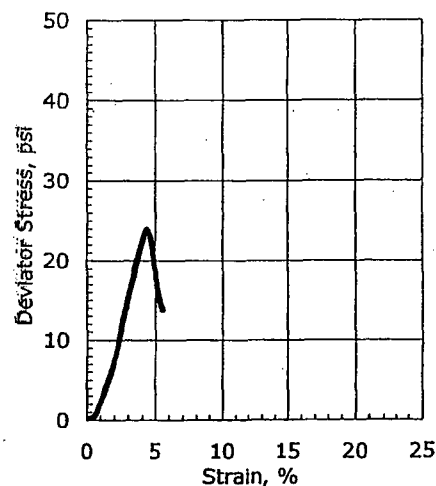
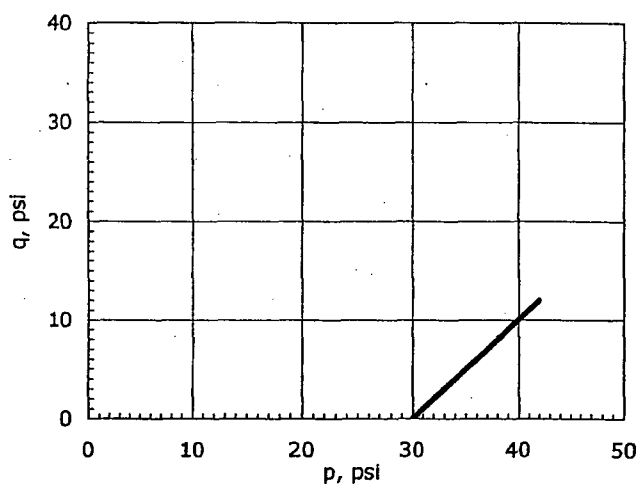
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/12/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-319
Sample ID:	S-12
Depth, ft:	43.5-45.2
Visual Description:	Molst, dark gray clay
Test No.:	UU4

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	30
Initial Height, in:	5.9	Undrained Shear Strength, psi:	12.0
Height to Diameter Ratio:	2.06	Maximum Deviator Stress, psi:	24.0
Initial Mass, grams:	1212	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	121.0	Strain at Failure, %:	4.3
Initial Moisture Content, %:	32.2		
Initial Dry Density, pcf:	91.5		
Initial Degree of Saturation:	102.0		
Initial Void Ratio:	0.86		
Measured Specific Gravity:	2.73		
Sample Type:	Tube		
Liquid Limit:	58		
Plastic Limit:	13		
Plasticity Index:	45		
% Passing #200 sieve:	87		
Soil Classification:	Fat Clay		
Group Symbol:	CH		



Failure Sketch

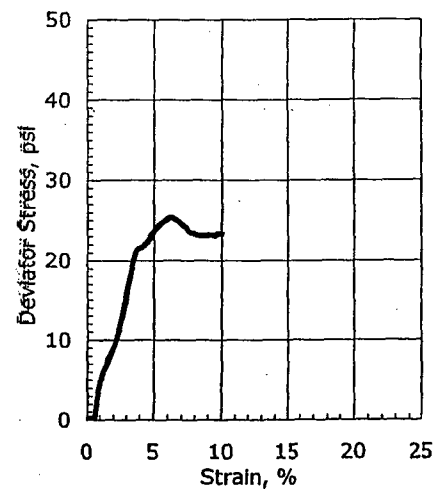
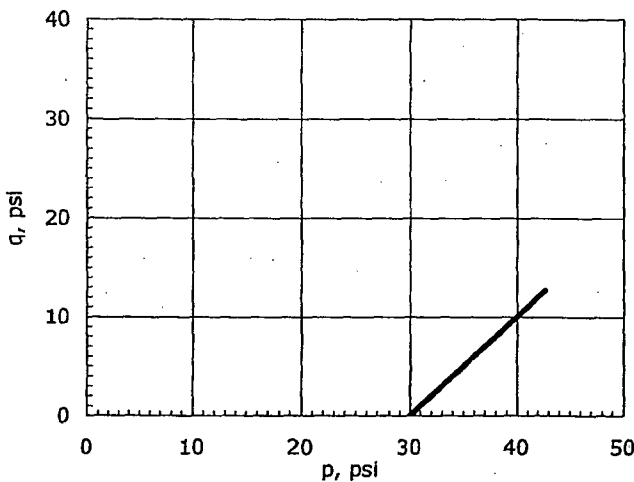
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/20/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-320
Sample ID:	S-13
Depth, ft:	48.5-50.0
Visual Description:	Moist, dark olive gray clay with sand
Test No.:	UU18

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	30
Initial Height, in:	6.05	Undrained Shear Strength, psi:	12.7
Height to Diameter Ratio:	2.11	Maximum Deviator Stress, psi:	25.4
Initial Mass, grams:	1171	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	114.0	Strain at Failure, %:	6.3
Initial Moisture Content, %:	30.8		
Initial Dry Density, pcf:	87.1		
Initial Degree of Saturation:	87.7		
Initial Void Ratio:	0.96		
Measured Specific Gravity:	2.74		
Sample Type:	Tube		
Liquid Limit:	59		
Plastic Limit:	19		
Plasticity Index:	40		
% Passing #200 sieve:	82		
Soil Classification:	Fat Clay with sand		
Group Symbol:	CH		



Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422



Unconsolidated Undrained Triaxial Compression Test

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

Specimen Conditions	
Diameter (in)	2.882
Height (in)	5.842
Area (in ²)	6.53
Moisture (%)	29.2
Weight (lbs)	2.57
P _{wet} (pcf)	116.7
P _{dry} (pcf)	90.3
Void Ratio	0.93
Saturation, %	88

Shear Testing Conditions	
Cell Pressure (psi)	15.0
Rate of Strain (%/min)	1.0

Specimen Type: Tube Sample

Axial Strain at Failure (%)	5.99
Compressive Strength (psi)	64.0
Major Principal Stress (psi)	79.0
Minor Principal Stress (psi)	15.0

ASTM D2850

Schnabel Contract: 06120048

Boring No.: B-321

Depth: 23.5-25.5ft.

Elevation: 47.2 to 45.2

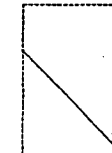
Confining Stress (psi): 15.0

Date: 10/26/2006

Reviewed by: CJS

Soil Description: LEAN CLAY (CL) - gray

Failure Sketch



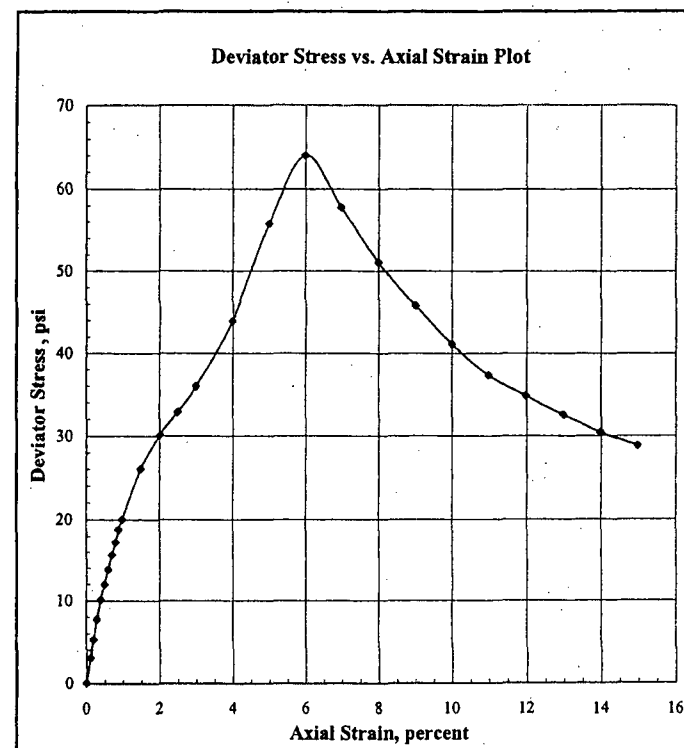
Liquid Limit:	45
Plasticity Index:	27
% finer than No. 200:	99.7
Specific Gravity:	2.79

Remarks:

Reading No.	Deviator Load (lbs)	Corrected Dev. Load ¹ (lbs.)	Axial Displacement (in.)	Axial Strain (%)	Corrected Area ² (in ²)	σ ₁ (psi)	σ ₃ (psi)	Deviator Stress (psi)
Initial	0.0	0.0	0.000	0.00	6.53	15.0	15.0	0.0
1	19.8	19.8	0.006	0.10	6.53	18.0	15.0	3.0
2	34.3	34.3	0.012	0.21	6.54	20.2	15.0	5.2
3	50.5	50.4	0.017	0.29	6.55	22.7	15.0	7.7
4	66.3	66.2	0.023	0.39	6.55	25.1	15.0	10.1
5	78.6	78.5	0.029	0.50	6.56	27.0	15.0	12.0
6	90.8	90.7	0.035	0.60	6.57	28.8	15.0	13.8
7	102.8	102.6	0.041	0.70	6.57	30.6	15.0	15.6
8	113.6	113.4	0.047	0.80	6.58	32.2	15.0	17.2
9	123.9	123.7	0.052	0.89	6.59	33.8	15.0	18.8
10	132.0	131.8	0.058	0.99	6.59	35.0	15.0	20.0
11	172.8	172.5	0.087	1.49	6.63	41.0	15.0	26.0
12	201.3	200.9	0.117	2.00	6.68	45.2	15.0	30.2
13	220.4	219.9	0.146	2.50	6.69	47.8	15.0	32.8
14	242.5	241.8	0.175	3.00	6.73	50.9	15.0	35.9
15	299.2	298.3	0.233	3.99	6.80	58.9	15.0	43.9
16	384.0	382.9	0.292	5.00	6.87	70.7	15.0	55.7
17	445.6	444.3	0.350	5.99	6.94	79.0	15.0	64.0
18	406.9	405.4	0.408	6.98	7.02	72.8	15.0	57.8
19	364.4	362.7	0.467	7.99	7.09	66.1	15.0	51.1
20	330.4	328.4	0.525	8.99	7.17	60.8	15.0	45.8
21	300.3	298.1	0.584	10.00	7.25	56.1	15.0	41.1
22	275.9	273.5	0.642	10.99	7.33	52.3	15.0	37.3
23	260.5	257.9	0.700	11.98	7.42	49.8	15.0	34.8
24	246.4	243.6	0.759	12.99	7.50	47.5	15.0	32.5
25	233.9	230.9	0.817	13.99	7.59	45.4	15.0	30.4
26	224.4	221.1	0.875	14.98	7.68	43.8	15.0	28.8

Notes: 1. Deviator load corrected for membrane effects.

2. Right Cylinder Correction Method





Unconsolidated Undrained Triaxial Compression Test

Project: Calvert Cliffs Nuclear Power Plant

Location: Clavert County, MD

Specimen Conditions	
Diameter (in)	2.893
Height (in)	5.855
Area (in ²)	6.57
Moisture (%)	36.2
Weight (lbs)	2.56
P _{wet} (pcf)	115.0
P _{dry} (pcf)	84.4
Void Ratio	1.04
Saturation, %	96

Shear Testing Conditions	
Cell Pressure (psi):	40.0
Rate of Strain (%/min):	1.0

Specimen Type: Tube Sample

Axial Strain at Failure (%): 2.99
Compressive Strength (psi): 79.9
Major Principal Stress (psi): 119.9
Minor Principal Stress (psi): 40.0

ASTM D2850

Schnabel Contract: 06120048

Boring No.: B-323

Depth: 83.5-84.8ft.

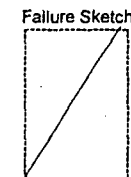
Elevation: 24 to 22.7 ft

Confining Stress (psi): 40.0

Date: 11/27/2006

Reviewed by: CJS

Soil Description: LEAN CLAY (CL), contains shells - gray



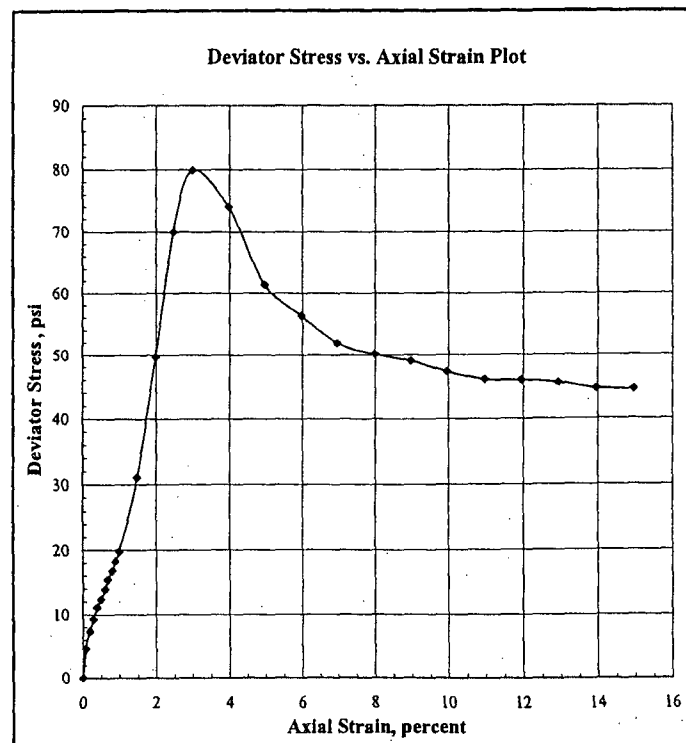
Liquid Limit: 42
Plasticity Index: 22
% finer than No. 200: 72.7
Specific Gravity: 2.76

Remarks:

Reading No.	Deviator Load (lbs)	Corrected Dev. Load ¹ (lbs.)	Axial Displacement (in.)	Axial Strain (%)	Corrected Area ² (in ²)	σ ₁ (psi)	σ ₃ (psi)	Deviator Stress (psi)
Initial	0.0	0.0	0.000	0.00	6.57	40.0	40.0	0.0
1	30.7	30.7	0.005	0.09	6.58	44.7	40.0	4.7
2	48.5	48.5	0.011	0.19	6.59	47.4	40.0	7.4
3	61.0	60.9	0.017	0.29	6.59	49.2	40.0	9.2
4	73.2	73.1	0.023	0.39	6.60	51.1	40.0	11.1
5	81.8	81.7	0.029	0.50	6.61	52.4	40.0	12.4
6	92.4	92.3	0.035	0.60	6.61	54.0	40.0	14.0
7	102.2	102.1	0.040	0.68	6.62	55.4	40.0	15.4
8	111.4	111.2	0.047	0.80	6.63	56.8	40.0	16.8
9	121.3	121.1	0.052	0.89	6.63	58.3	40.0	18.3
10	131.1	130.9	0.058	0.99	6.64	59.7	40.0	19.7
11	207.4	207.1	0.087	1.49	6.67	71.0	40.0	31.0
12	333.1	332.7	0.116	1.98	6.71	89.6	40.0	49.6
13	472.3	471.8	0.145	2.48	6.74	110.0	40.0	70.0
14	541.9	541.2	0.175	2.99	6.78	119.9	40.0	79.9
15	507.0	506.1	0.233	3.98	6.85	113.9	40.0	73.9
16	425.6	424.5	0.291	4.97	6.92	101.4	40.0	61.4
17	394.7	393.4	0.350	5.98	6.99	96.3	40.0	56.3
18	368.7	367.2	0.408	6.97	7.07	92.0	40.0	52.0
19	359.8	358.1	0.468	7.99	7.14	90.1	40.0	50.1
20	355.7	353.7	0.525	8.97	7.22	89.0	40.0	49.0
21	347.4	345.2	0.583	9.96	7.30	87.3	40.0	47.3
22	342.3	339.9	0.643	10.98	7.38	86.0	40.0	46.0
23	345.7	343.1	0.700	11.95	7.47	86.0	40.0	46.0
24	347.0	344.2	0.758	12.95	7.55	85.6	40.0	45.6
25	344.2	341.2	0.817	13.95	7.64	84.7	40.0	44.7
26	347.3	344.0	0.876	14.96	7.73	84.5	40.0	44.5

Notes: ¹ Deviator load corrected for membrane effects.

² Light Cylinder Correction Method

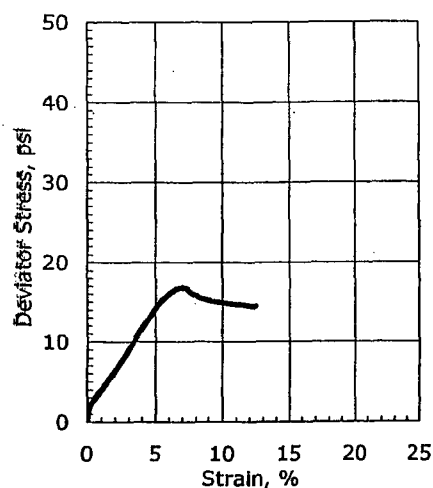
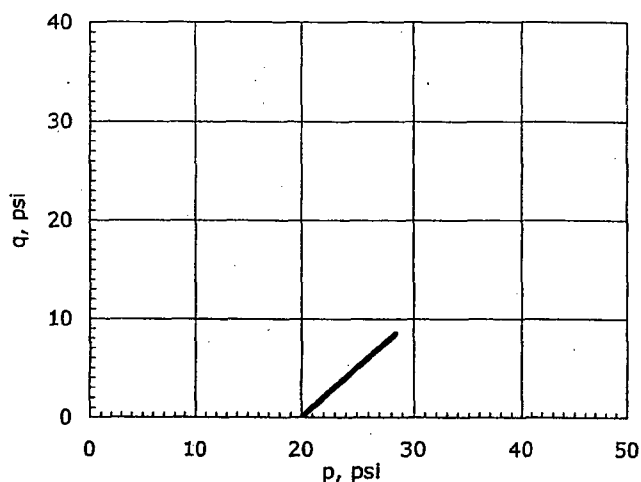


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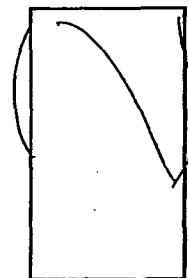
a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	10/18/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-326
Sample ID:	S-10
Depth, ft:	33.5-35.5
Visual Description:	Moist, dark gray sandy clay
Test No.:	UU24

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	20
Initial Height, in:	6	Undrained Shear Strength, psi:	8.4
Height to Diameter Ratio:	2.09	Maximum Deviator Stress, psi:	16.8
Initial Mass, grams:	1189	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	116.7	Strain at Failure, %:	7.0
Initial Moisture Content, %:	28.1		
Initial Dry Density, pcf:	91.1		
Initial Degree of Saturation:	87.1		
Initial Void Ratio:	0.89		
Measured Specific Gravity:	2.76		
Sample Type:	Tube		
Liquid Limit:	41		
Plastic Limit:	16		
Plasticity Index:	25		
% Passing #200 sieve:	62		
Soil Classification:	Sandy Lean Clay		
Group Symbol:	CL		



Failure Sketch

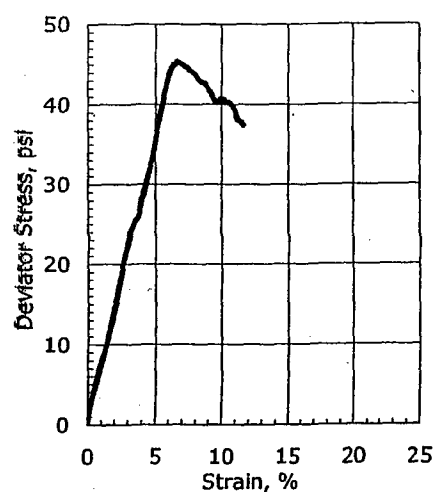
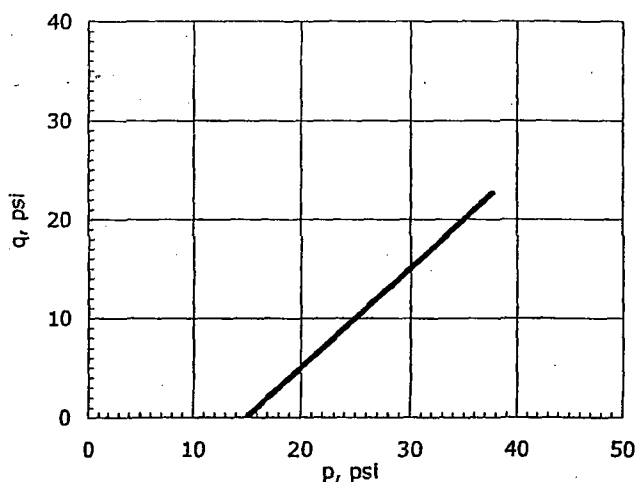
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

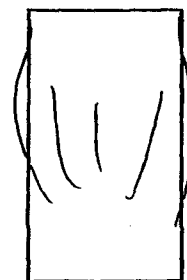
a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	10/18/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-331
Sample ID:	S-7
Depth, ft:	18.5-20.5
Visual Description:	Moist, mottled dark greenish gray, dusky red, and reddish brown clay
Test No.:	UU25

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	15
Initial Height, in:	6	Undrained Shear Strength, psi:	22.7
Height to Diameter Ratio:	2.09	Maximum Deviator Stress, psi:	45.4
Initial Mass, grams:	1191	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	116.9	Strain at Failure, %:	6.6
Initial Moisture Content, %:	36.5		
Initial Dry Density, pcf:	85.6		
Initial Degree of Saturation:	101.5		
Initial Void Ratio:	0.98		
Measured Specific Gravity:	2.71		
Sample Type:	Tube		
Liquid Limit:	57		
Plastic Limit:	23		
Plasticity Index:	34		
% Passing #200 sieve:	97		
Soil Classification:	Fat Clay		
Group Symbol:	CH		



Failure Sketch

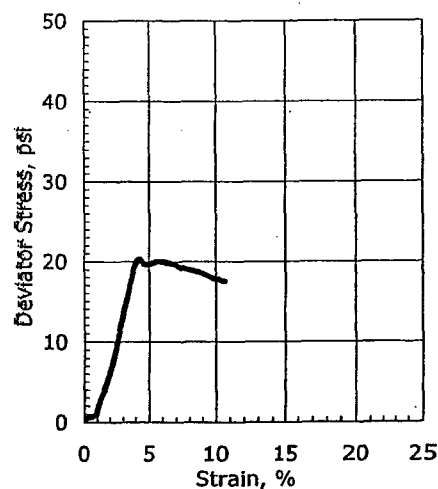
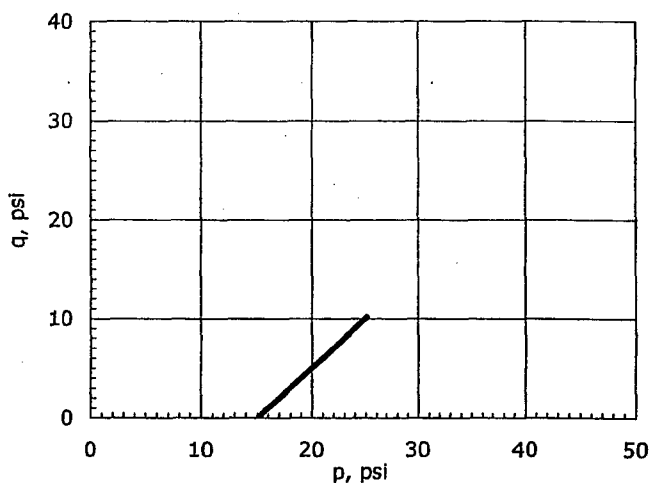
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

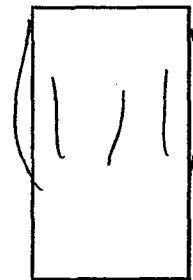
a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/12/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-334
Sample ID:	S-8
Depth, ft:	23-25
Visual Description:	Moist, dark greenish gray clay with sand
Test No.:	UU2

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	15
Initial Height, in:	6.1	Undrained Shear Strength, psi:	10.1
Height to Diameter Ratio:	2.13	Maximum Deviator Stress, psi:	20.3
Initial Mass, grams:	1235	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	119.2	Strain at Failure, %:	4.2
Initial Moisture Content, %:	31.2		
Initial Dry Density, pcf:	90.9		
Initial Degree of Saturation:	98.7		
Initial Void Ratio:	0.85		
Measured Specific Gravity:	2.70		
Sample Type:	Tube		
Liquid Limit:	51		
Plastic Limit:	16		
Plasticity Index:	35		
% Passing #200 sieve:	79		
Soil Classification:	Fat Clay with sand		
Group Symbol:	CH		

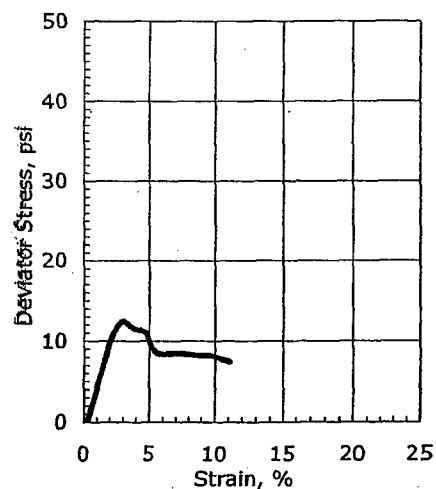
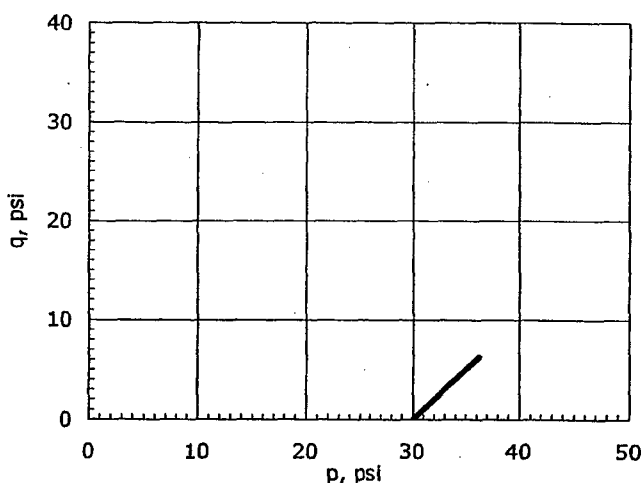


Failure Sketch

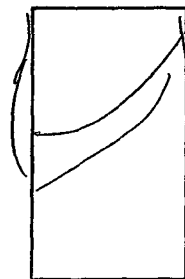
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/21/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-337
Sample ID:	S-14
Depth, ft:	53.5-55.5
Visual Description:	Moist, olive gray clayey sand
Test No.:	UU22

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	15
Initial Height, in:	5.8	Undrained Shear Strength, psi:	6.2
Height to Diameter Ratio:	2.02	Maximum Deviator Stress, psi:	12.5
Initial Mass, grams:	1246	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	126.5	Strain at Failure, %:	3.0
Initial Moisture Content, %:	33.6		
Initial Dry Density, pcf:	94.7		
Initial Degree of Saturation:	113.7		
Initial Void Ratio:	0.81		
Measured Specific Gravity:	2.75		
Sample Type:	Tube		
Liquid Limit:	38		
Plastic Limit:	19		
Plasticity Index:	19		
% Passing #200 sieve:	39		
Soil Classification:	Clayey Sand		
Group Symbol:	SC		

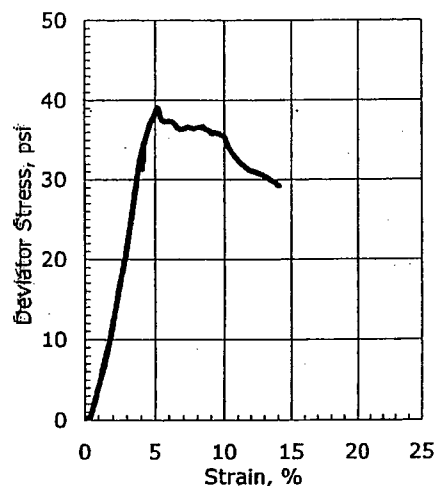
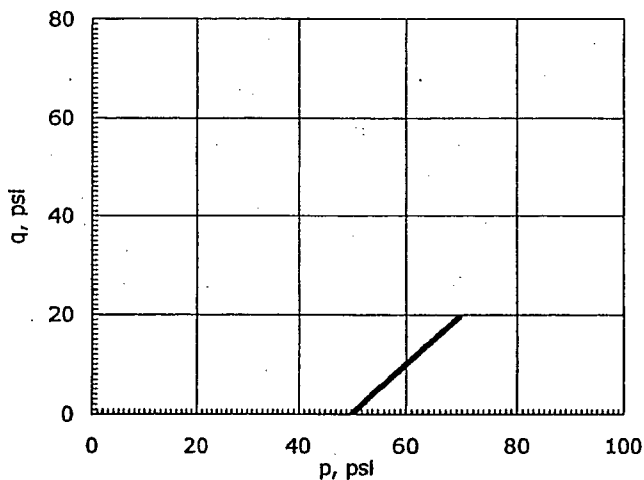


Failure Sketch

Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/20/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-401
Sample ID:	S-23
Depth, ft:	98.5-99.8
Visual Description:	Moist, dark gray sandy silt
Test No.:	UU15

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	50
Initial Height, in:	6	Undrained Shear Strength, psi:	19.6
Height to Diameter Ratio:	2.09	Maximum Deviator Stress, psi:	39.1
Initial Mass, grams:	1189	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	116.7	Strain at Failure, %:	5.1
Initial Moisture Content, %:	54.5		
Initial Dry Density, pcf:	75.5		
Initial Degree of Saturation:	119.2		
Initial Void Ratio:	1.24		
Measured Specific Gravity:	2.71		
Sample Type:	Tube		
Liquid Limit:	78		
Plastic Limit:	48		
Plasticity Index:	30		
% Passing #200 sieve:	65		
Soil Classification:	Sandy Elastic Silt		
Group Symbol:	MH		

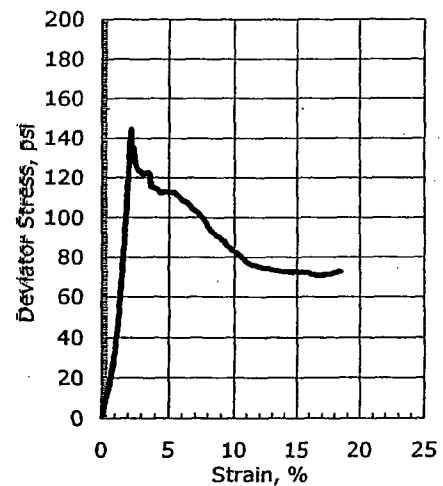
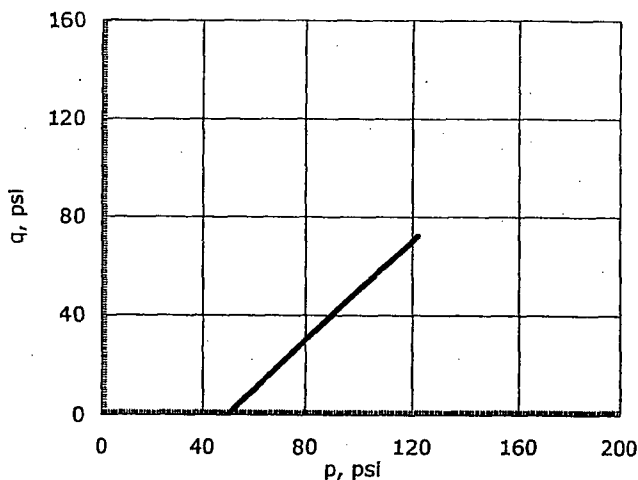


Failure Sketch

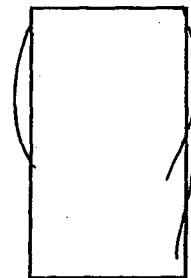
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/20/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-401
Sample ID:	S-28
Depth, ft:	123.5-124.8
Visual Description:	Moist, dark olive gray silt with sand
Test No.:	UU17

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	50
Initial Height, in:	6.10	Undrained Shear Strength, psi:	72.3
Height to Diameter Ratio:	2.13	Maximum Deviator Stress, psi:	144.6
Initial Mass, grams:	1068	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	103.1	Strain at Failure, %:	2.2
Initial Moisture Content, %:	56.8		
Initial Dry Density, pcf:	65.8		
Initial Degree of Saturation:	99.1		
Initial Void Ratio:	1.52		
Measured Specific Gravity:	2.66		
Sample Type:	Tube		
Liquid Limit:	85		
Plastic Limit:	54		
Plasticity Index:	31		
% Passing #200 sieve:	82		
Soil Classification:	Elastic Silt with Sand		
Group Symbol:	MH		



Failure Sketch

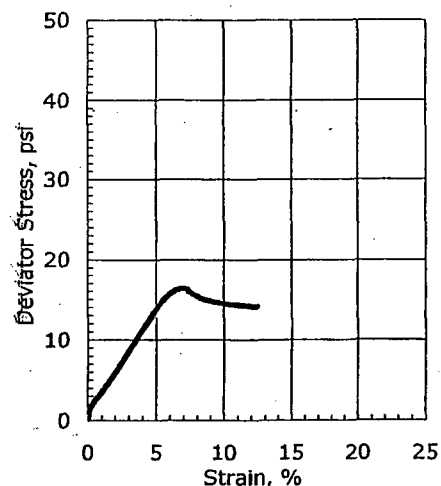
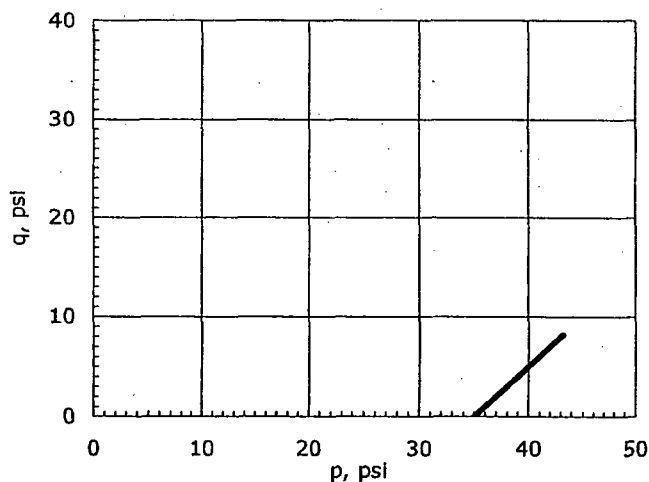
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

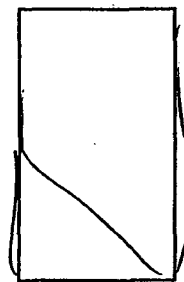
a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/20/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-406
Sample ID:	S-16
Depth, ft:	63.5-65.5
Visual Description:	Moist, very dark gray organic clay with sand
Test No.:	UU24

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	35
Initial Height, in:	6.00	Undrained Shear Strength, psi:	8.2
Height to Diameter Ratio:	2.09	Maximum Deviator Stress, psi:	16.4
Initial Mass, grams:	1156	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	113.5	Strain at Failure, %:	7.0
Initial Moisture Content, %:	39.1		
Initial Dry Density, pcf:	81.6		
Initial Degree of Saturation:	97.7		
Initial Void Ratio:	1.10		
Measured Specific Gravity:	2.74		
Sample Type:	Tube		
Liquid Limit:	63		
Plastic Limit:	19		
Plasticity Index:	44		
% Passing #200 sieve:	90		
Soil Classification:	Organic Clay with Sand		
Group Symbol:	OH		



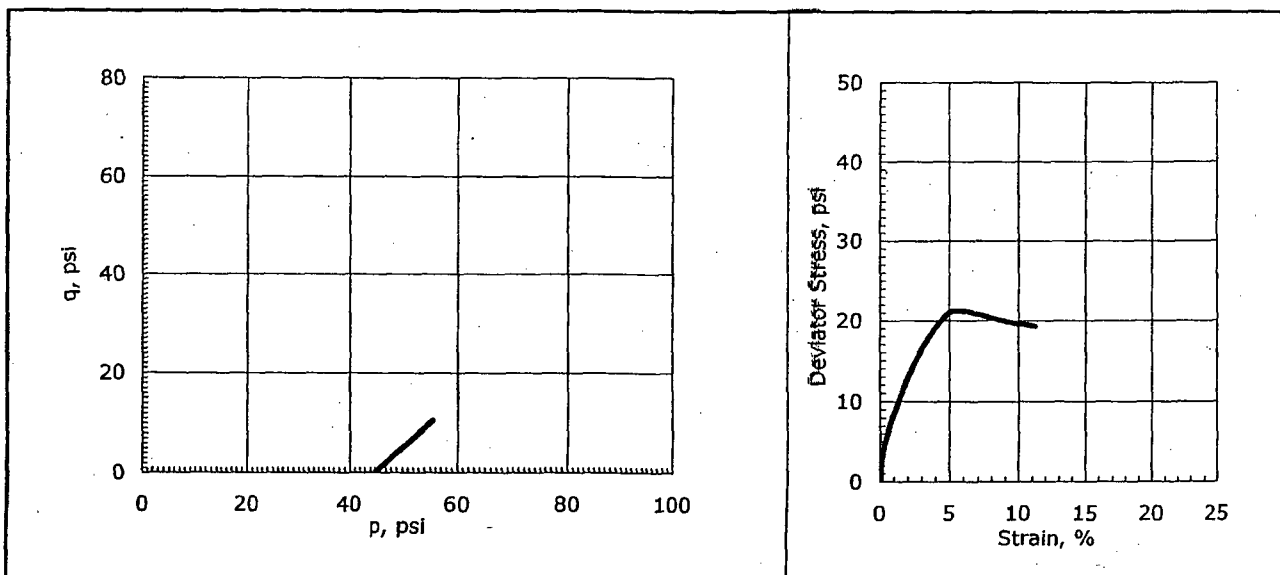
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/20/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-413
Sample ID:	S-17
Depth, ft:	73-75
Visual Description:	Moist, dark greenish gray clay
Test No.:	UU23

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	45
Initial Height, in:	5.95	Undrained Shear Strength, psi:	10.6
Height to Diameter Ratio:	2.07	Maximum Deviator Stress, psi:	21.2
Initial Mass, grams:	1191	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	117.9	Strain at Failure, %:	6.9
Initial Moisture Content, %:	32.2		
Initial Dry Density, pcf:	89.1		
Initial Degree of Saturation:	96.6		
Initial Void Ratio:	0.91		
Measured Specific Gravity:	2.73		
Sample Type:	Tube		
Liquid Limit:	59		
Plastic Limit:	16		
Plasticity Index:	43		
% Passing #200 sieve:	98		
Soil Classification:	Fat Clay		
Group Symbol:	CH		



Failure Sketch

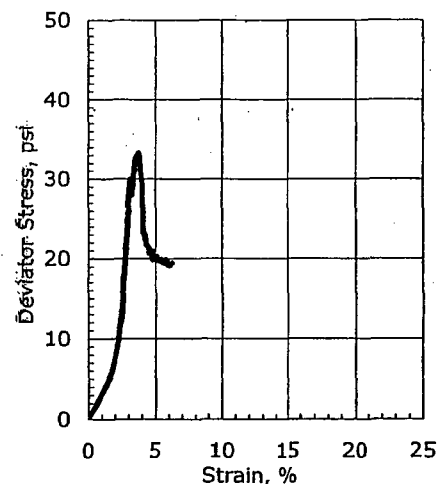
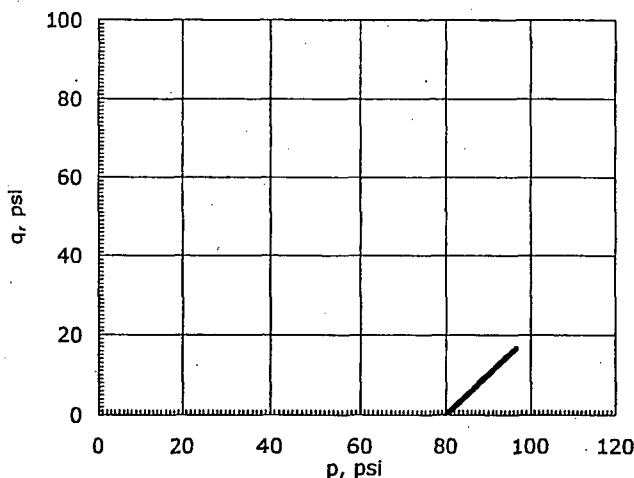
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

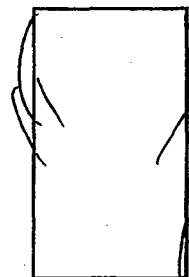
a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/12/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-423
Sample ID:	S-35
Depth, ft:	158.5-160.1
Visual Description:	Molst, olive gray organic clay
Test No.:	UU5

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	80
Initial Height, in:	5.80	Undrained Shear Strength, psi:	16.6
Height to Diameter Ratio:	2.02	Maximum Deviator Stress, psi:	33.3
Initial Mass, grams:	1063	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	107.9	Strain at Failure, %:	3.7
Initial Moisture Content, %:	45.1		
Initial Dry Density, pcf:	74.4		
Initial Degree of Saturation:	96.0		
Initial Void Ratio:	1.27		
Measured Specific Gravity:	2.71		
Sample Type:	Tube		
Liquid Limit:	74		
Plastic Limit:	18		
Plasticity Index:	56		
% Passing #200 sieve:	88		
Soil Classification:	Organic Clay		
Group Symbol:	OH		



Failure Sketch

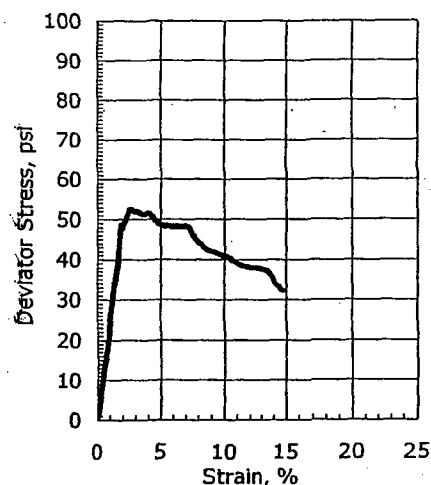
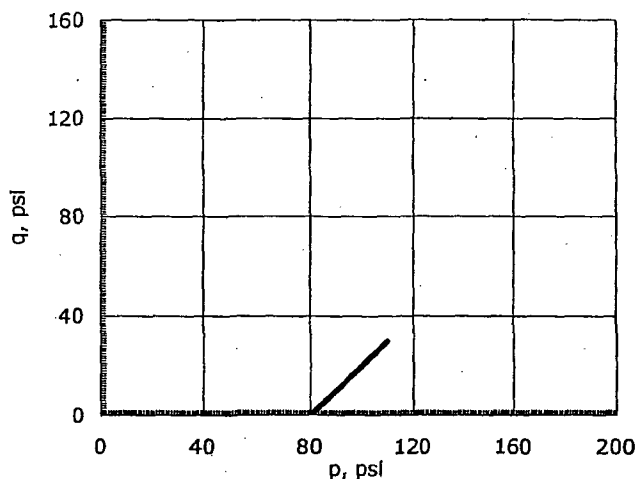
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

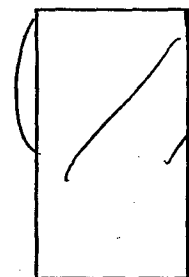
a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/21/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-423
Sample ID:	S-39
Depth, ft:	178.5-179.8
Visual Description:	Moist, olive silty sand
Test No.:	UU20

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	80
Initial Height, in:	6.15	Undrained Shear Strength, psi:	26.3
Height to Diameter Ratio:	2.14	Maximum Deviator Stress, psi:	52.6
Initial Mass, grams:	1167	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	111.7	Strain at Failure, %:	2.6
Initial Moisture Content, %:	41.7		
Initial Dry Density, pcf:	78.9		
Initial Degree of Saturation:	101.0		
Initial Void Ratio:	1.09		
Measured Specific Gravity:	2.64		
Sample Type:	Tube		
Liquid Limit:	64		
Plastic Limit:	34		
Plasticity Index:	30		
% Passing #200 sieve:	46		
Soil Classification:	Silty Sand		
Group Symbol:	SM		



Failure Sketch

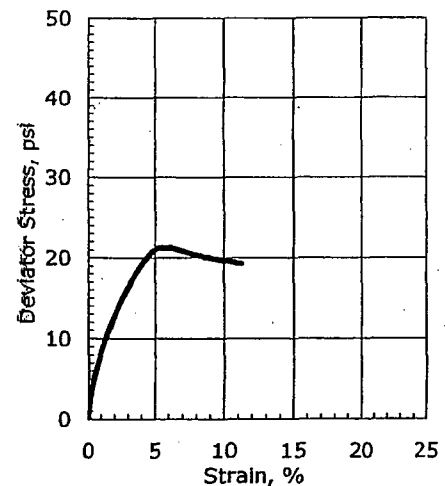
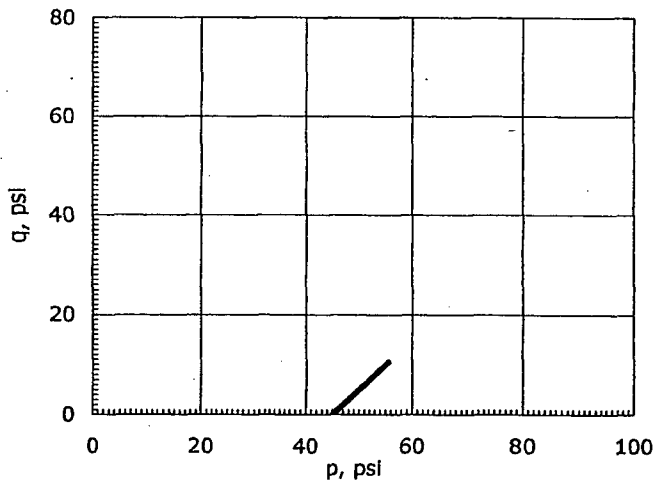
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

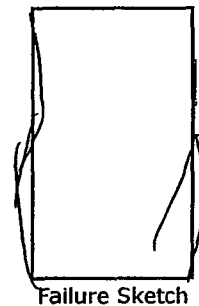
a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/29/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-427
Sample ID:	S-16
Depth, ft:	63.5-65.5
Visual Description:	Molst, black sandy organic clay
Test No.:	UU23

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	45
Initial Height, in:	6.02	Undrained Shear Strength, psi:	10.6
Height to Diameter Ratio:	2.10	Maximum Deviator Stress, psi:	21.2
Initial Mass, grams:	1187	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	116.1	Strain at Failure, %:	6.1
Initial Moisture Content, %:	34.1		
Initial Dry Density, pcf:	86.6		
Initial Degree of Saturation:	95.9		
Initial Void Ratio:	0.97		
Measured Specific Gravity:	2.74		
Sample Type:	Tube		
Liquid Limit:	56		
Plastic Limit:	18		
Plasticity Index:	38		
% Passing #200 sieve:	61		
Soil Classification:	Sandy Organic Clay		
Group Symbol:	OH		



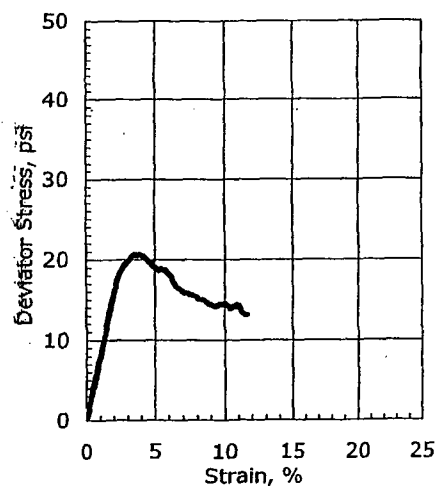
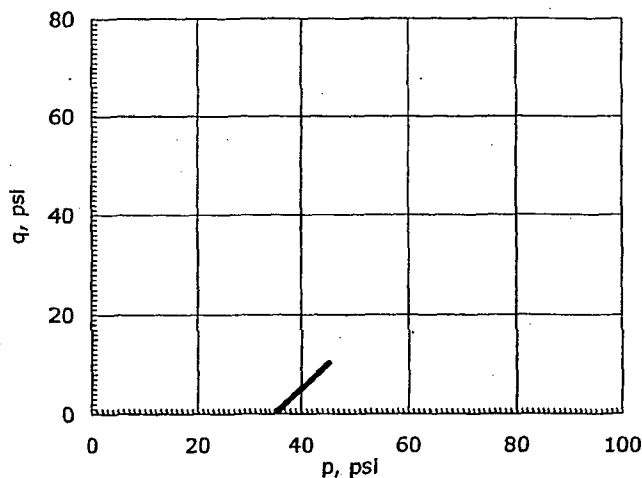
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	11/1/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-428
Sample ID:	---
Depth, ft:	60-62
Visual Description:	Moist, dark greenish gray <i>Fact</i> organic clay <i>BB/4/6/07</i>
Test No.:	UU26

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.86	Confining Stress, psi:	35
Initial Height, in:	6.10	Undrained Shear Strength, psi:	10.3
Height to Diameter Ratio:	2.13	Maximum Deviator Stress, psi:	20.6
Initial Mass, grams:	1213	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	117.9	Strain at Failure, %:	3.8
Initial Moisture Content, %:	34.2		
Initial Dry Density, pcf:	87.8		
Initial Degree of Saturation:	97.6		
Initial Void Ratio:	0.97		
Measured Specific Gravity:	2.78		
Sample Type:	Tube		
Liquid Limit:	61		
Plastic Limit:	17		
Plasticity Index:	44		
% Passing #200 sieve:	93		
Soil Classification:	<i>Fact</i> Organic Clay <i>BB/4/6/07</i>		
Group Symbol:	CH-OH		



Failure Sketch

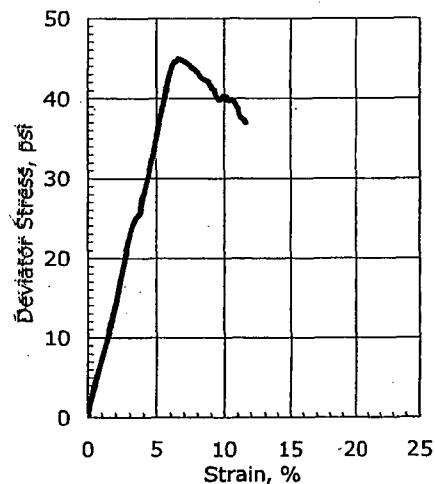
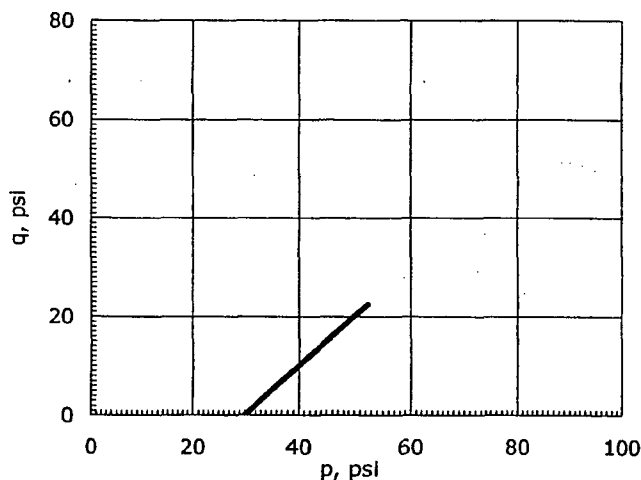
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	10/19/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-433
Sample ID:	S-11
Depth, ft:	38.5-40.5
Visual Description:	Moist, very dark gray clay
Test No.:	UU25

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	30
Initial Height, in:	6.05	Undrained Shear Strength, psi:	22.5
Height to Diameter Ratio:	2.11	Maximum Deviator Stress, psi:	44.9
Initial Mass, grams:	1238	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	120.5	Strain at Failure, %:	6.7
Initial Moisture Content, %:	30.8		
Initial Dry Density, pcf:	92.1		
Initial Degree of Saturation:	97.3		
Initial Void Ratio:	0.88		
Measured Specific Gravity:	2.77		
Sample Type:	Tube		
Liquid Limit:	61		
Plastic Limit:	14		
Plasticity Index:	47		
% Passing #200 sieve:	91		
Soil Classification:	Fat Clay		
Group Symbol:	CH		



Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422



Unconsolidated Undrained Triaxial Compression Test

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

ASTM D2850

Schnabel Contract: 06120048

Boring No.: B-434

Depth: 53.5-55.5ft.

Elevation: 51.7 to 49.7 ft

Confining Stress (psi): 35.0

Date: 11/27/2006

Reviewed by: CJS

Specimen Conditions	
Diameter (in)	2.890
Height (in)	5.829
Area (in ²)	6.56
Moisture (%)	35.5
Weight (lbs)	2.57
P _{wet} (pcf)	118.3
P _{dry} (pcf)	85.8
Void Ratio	1.06
Saturation, %	95

Shear Testing Conditions	
Cell Pressure (psi):	35.0
Rate of Strain (%/min):	1.0

Specimen Type: Tube Sample

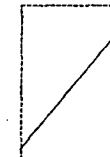
Axial Strain at Failure (%): 3.00
Compressive Strength (psi): 50.7
Major Principal Stress (psi): 85.7
Minor Principal Stress (psi): 35.0

Soil Description: FAT CLAY (CH) trace sand - gray

Liquid Limit: 56
Plasticity Index: 32
% finer than No. 200: 94.9
Specific Gravity: 2.84

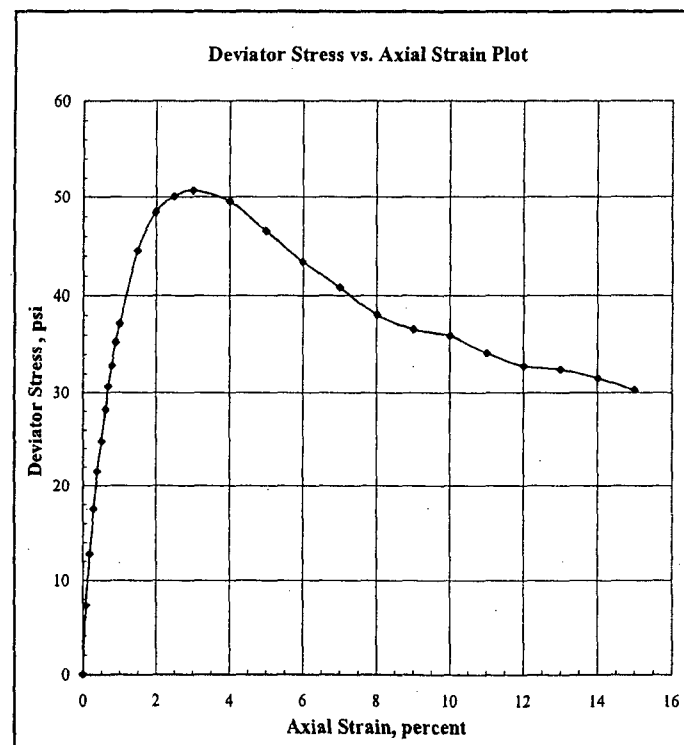
Remarks:

Failure Sketch



Reading No.	Deviator Load (lbs)	Corrected Dev. Load ¹ (lbs.)	Axial Displacement (in.)	Axial Strain (%)	Corrected Area ² (in ²)	σ ₁ (psi)	σ ₃ (psi)	Deviator Stress (psi)
Initial	0.0	0.0	0.000	0.00	6.56	35.0	35.0	0.0
1	48.1	48.1	0.005	0.09	6.57	42.3	35.0	7.3
2	84.0	84.0	0.011	0.19	6.57	47.8	35.0	12.8
3	115.4	115.3	0.017	0.29	6.58	52.5	35.0	17.5
4	141.6	141.5	0.023	0.39	6.59	56.5	35.0	21.5
5	163.6	163.5	0.029	0.50	6.60	59.8	35.0	24.8
6	186.1	186.0	0.036	0.62	6.60	63.2	35.0	28.2
7	202.5	202.4	0.040	0.69	6.61	65.6	35.0	30.6
8	217.5	217.3	0.046	0.79	6.61	67.9	35.0	32.9
9	233.9	233.7	0.052	0.89	6.62	70.3	35.0	35.3
10	246.7	246.5	0.058	1.00	6.63	72.2	35.0	37.2
11	297.1	296.8	0.087	1.49	6.66	79.5	35.0	44.5
12	324.7	324.3	0.116	1.99	6.70	83.4	35.0	48.4
13	337.2	336.7	0.145	2.49	6.73	85.0	35.0	50.0
14	343.5	342.8	0.175	3.00	6.77	85.7	35.0	50.7
15	339.4	338.5	0.233	4.00	6.84	84.5	35.0	49.5
16	322.5	321.4	0.291	4.99	6.91	81.5	35.0	46.5
17	304.1	302.8	0.350	6.00	6.98	78.4	35.0	43.4
18	289.4	287.9	0.408	7.00	7.06	75.8	35.0	40.8
19	273.2	271.5	0.467	8.01	7.13	73.1	35.0	38.1
20	266.0	264.0	0.525	9.01	7.21	71.6	35.0	36.6
21	264.2	262.0	0.583	10.00	7.29	70.9	35.0	35.9
22	254.2	251.8	0.642	11.01	7.37	69.1	35.0	34.1
23	247.3	244.7	0.700	12.01	7.46	67.8	35.0	32.8
24	247.6	244.8	0.758	13.00	7.54	67.4	35.0	32.4
25	243.4	240.3	0.817	14.02	7.63	66.5	35.0	31.5
26	237.0	233.7	0.875	15.01	7.72	65.3	35.0	30.3

Notes: Deviator load corrected for membrane effects.
1. Right Cylinder Correction Method

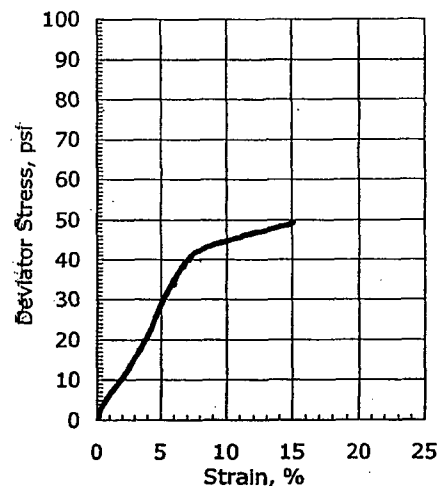
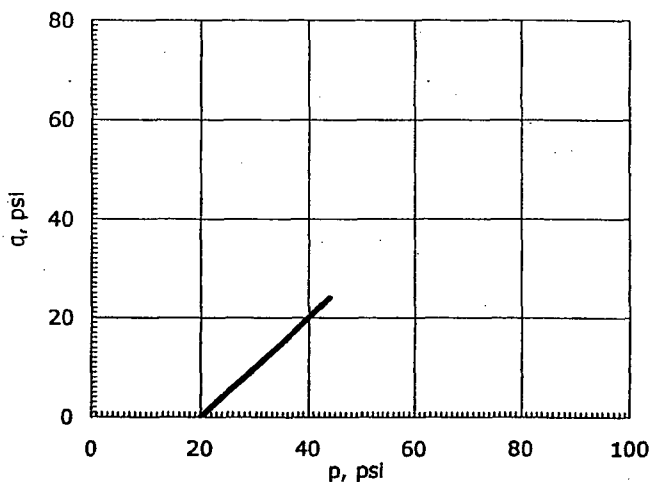


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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/20/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-701
Sample ID:	S-12
Depth, ft:	43.5-45.2
Visual Description:	Moist, mottled olive gray and light gray sandy silt
Test No.:	UU16

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



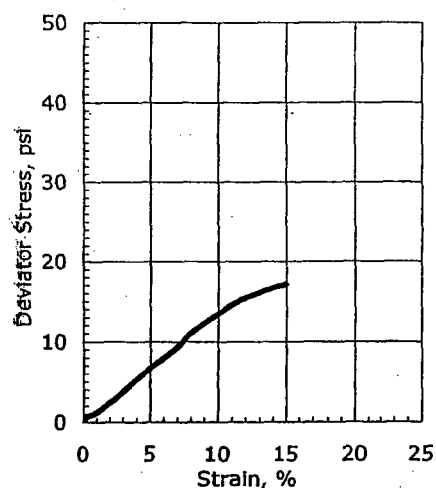
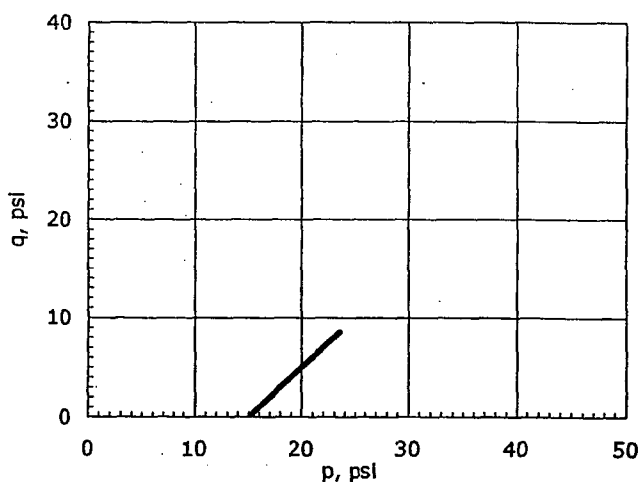
Initial Diameter, in:	2.87	Confining Stress, psi:	20
Initial Height, in:	6.30	Undrained Shear Strength, psi:	24.6
Height to Diameter Ratio:	2.20	Maximum Deviator Stress, psi:	49.3
Initial Mass, grams:	1240	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	115.9	Strain at Failure, %:	15.0
Initial Moisture Content, %:	30.8		
Initial Dry Density, pcf:	88.6		
Initial Degree of Saturation:	94.6		
Initial Void Ratio:	0.86		
Measured Specific Gravity:	2.64		
Sample Type:	Tube		
Liquid Limit:	54		
Plastic Limit:	33		
Plasticity Index:	21		
% Passing #200 sieve:	64		
Soil Classification:	Sandy Elastic Silt		
Group Symbol:	MH		



Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/20/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-722
Sample ID:	UD-1
Depth, ft:	33.5-35.5
Visual Description:	Moist, brownish yellow silty sand
Test No.:	UU9

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	25
Initial Height, in:	5.80	Undrained Shear Strength, psi:	8.5
Height to Diameter Ratio:	2.02	Maximum Deviator Stress, psi:	17.1
Initial Mass, grams:	1178	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	119.6	Strain at Failure, %:	15.0
Initial Moisture Content, %:	28.5		
Initial Dry Density, pcf:	93.0		
Initial Degree of Saturation:	92.6		
Initial Void Ratio:	0.85		
Measured Specific Gravity:	2.76		
Sample Type:	Tube		
Liquid Limit:	---		
Plastic Limit:	---		
Plasticity Index:	Non-Plastic		
% Passing #200 sieve:	20		
Soil Classification:	Silty Sand		
Group Symbol:	SM		



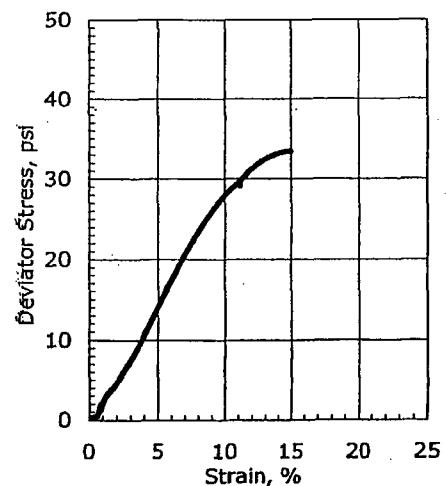
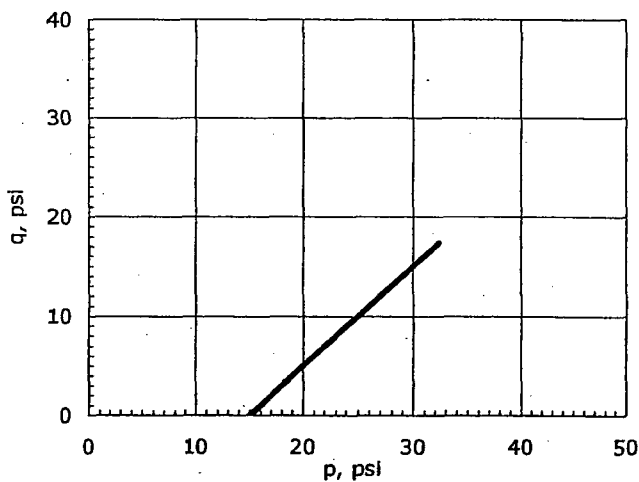
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/21/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-723
Sample ID:	UD-2
Depth, ft:	28.5-30.5
Visual Description:	Moist, dark olive gray clay
Test No.:	UU19

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



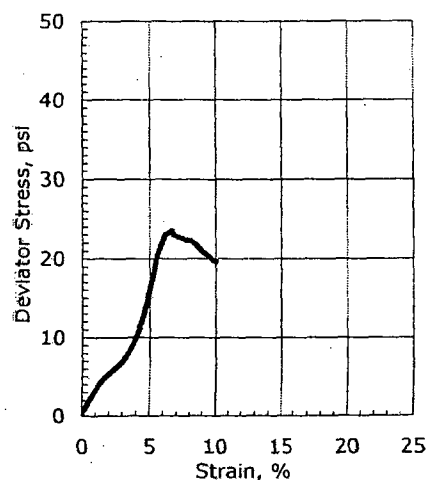
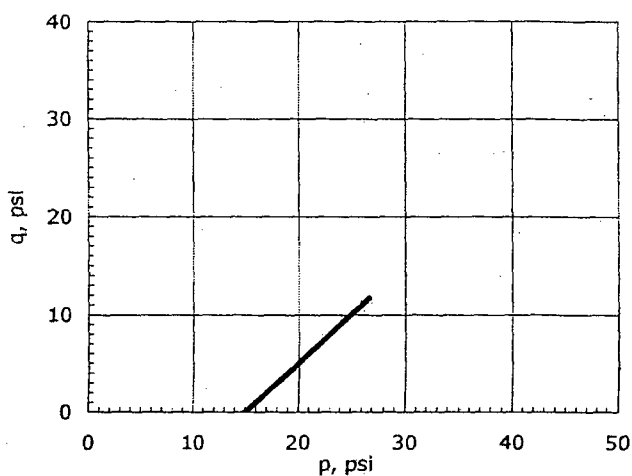
Initial Diameter, in:	2.87	Confining Stress, psi:	15
Initial Height, in:	5.90	Undrained Shear Strength, psi:	16.7
Height to Diameter Ratio:	2.06	Maximum Deviator Stress, psi:	33.5
Initial Mass, grams:	1198	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	119.6	Strain at Failure, %:	15.0
Initial Moisture Content, %:	27.3		
Initial Dry Density, pcf:	94.0		
Initial Degree of Saturation:	92.4		
Initial Void Ratio:	0.80		
Measured Specific Gravity:	2.71		
Sample Type:	Tube		
Liquid Limit:	56		
Plastic Limit:	15		
Plasticity Index:	41		
% Passing #200 sieve:	90		
Soil Classification:	Fat Clay		
Group Symbol:	CH		



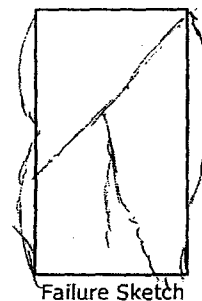
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/19/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-723
Sample ID:	UD-3
Depth, ft:	38.5-40.5
Visual Description:	Moist, greenish gray clay
Test No.:	UU8

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	15
Initial Height, in:	6.10	Undrained Shear Strength, psi:	11.7
Height to Diameter Ratio:	2.13	Maximum Deviator Stress, psi:	23.5
Initial Mass, grams:	1160	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	112.0	Strain at Failure, %:	6.7
Initial Moisture Content, %:	33.8		
Initial Dry Density, pcf:	83.7		
Initial Degree of Saturation:	90.1		
Initial Void Ratio:	1.01		
Measured Specific Gravity	2.73		
Sample Type:	Tube		
Liquid Limit:	64		
Plastic Limit:	19		
Plasticity Index:	45		
% Passing #200 sieve:	85		
Soil Classification:	Fat Clay		
Group Symbol:	CH		



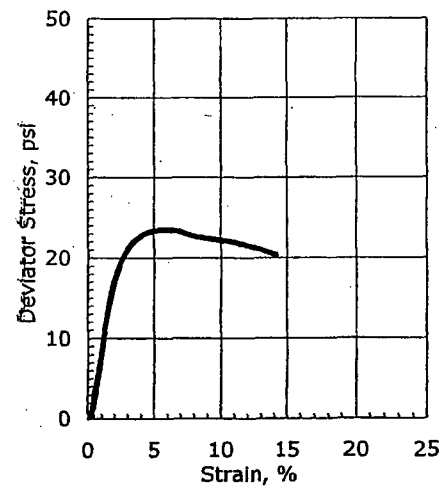
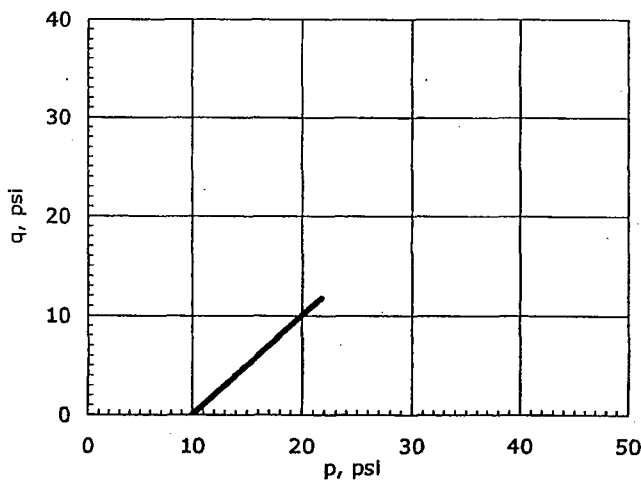
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/19/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-726
Sample ID:	UD-2
Depth, ft:	23.5-25.5
Visual Description:	Moist, black clay
Test No.:	UU13

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	10
Initial Height, in:	6.00	Undrained Shear Strength, psi:	11.8
Height to Diameter Ratio:	2.09	Maximum Deviator Stress, psi:	23.5
Initial Mass, grams:	1193	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	117.1	Strain at Failure, %:	5.7
Initial Moisture Content, %:	34.6		
Initial Dry Density, pcf:	87.0		
Initial Degree of Saturation:	99.7		
Initial Void Ratio:	0.94		
Measured Specific Gravity:	2.70		
Sample Type:	Tube		
Liquid Limit:	69		
Plastic Limit:	22		
Plasticity Index:	47		
% Passing #200 sieve:	96		
Soil Classification:	Fat Clay		
Group Symbol:	CH		



Failure Sketch

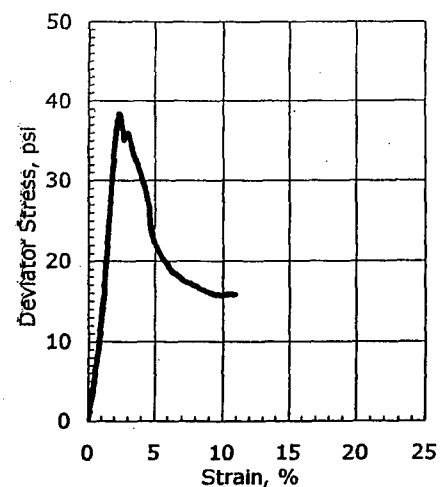
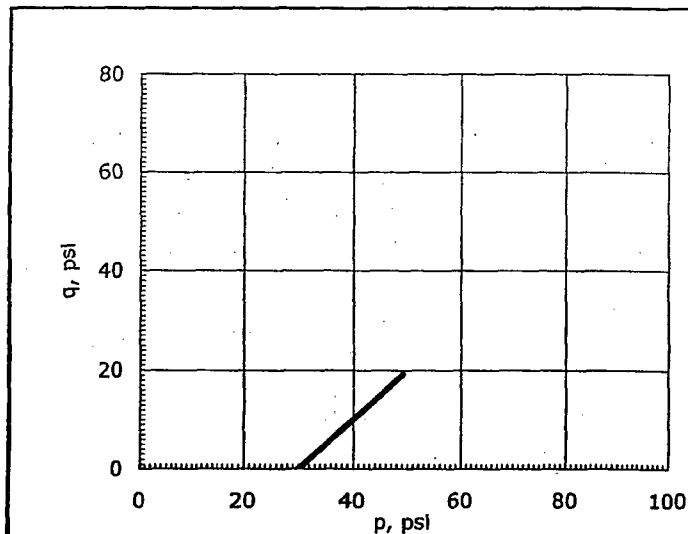
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	11/15/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-729
Sample ID:	UD-1 (S-9)
Depth, ft:	68.5-70'
Visual Description:	Moist, dark greenish gray organic clay
Test No.:	UU28

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	30
Initial Height, in:	6.05	Undrained Shear Strength, psi:	19.2
Height to Diameter Ratio:	2.11	Maximum Deviator Stress, psi:	38.4
Initial Mass, grams:	1220	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	118.7	Strain at Failure, %:	2.3
Initial Moisture Content, %:	34.6		
Initial Dry Density, pcf:	88.2		
Initial Degree of Saturation:	99.1		
Initial Void Ratio:	0.97		
Measured Specific Gravity:	2.79		
Sample Type:	Tube		
Liquid Limit:	56		
Plastic Limit:	18		
Plasticity Index:	38		
% Passing #200 sieve:	93		
Soil Classification:	Organic Clay		
Group Symbol:	OH		



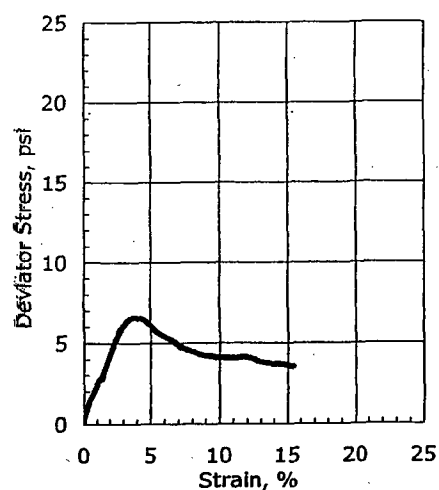
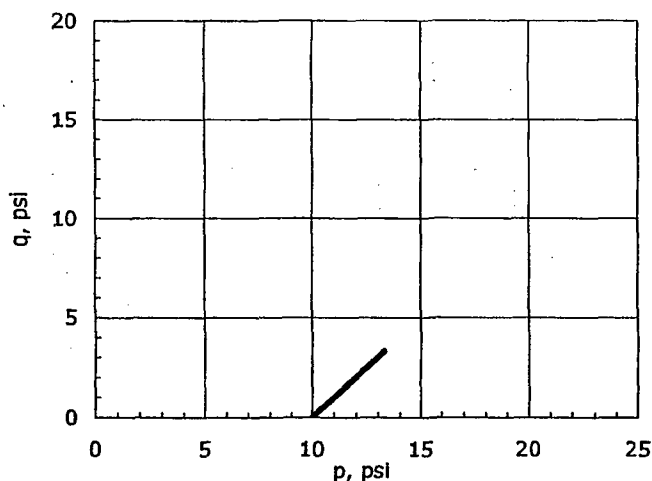
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/21/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-732
Sample ID:	UD-1
Depth, ft:	15-17
Visual Description:	Moist, mottled pale yellow and brownish yellow clayey sand
Test No.:	UU21

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	10
Initial Height, in:	6.10	Undrained Shear Strength, psi:	3.3
Height to Diameter Ratio:	2.13	Maximum Deviator Stress, psi:	6.6
Initial Mass, grams:	1283	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	123.9	Strain at Failure, %:	3.9
Initial Moisture Content, %:	22.2		
Initial Dry Density, pcf:	101.3		
Initial Degree of Saturation:	88.2		
Initial Void Ratio:	0.69		
Measured Specific Gravity:	2.75		
Sample Type:	Tube		
Liquid Limit:	26		
Plastic Limit:	19		
Plasticity Index:	7		
% Passing #200 sieve:	32		
Soil Classification:	Clayey Sand		
Group Symbol:	SC		



Failure Sketch

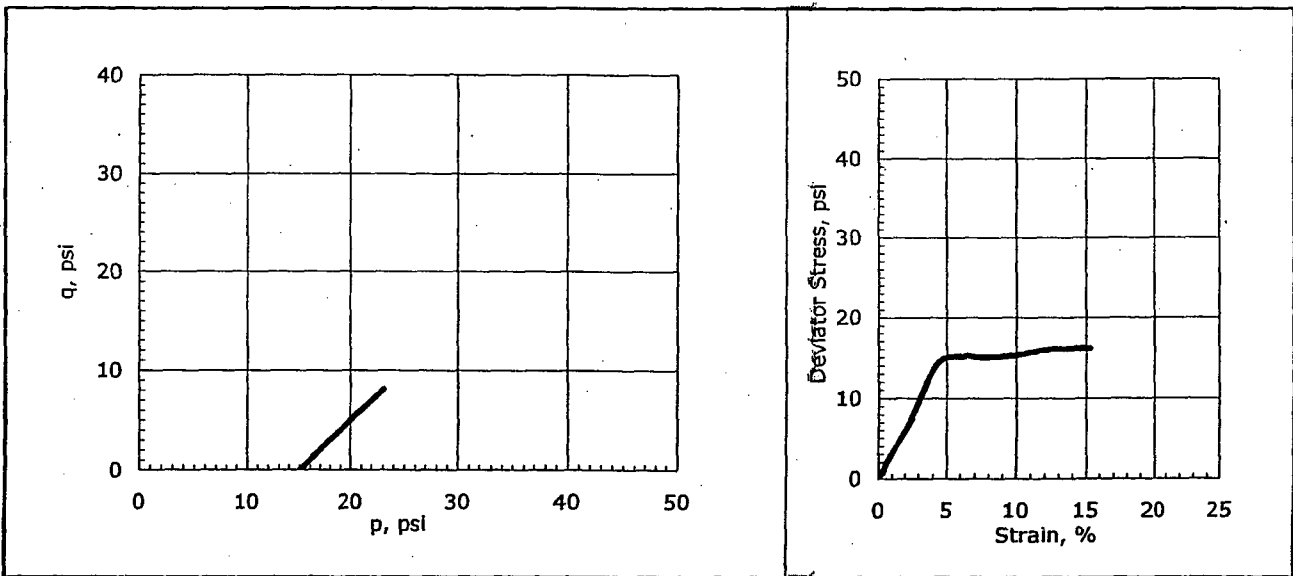
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/19/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-733
Sample ID:	UD-1
Depth, ft:	23.5-25.5
Visual Description:	Moist, dark olive gray clay with sand
Test No.:	UU6

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	10
Initial Height, in:	6.05	Undrained Shear Strength, psi:	8.1
Height to Diameter Ratio:	2.11	Maximum Deviator Stress, psi:	16.1
Initial Mass, grams:	1218	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	118.6	Strain at Failure, %:	15.0
Initial Moisture Content, %:	32.6		
Initial Dry Density, pcf:	89.4		
Initial Degree of Saturation:	98.3		
Initial Void Ratio:	0.91		
Measured Specific Gravity:	2.73		
Sample Type:	Tube		
Liquid Limit:	51		
Plastic Limit:	15		
Plasticity Index:	36		
% Passing #200 sieve:	78		
Soil Classification:	Fat Clay with Sand		
Group Symbol:	CH		

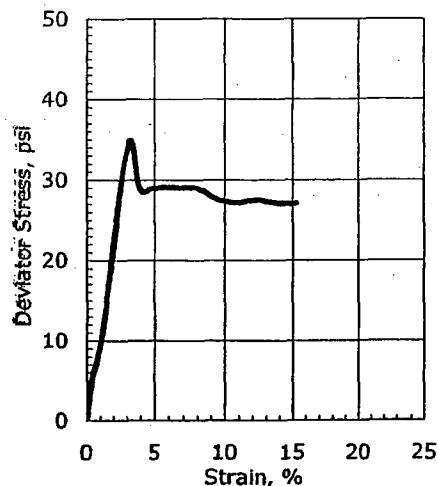
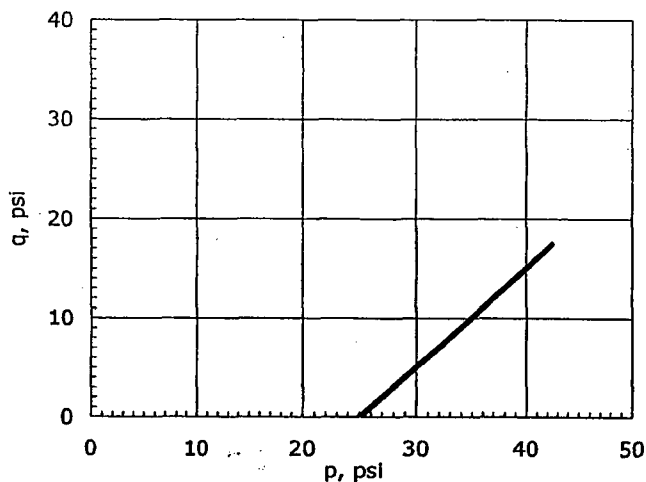


Failure Sketch

Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/19/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-735
Sample ID:	S-9
Depth, ft:	28-30
Visual Description:	Moist, dark gray clay
Test No.:	UU7

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	25
Initial Height, in:	6.03	Undrained Shear Strength, psi:	17.5
Height to Diameter Ratio:	2.10	Maximum Deviator Stress, psi:	34.9
Initial Mass, grams:	1222	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	119.3	Strain at Failure, %:	3.2
Initial Moisture Content, %:	31.7		
Initial Dry Density, pcf:	90.6		
Initial Degree of Saturation:	99.6		
Initial Void Ratio:	0.86		
Measured Specific Gravity:	2.73		
Sample Type:	Tube		
Liquid Limit:	51		
Plastic Limit:	16		
Plasticity Index:	35		
% Passing #200 sieve:	87		
Soil Classification:	Fat Clay		
Group Symbol:	CH		



Failure Sketch

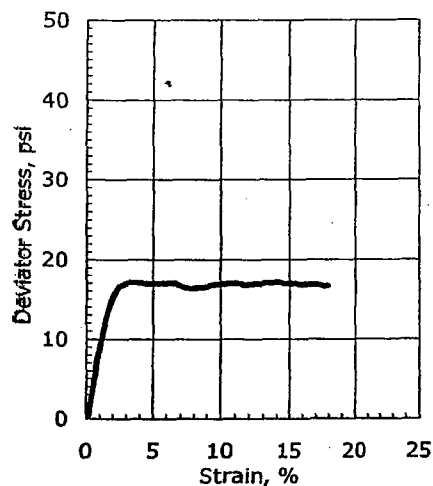
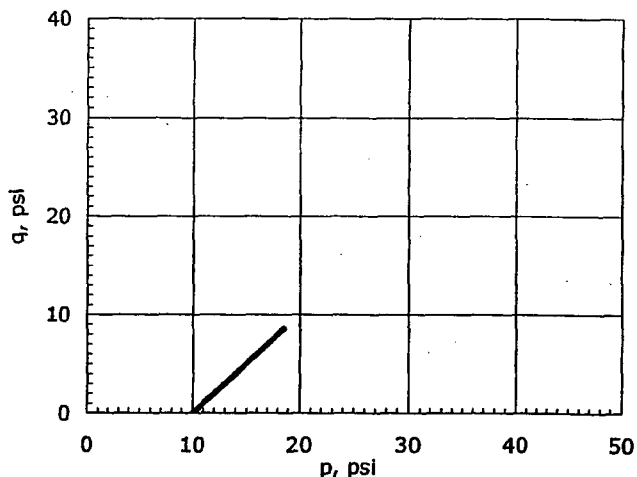
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

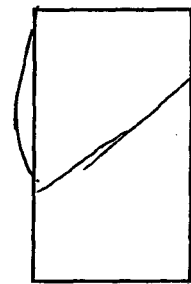
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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/19/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-737
Sample ID:	UD-1
Depth, ft:	10.5-12.5
Visual Description:	Moist, very pale brown clay
Test No.:	UU11

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	10
Initial Height, in:	6.03	Undrained Shear Strength, psi:	8.6
Height to Diameter Ratio:	2.10	Maximum Deviator Stress, psi:	17.2
Initial Mass, grams:	1162	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	113.5	Strain at Failure, %:	15.0
Initial Moisture Content, %:	36.2		
Initial Dry Density, pcf:	83.3		
Initial Degree of Saturation:	98.1		
Initial Void Ratio:	0.97		
Measured Specific Gravity:	2.73		
Sample Type:	Tube		
Liquid Limit:	75		
Plastic Limit:	23		
Plasticity Index:	52		
% Passing #200 sieve:	93		
Soil Classification:	Fat Clay		
Group Symbol:	CH		



Failure Sketch

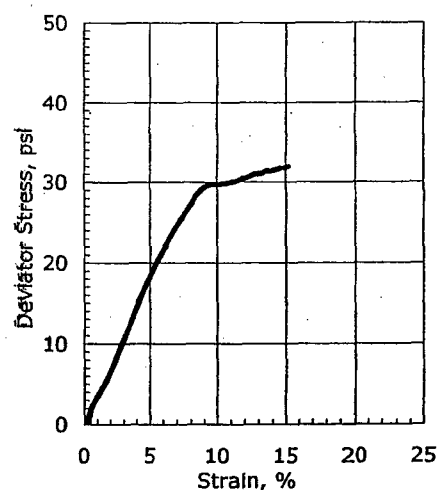
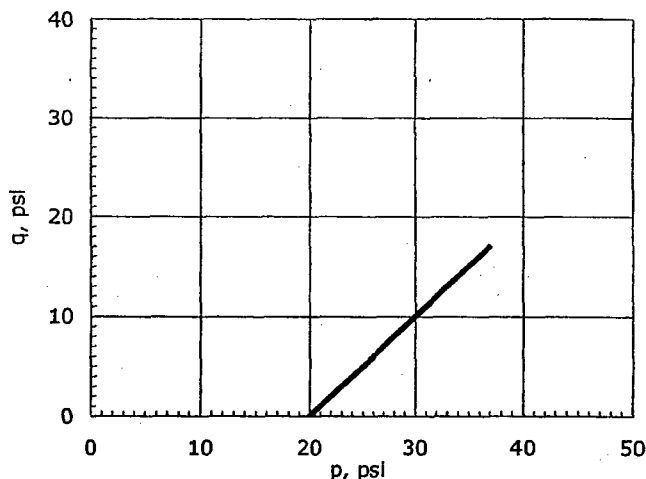
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/19/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-738
Sample ID:	UD-1
Depth, ft:	35-37
Visual Description:	Moist, dark olive gray silty, clayey sand
Test No.:	UU14

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	20
Initial Height, in:	5.85	Undrained Shear Strength, psi:	15.9
Height to Diameter Ratio:	2.04	Maximum Deviator Stress, psi:	31.8
Initial Mass, grams:	1091	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	109.8	Strain at Failure, %:	15.0
Initial Moisture Content, %:	10.7		
Initial Dry Density, pcf:	99.2		
Initial Degree of Saturation:	42.1		
Initial Void Ratio:	0.68		
Measured Specific Gravity:	2.67		
Sample Type:	Tube		
Liquid Limit:	26		
Plastic Limit:	22		
Plasticity Index:	4		
% Passing #200 sieve:	25		
Soil Classification:	Silty Clayey Sand		
Group Symbol:	SC-SM		



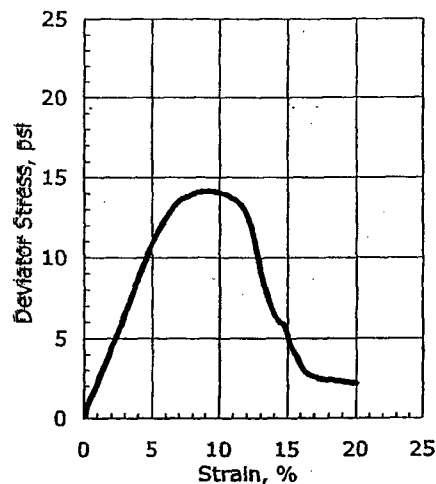
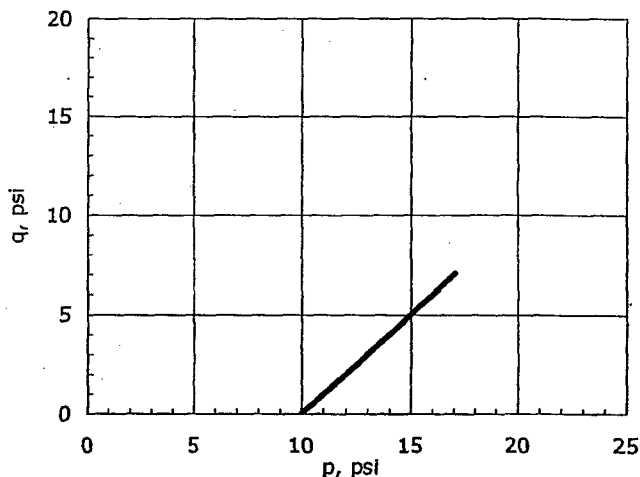
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	11/8/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-746
Sample ID:	S-6
Depth, ft:	13.5-15.5
Visual Description:	Moist, dark olive gray silty, clayey sand
Test No.:	UU27

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	10
Initial Height, in:	5.85	Undrained Shear Strength, psi:	7.1
Height to Diameter Ratio:	2.04	Maximum Deviator Stress, psi:	14.2
Initial Mass, grams:	1201	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	120.9	Strain at Failure, %:	9.3
Initial Moisture Content, %:	27.2		
Initial Dry Density, pcf:	95.0		
Initial Degree of Saturation:	92.5		
Initial Void Ratio:	0.81		
Measured Specific Gravity:	2.76		
Sample Type:	Tube		
Liquid Limit:	25		
Plastic Limit:	21		
Plasticity Index:	4		
% Passing #200 sieve:	29		
Soil Classification:	Silty Clayey Sand		
Group Symbol:	SC-SM		



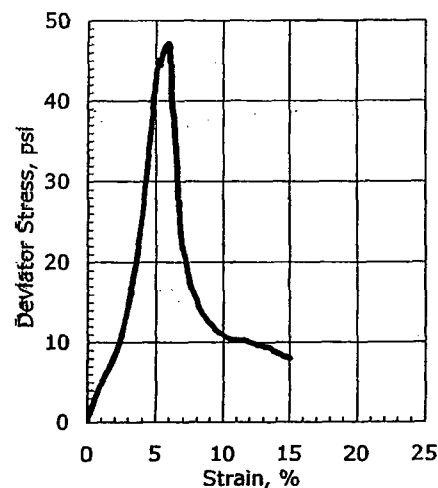
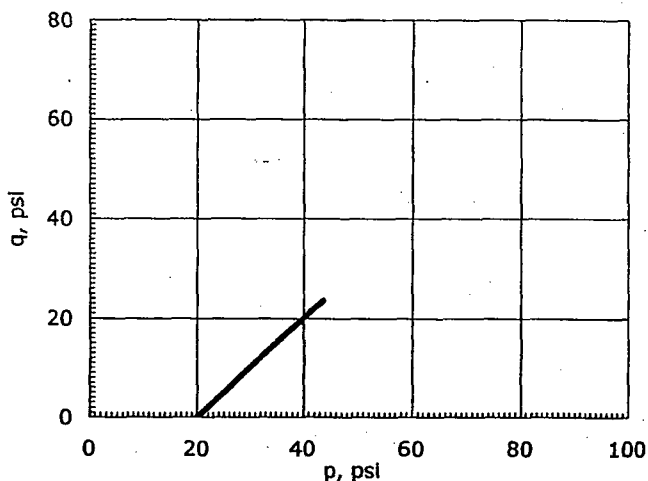
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/18/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-747
Sample ID:	S-15
Depth, ft:	58.5-60
Visual Description:	Moist, dark olive gray clay with sand
Test No.:	UU12

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



Initial Diameter, in:	2.87	Confining Stress, psi:	20
Initial Height, in:	5.75	Undrained Shear Strength, psi:	23.6
Height to Diameter Ratio:	2.00	Maximum Deviator Stress, psi:	47.2
Initial Mass, grams:	1056	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	108.1	Strain at Failure, %:	6.0
Initial Moisture Content, %:	42.3		
Initial Dry Density, pcf:	76.0		
Initial Degree of Saturation:	93.1		
Initial Void Ratio:	1.24		
Measured Specific Gravity:	2.73		
Sample Type:	Tube		
Liquid Limit:	53		
Plastic Limit:	16		
Plasticity Index:	37		
% Passing #200 sieve:	74		
Soil Classification:	Fat Clay with Sand		
Group Symbol:	CH		



Failure Sketch

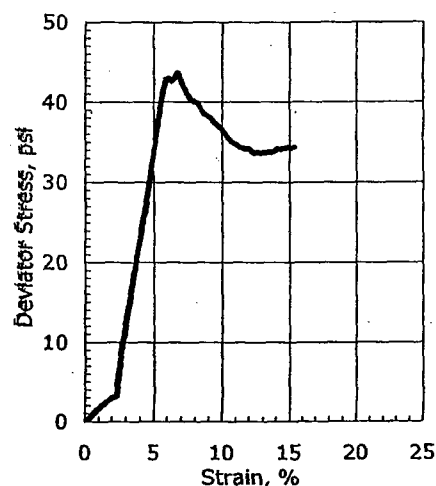
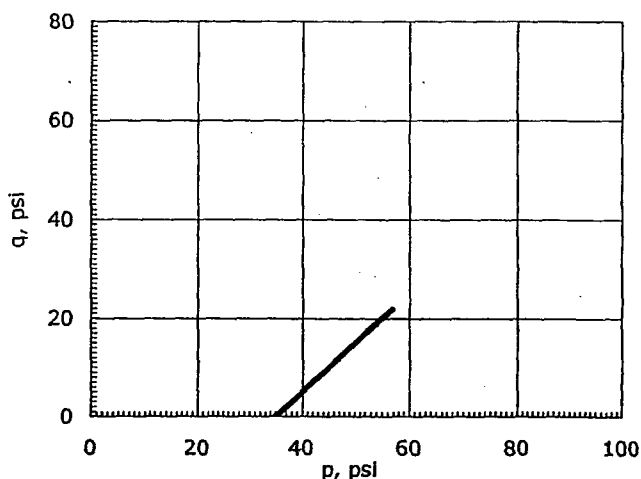
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/19/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-752
Sample ID:	S-15
Depth, ft:	58-60
Visual Description:	Moist, dark greenish gray organic clay
Test No.:	UU10

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils by ASTM D 2850-03a



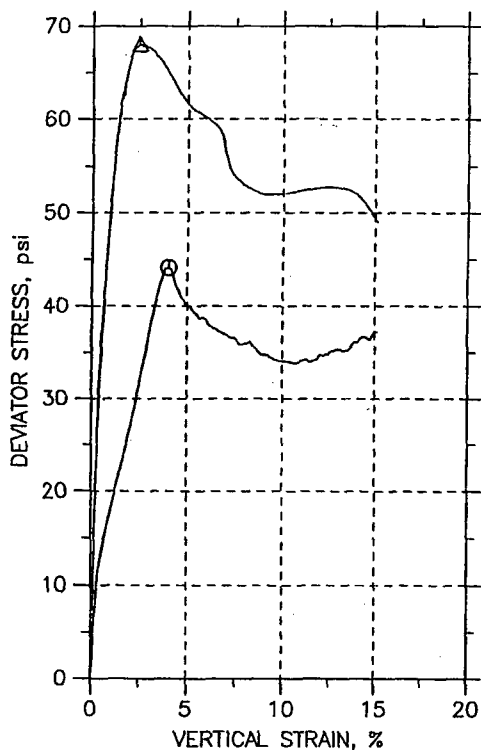
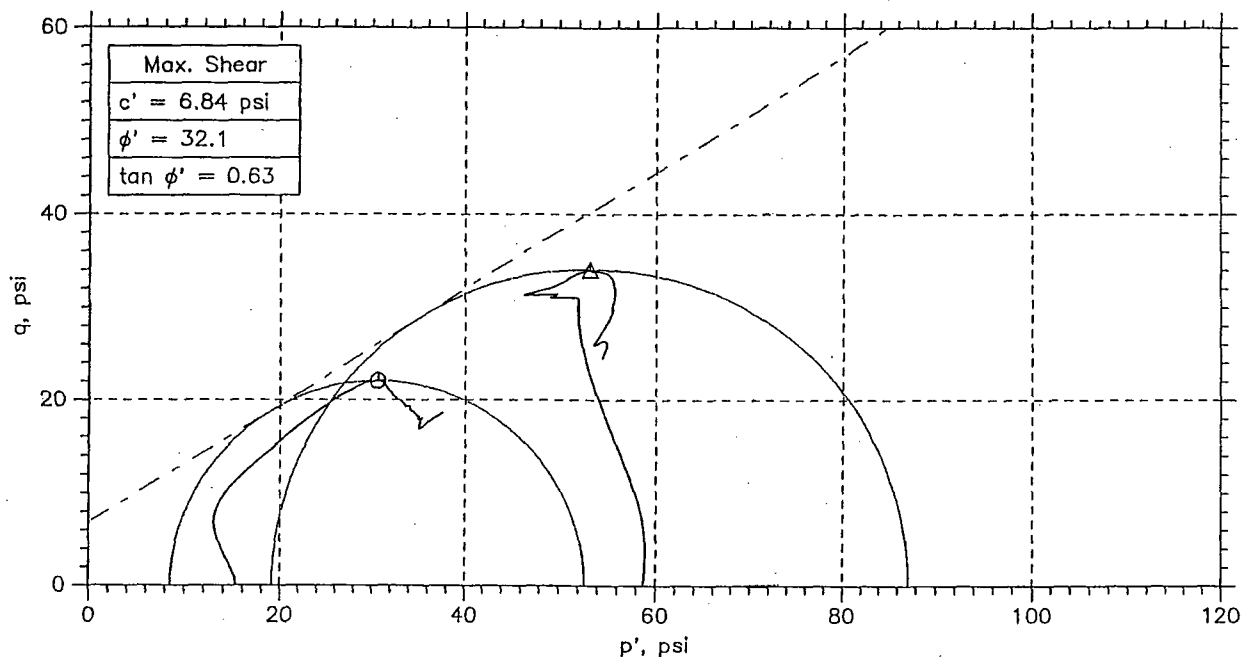
Initial Diameter, in:	2.87	Confining Stress, psi:	35
Initial Height, in:	6.15	Undrained Shear Strength, psi:	21.8
Height to Diameter Ratio:	2.14	Maximum Deviator Stress, psi:	43.7
Initial Mass, grams:	1153	Strain Rate, %/min:	1
Initial Bulk Density, pcf:	110.4	Strain at Failure, %:	6.7
Initial Moisture Content, %:	31.8		
Initial Dry Density, pcf:	83.8		
Initial Degree of Saturation:	82.2		
Initial Void Ratio:	1.08		
Measured Specific Gravity:	2.79		
Sample Type:	Tube		
Liquid Limit:	65		
Plastic Limit:	17		
Plasticity Index:	48		
% Passing #200 sieve:	98		
Soil Classification:	Organic Clay		
Group Symbol:	OH		



Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

CIU-bar TRIAXIAL COMPRESSION RESULTS

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767



Symbol	⊙	△		
Sample No.	S-14	S-14		
Test No.	CU1	CU3		
Depth	53.5-55.5	53.5-55.5		
Initial	Diameter, in	2.87	2.86	
	Height, in	6.05	5.99	
	Water Content, %	33.2	34.6	
	Dry Density, pcf	88.41	86.45	
	Saturation, %	96.2	95.7	
Before Shear	Void Ratio	0.956	1	
	Water Content, %	36.7	37.5	
	Dry Density, pcf	85.73	84.83	
	Saturation*, %	100.0	100.0	
	Void Ratio	1.02	1.04	
	Back Press., psi	99.99	57.97	
	Ver. Eff. Cons. Stress, psi	15.	60.03	
	Shear Strength, psi	22.06	34.04	
	Strain at Failure, %	4.04	2.47	
	Strain Rate, %/min	0.02	0.02	
	B-Value	0.95	0.95	
	Measured Specific Gravity	2.77	2.77	
	Liquid Limit	33	33	
	Plastic Limit	11	11	

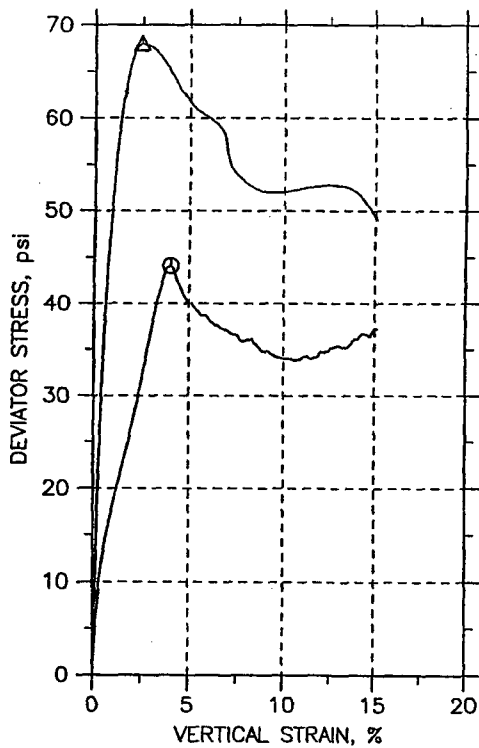
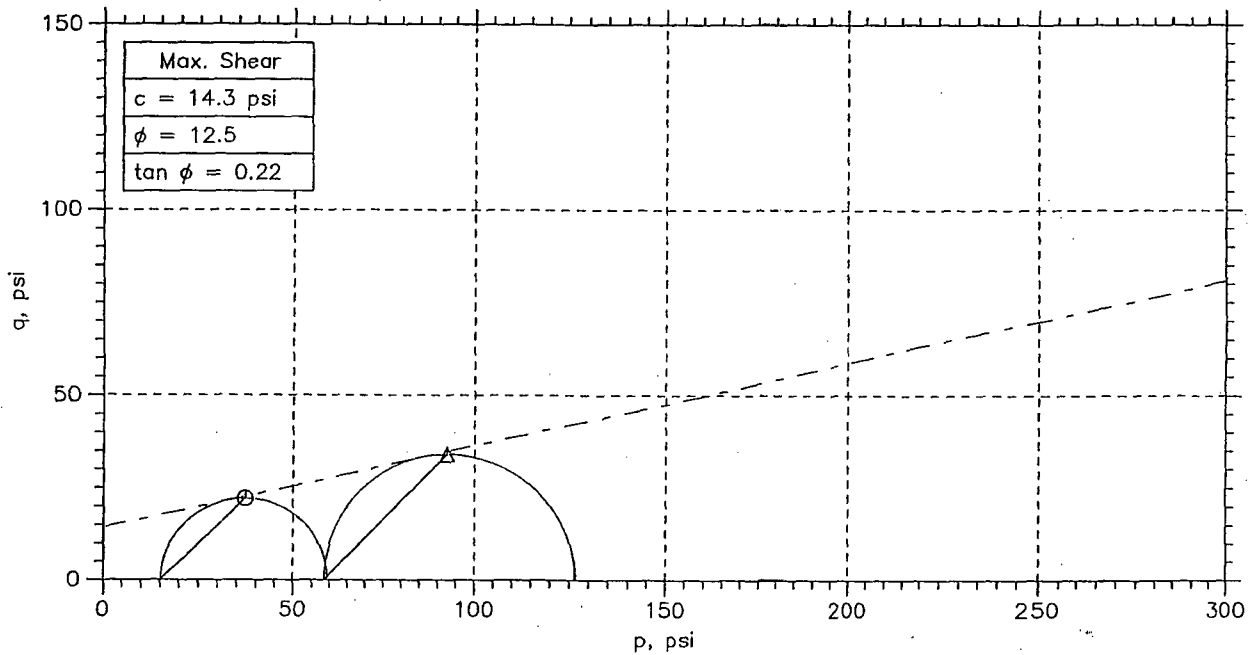
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	
	Location: Calvert County, MD	
	Project No.: GTX-6880	
	Boring No.: B-316	
	Sample Type: tube	
	Description: Moist, dark olive gray sandy clay (CL), 50% passing the #200 sieve	
Remarks: System E - t50 = 21 min, Triaxial Rev.1.0.6.318		

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Phase calculations based on start and end of test.

* Saturation is set to 100% for phase calculations.

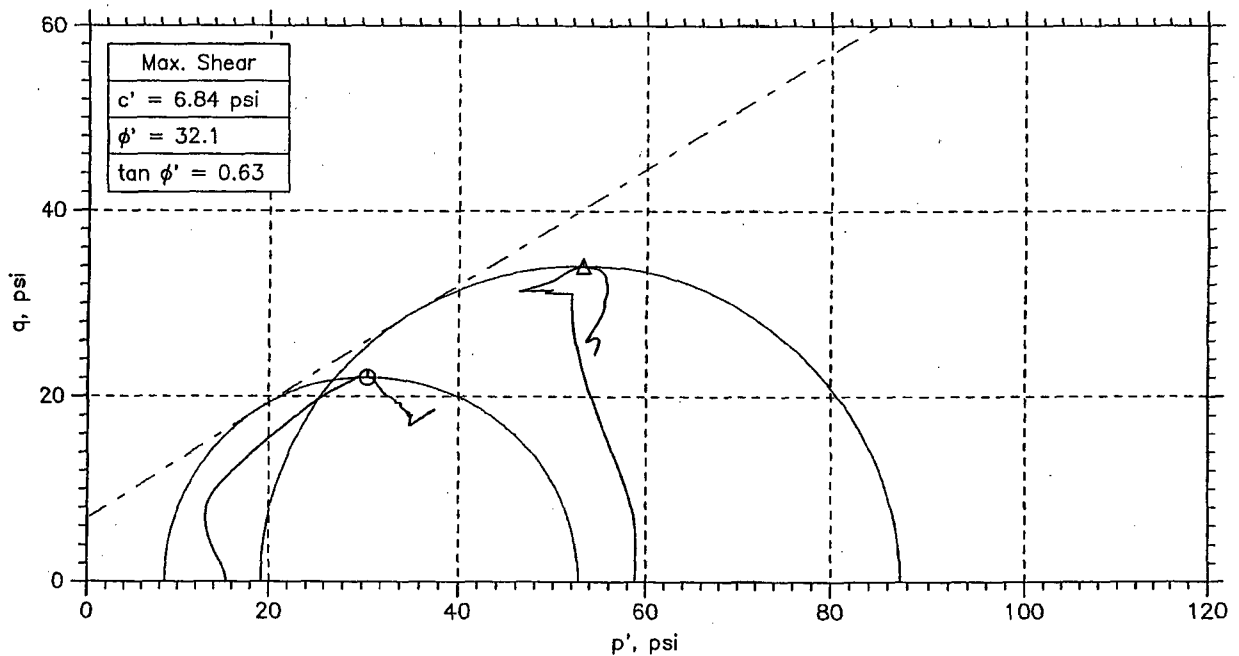
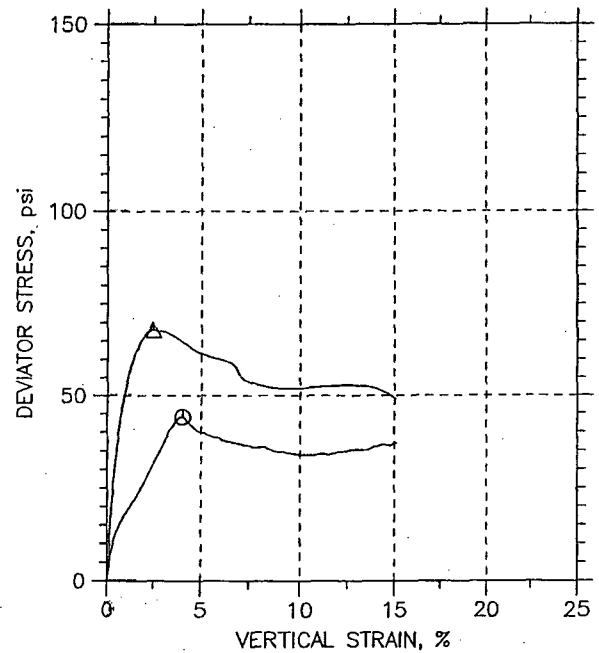
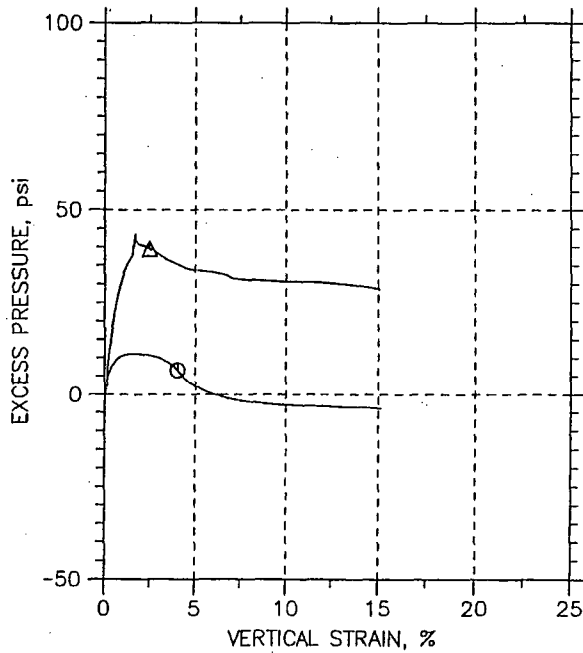
CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767



Symbol	○	Δ		
Sample No.	S-14	S-14		
Test No.	CU1	CU3		
Depth	53.5-55.5	53.5-55.5		
Initial	Diameter, in	2.87	2.86	
	Height, in	6.05	5.99	
	Water Content, %	33.2	34.6	
	Dry Density, pcf	88.41	86.45	
	Saturation, %	96.2	95.7	
Before Shear	Void Ratio	0.956	1	
	Water Content, %	36.7	37.5	
	Dry Density, pcf	85.73	84.83	
	Saturation*, %	100.0	100.0	
	Void Ratio	1.02	1.04	
	Back Press., psi	99.99	57.97	
	Ver. Eff. Cons. Stress, psi	15.	60.03	
	Shear Strength, psi	22.06	34.04	
	Strain at Failure, %	4.04	2.47	
	Strain Rate, %/min	0.02	0.02	
	B-Value	0.95	0.95	
	Measured Specific Gravity	2.77	2.77	
	Liquid Limit	33	33	
	Plastic Limit	11	11	

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP			
	Location: Calvert County, MD			
	Project No.: GTX-6880			
	Boring No.: B-316			
	Sample Type: tube			
	Description: Moist, dark olive gray sandy clay (CL), 50% passing the #200 sieve			
Remarks: System E - t50 = 21 min, Triaxial Rev.1.0.6.318				

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767

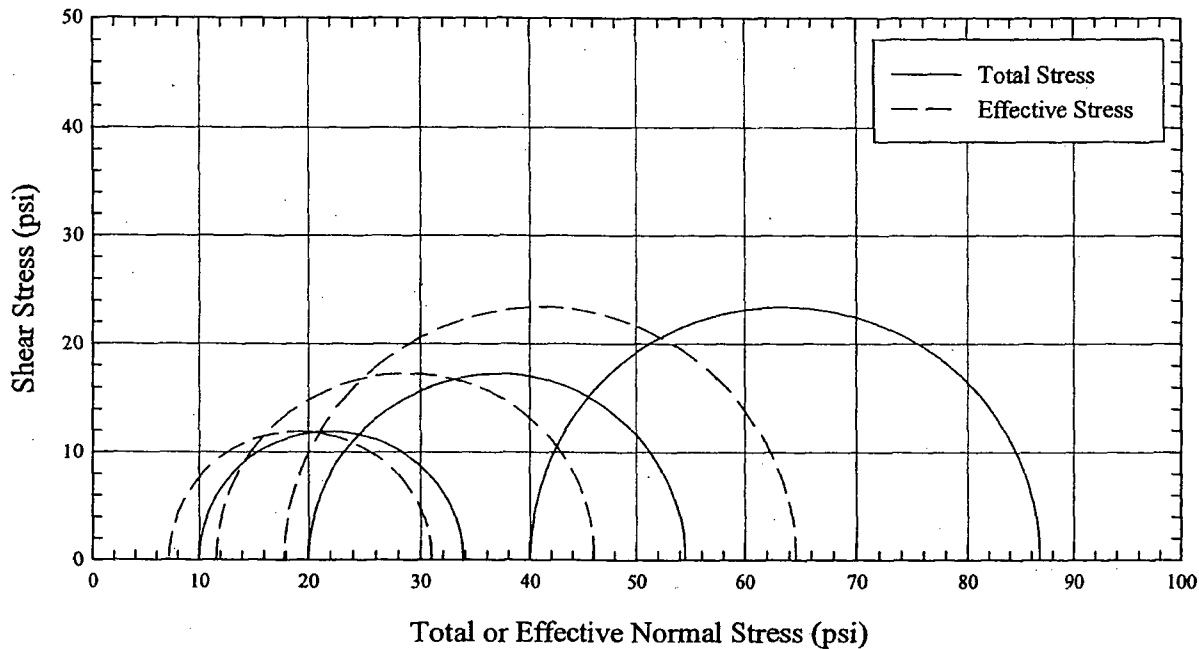


	Sample No.	Test No.	Depth	Tested By	Test Date	Checked By	Check Date	Test File
○	S-14	CU1	53.5-55.5	njh	09/18/06	jdt		6880-CU1n.dat
Δ	S-14	CU3	53.5-55.5	njh	09/18/06	jdt		6880-cu3An.dat

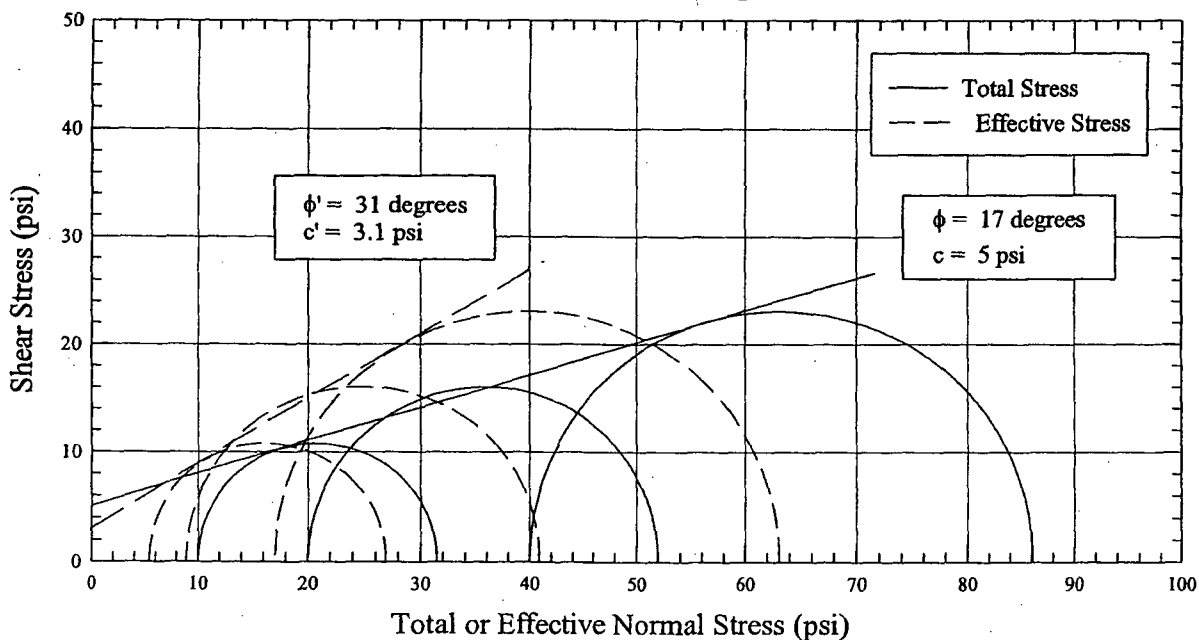
GeoTesting express a subsidiary of Geocomp Corporation			
	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-316	Sample Type: tube	
	Description: Moist, dark olive gray sandy clay (CL), 50% passing the #200 sieve		
	Remarks: System E - t50 = 21 min, Triaxial Rev.1.0.5.318		

Consolidated Undrained (CU) Triaxial Shear (ASTM D4767)

Mohr Stress Circles at Maximum Deviator Stress Criterion



Mohr Stress Circles at Maximum Principal Stress Ratio Criterion



Boring No.: B-317

Depth: 28.5-30.5 ft

SEI Contract: 06120048

Date: 10/12/06

Sample Description: LEAN CLAY (CL), trace sand - gray

Reviewed By: CJS

Specimen Type: Tube Sample

Specific Gravity: 2.75

LL: 27

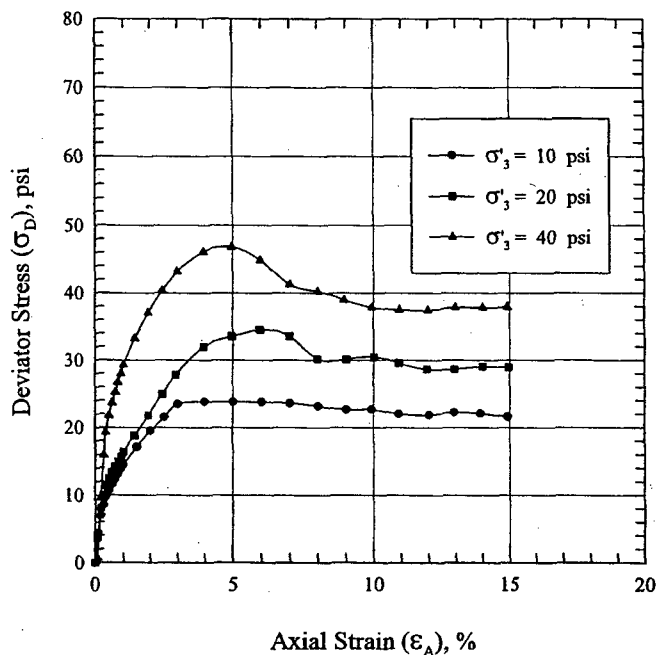
PI: 8

%<200: 97.8

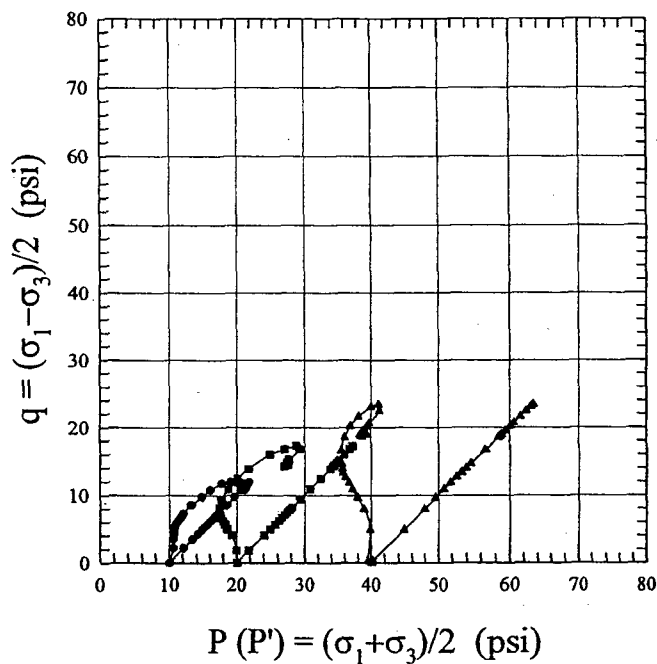


Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

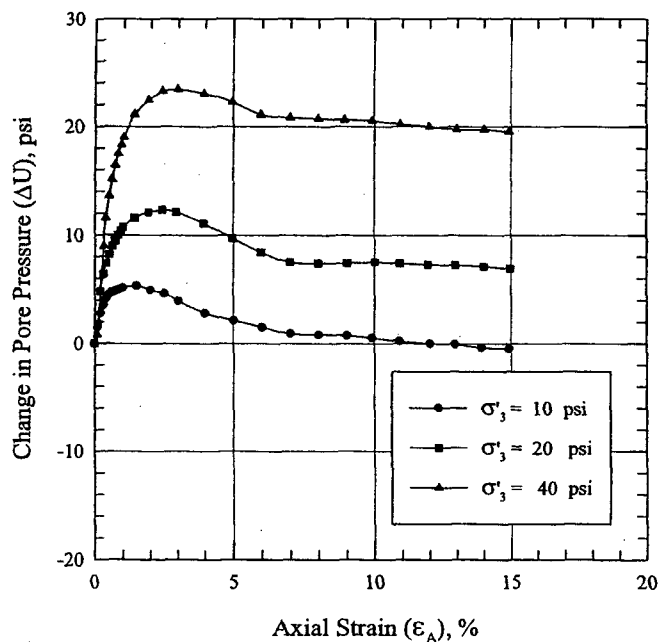
Deviator Stress vs. Axial Strain



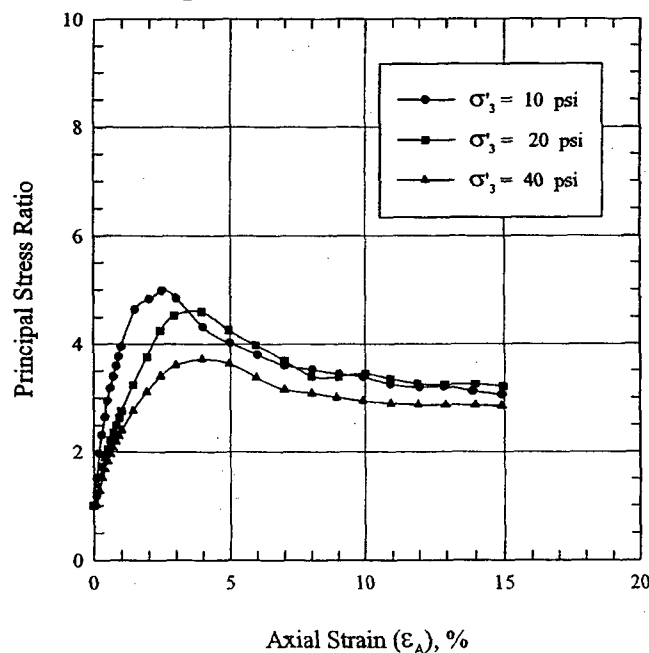
Stress Paths



Change in Pore Pressure vs. Axial Strain



Principal Stress Ratio vs. Axial Strain



Boring No.: B-317

Depth: 28.5-30.5 ft

SEI Contract: 06120048

Date: 10/12/06

Sample Description: LEAN CLAY (CL), trace sand - gray

Reviewed By: CJS

Specimen Type: Tube Sample

Specific Gravity: 2.75

LL: 27

PI: 8 %<200: 97.8



Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland



Consolidated Undrained Triaxial Compression Test

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

ASTM D4767

Schnabel Contract: 06120048.10

Boring No.: B-317

Depth: 28.5-30.5ft.

Elevation: 65.9 to 63.9

Confining Stress (psi): 10.0

Date: 10/12/2006

Reviewed by: CJS

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.897	2.88
Height (in)	5.836	5.83
Area (in ²)	6.59	6.54
Moisture (%)	33.5	
W _{solid} (lbs)	1.99	
P _{wet} (pcf)	119.1	
P _{dry} (pcf)	89.3	90.2
Void Ratio	0.92	0.90
Saturation, %	100	95

Shear Testing Conditions	
Cell Pressure (psi):	50.0
Back Pressure (psi):	40.0
Eff. Confining Stress (psi):	10.0
Final B check	0.98
t ₅₀ (min.):	5.1
Rate of Strain (%/min):	0.0232

Filter strips used? YES

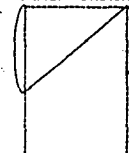
Specimen Type: Tube Sample

Soil Description: LEAN CLAY (CL), trace sand - gray

Liquid Limit: 27
Plasticity Index: 8
% finer than No. 200: 97.8
Specific Gravity: 2.75

Remarks:

Failure Sketch



Reading No.	Deviator Load (lbs)	Corrected ¹ Dev. Load (lbs.)	Axial Deformation (in.)	Axial Strain (%)	Pore Pressure (psi)	Change in Pore Press. (psi)	Corrected Area ² (in ²)	σ ₁ (psi)	σ ₃ (psi)	σ' ₁ (psi)	σ' ₃ (psi)	Deviator Stress (psi)	Principal Stress Ratio	A _{bar}	P (psi)	P' (psi)	q (psi)
Zero	0.0	0.0	0.000	0.00	40.0	0.0	6.54	10.0	10.0	10.0	10.0	0.0	1.00	0.00	10.0	10.0	0.0
1	28.4	28.3	0.006	0.10	41.5	1.5	6.54	14.3	10.0	12.8	8.5	4.3	1.51	0.35	12.2	10.7	2.2
2	46.0	45.8	0.012	0.21	42.8	2.8	6.55	17.0	10.0	14.2	7.2	7.0	1.97	0.40	13.5	10.7	3.5
3	56.2	55.9	0.017	0.29	43.5	3.5	6.56	18.5	10.0	15.0	6.5	8.5	2.31	0.41	14.3	10.8	4.3
4	64.1	63.6	0.023	0.39	44.1	4.1	6.56	19.7	10.0	15.6	5.9	9.7	2.64	0.42	14.8	10.7	4.8
5	70.7	70.1	0.029	0.50	44.5	4.5	6.57	20.7	10.0	16.2	5.5	10.7	2.94	0.42	15.3	10.8	5.3
6	76.6	75.9	0.035	0.60	44.7	4.7	6.58	21.5	10.0	16.8	5.3	11.5	3.18	0.41	15.8	11.1	5.8
7	82.6	81.8	0.041	0.70	44.8	4.8	6.58	22.4	10.0	17.6	5.2	12.4	3.39	0.39	16.2	11.4	6.2
8	87.9	86.9	0.047	0.81	44.9	4.9	6.59	23.2	10.0	18.3	5.1	13.2	3.59	0.37	16.6	11.7	6.6
9	92.1	91.0	0.052	0.89	45.0	5.0	6.60	23.8	10.0	18.8	5.0	13.8	3.76	0.36	16.9	11.9	6.9
10	96.3	95.1	0.058	1.00	45.1	5.1	6.60	24.4	10.0	19.3	4.9	14.4	3.94	0.35	17.2	12.1	7.2
11	115.0	113.2	0.087	1.49	45.3	5.3	6.64	27.1	10.0	21.8	4.7	17.1	4.63	0.31	18.5	13.2	8.5
12	132.5	130.1	0.117	2.01	44.9	4.9	6.67	29.5	10.0	24.6	5.1	19.5	4.82	0.25	19.8	14.9	9.8
13	146.7	144.2	0.146	2.51	44.6	4.6	6.70	31.5	10.0	26.9	5.4	21.5	4.98	0.21	20.8	16.2	10.8
14	160.8	158.2	0.175	3.00	43.9	3.9	6.74	33.5	10.0	29.6	6.1	23.5	4.85	0.17	21.7	17.8	11.7
15	165.1	162.3	0.233	4.00	42.8	2.8	6.81	33.8	10.0	31.0	7.2	23.8	4.31	0.12	21.9	19.1	11.9
16	166.7	163.7	0.292	5.01	42.1	2.1	6.88	33.8	10.0	31.7	7.9	23.8	4.01	0.09	21.9	19.8	11.9
17	168.6	165.3	0.350	6.01	41.5	1.5	6.95	33.8	10.0	32.3	8.5	23.8	3.80	0.06	21.9	20.4	11.9
18	169.3	165.8	0.408	7.00	40.9	0.9	7.03	33.8	10.0	32.7	9.1	23.6	3.59	0.04	21.8	20.9	11.8
19	168.3	164.6	0.467	8.02	40.8	0.8	7.11	33.2	10.0	32.4	9.2	23.2	3.52	0.03	21.6	20.8	11.6
20	166.5	162.6	0.525	9.01	40.7	0.7	7.18	32.6	10.0	31.9	9.3	22.6	3.43	0.03	21.3	20.6	11.3
21	168.4	164.3	0.578	9.92	40.5	0.5	7.26	32.6	10.0	32.1	9.5	22.6	3.38	0.02	21.3	20.8	11.3
22	165.9	161.6	0.636	10.92	40.2	0.2	7.34	32.0	10.0	31.8	9.8	22.0	3.25	0.01	21.0	20.8	11.0
23	167.0	162.4	0.700	12.01	40.0	0.0	7.43	31.9	10.0	31.9	10.0	21.9	3.19	0.00	20.9	20.9	10.9
24	171.7	166.9	0.753	12.92	39.9	-0.1	7.51	32.2	10.0	32.3	10.1	22.2	3.20	0.00	21.1	21.2	11.1
25	172.5	167.5	0.811	13.92	39.6	-0.4	7.59	32.1	10.0	32.5	10.4	22.1	3.12	-0.02	21.0	21.4	11.0
26	171.2	166.0	0.870	14.93	39.5	-0.5	7.68	31.6	10.0	32.1	10.5	21.6	3.06	-0.02	20.8	21.3	10.8

Notes: Deviator load corrected for membrane and filter cage (if applicable) effects.

Right Cylinder Correction Method

CU 8/2006 R



Consolidated Undrained Triaxial Compression Test

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

ASTM D4767

Schnabel Contract: 06120048

Boring No.: B-317

Depth: 28.5-30.5ft.

Elevation: 65.9 to 63.9

Confining Stress (psi): 20.0

Date: 10/12/2006

Reviewed by: CJS

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.890	2.87
Height (in)	5.833	5.77
Area (in ²)	6.56	6.48
Moisture (%)	32.0	
W _{solids} (lbs)	2.02	
P _{wet} (pcf)	120.5	
P _{dry} (pcf)	91.3	93.5
Void Ratio	0.88	0.84
Saturation, %	100	96

Shear Testing Conditions	
Cell Pressure (psi):	50.0
Back Pressure (psi):	30.0
Eff. Confining Stress (psi):	20.0
Final B check	1.00
t ₉₀ (min.):	13.8
Rate of Strain (%/min):	0.0119

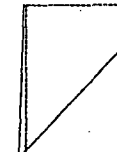
Filter strips used? YES

Specimen Type: Tube Sample

Soil Description: LEAN CLAY (CL), trace sand - gray

Liquid Limit: 27
Plasticity Index: 8
% finer than No. 200: 97.8
Specific Gravity: 2.75

Failure Sketch



Remarks:

Reading No.	Deviator Load (lbs)	Corrected ¹ Dev. Load (lbs.)	Axial Deformation (in.)	Axial Strain (%)	Pore Pressure (psi)	Change in Pore Press. (psi)	Corrected Area ² (in ²)	σ ₁ (psi)	σ ₃ (psi)	σ' ₁ (psi)	σ' ₃ (psi)	Deviator Stress (psi)	Principal Stress Ratio	A _{bar}	P (psi)	P' (psi)	q (psi)
Zero	0.0	0.0	0.000	0.00	30.0	0.0	6.48	20.0	20.0	20.0	20.0	0.0	1.00	0.00	20.0	20.0	0.0
1	23.8	23.7	0.006	0.10	31.8	1.8	6.49	23.6	20.0	21.8	18.2	3.6	1.20	0.49	21.8	20.0	1.8
2	53.3	53.1	0.012	0.21	34.8	4.8	6.50	28.2	20.0	23.4	15.2	8.2	1.54	0.59	24.1	19.3	4.1
3	65.4	65.0	0.018	0.31	36.4	6.4	6.50	30.0	20.0	23.6	13.6	10.0	1.74	0.64	25.0	18.6	5.0
4	74.5	74.0	0.023	0.40	37.4	7.4	6.51	31.4	20.0	24.0	12.6	11.4	1.90	0.65	25.7	18.3	5.7
5	81.8	81.2	0.029	0.50	38.2	8.2	6.52	32.5	20.0	24.3	11.8	12.5	2.06	0.66	26.2	18.0	6.2
6	87.8	87.1	0.035	0.61	39.0	9.0	6.52	33.4	20.0	24.4	11.0	13.4	2.21	0.67	26.7	17.7	6.7
7	93.4	92.6	0.041	0.71	39.5	9.5	6.53	34.2	20.0	24.7	10.5	14.2	2.35	0.67	27.1	17.6	7.1
8	98.5	97.5	0.047	0.81	40.0	10.0	6.54	34.9	20.0	24.9	10.0	14.9	2.49	0.67	27.5	17.5	7.5
9	103.4	102.3	0.053	0.92	40.4	10.4	6.54	35.6	20.0	25.2	9.6	15.6	2.63	0.67	27.8	17.4	7.8
10	108.1	106.9	0.058	1.01	40.7	10.7	6.55	36.3	20.0	25.6	9.3	16.3	2.76	0.66	28.2	17.5	8.2
11	125.2	123.5	0.082	1.42	41.6	11.6	6.58	38.8	20.0	27.2	8.4	18.8	3.24	0.62	29.4	17.8	9.4
12	146.3	144.0	0.111	1.92	42.1	12.1	6.61	41.8	20.0	29.7	7.9	21.8	3.76	0.56	30.9	18.8	10.9
13	168.3	165.8	0.140	2.43	42.3	12.3	6.64	45.0	20.0	32.7	7.7	25.0	4.24	0.49	32.5	20.2	12.5
14	188.3	185.7	0.169	2.93	42.1	12.1	6.68	47.8	20.0	35.7	7.9	27.8	4.52	0.44	33.9	21.8	13.9
15	218.6	215.8	0.228	3.95	41.1	11.1	6.75	52.0	20.0	40.9	8.9	32.0	4.59	0.35	36.0	24.9	16.0
16	231.7	228.7	0.266	4.96	39.7	9.7	6.82	53.5	20.0	43.8	10.3	33.5	4.25	0.29	36.8	27.1	16.8
17	241.2	238.0	0.344	5.96	38.4	8.4	6.89	54.5	20.0	46.1	11.6	35.5	3.98	0.24	37.3	28.9	17.3
18	237.3	233.8	0.403	6.98	37.5	7.5	6.97	53.8	20.0	46.1	12.5	33.6	3.68	0.22	36.8	29.3	16.8
19	216.5	212.8	0.461	7.99	37.4	7.4	7.05	50.2	20.0	42.8	12.6	30.2	3.40	0.24	35.1	27.7	15.1
20	218.4	214.5	0.520	9.01	37.4	7.4	7.12	50.1	20.0	42.7	12.6	30.1	3.39	0.25	35.1	27.7	15.1
21	223.6	219.5	0.578	10.02	37.5	7.5	7.20	50.5	20.0	43.0	12.5	30.5	3.44	0.25	35.2	27.7	15.2
22	219.4	215.1	0.630	10.92	37.4	7.4	7.28	49.8	20.0	42.2	12.6	29.6	3.35	0.25	34.8	27.4	14.8
23	215.6	211.1	0.689	11.94	37.3	7.3	7.36	48.7	20.0	41.4	12.7	28.7	3.26	0.25	34.3	27.0	14.3
24	218.1	213.3	0.747	12.94	37.2	7.2	7.45	48.6	20.0	41.4	12.8	28.6	3.24	0.25	34.3	27.1	14.3
25	223.9	218.9	0.808	14.00	37.1	7.1	7.54	49.0	20.0	41.9	12.9	29.0	3.25	0.24	34.5	27.4	14.5
26	225.8	220.6	0.864	14.97	36.9	6.9	7.62	48.9	20.0	42.0	13.1	28.9	3.21	0.24	34.5	27.6	14.5

Notes: 1. Deviator load corrected for membrane and filler cage (if applicable) effects.
2. Right Cylinder Correction Method



Consolidated Undrained Triaxial Compression Test

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

ASTM D4767

Schnabel Contract: 06120048

Boring No.: B-317

Depth: 28.5-30.5ft.

Elevation: 65.9 to 63.9

Confining Stress (psi): 40.0

Date: 10/12/2006

Reviewed by: CJS

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.891	2.86
Height (in)	5.835	5.75
Area (in ²)	6.57	6.41
Moisture (%)	31.3	
W _{solids} (lbs)	2.05	
ρ_{wet} (pcf)	121.2	
ρ_{dry} (pcf)	92.3	95.9
Void Ratio	0.86	0.79
Saturation, %	100	96

Shear Testing Conditions	
Cell Pressure (psi):	65.0
Back Pressure (psi):	25.0
Eff. Confining Stress (psi):	40.0
Final B check	0.98
t_{50} (min.):	10.9
Rate of Strain (%/min):	0.0232

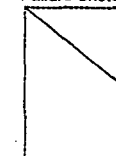
Filter strips used? YES

Specimen Type: Tube Sample

Soil Description: LEAN CLAY (CL), trace sand - gray

Liquid Limit: 27
Plasticity Index: 8
% finer than No. 200: 97.8
Specific Gravity: 2.75

Failure Sketch



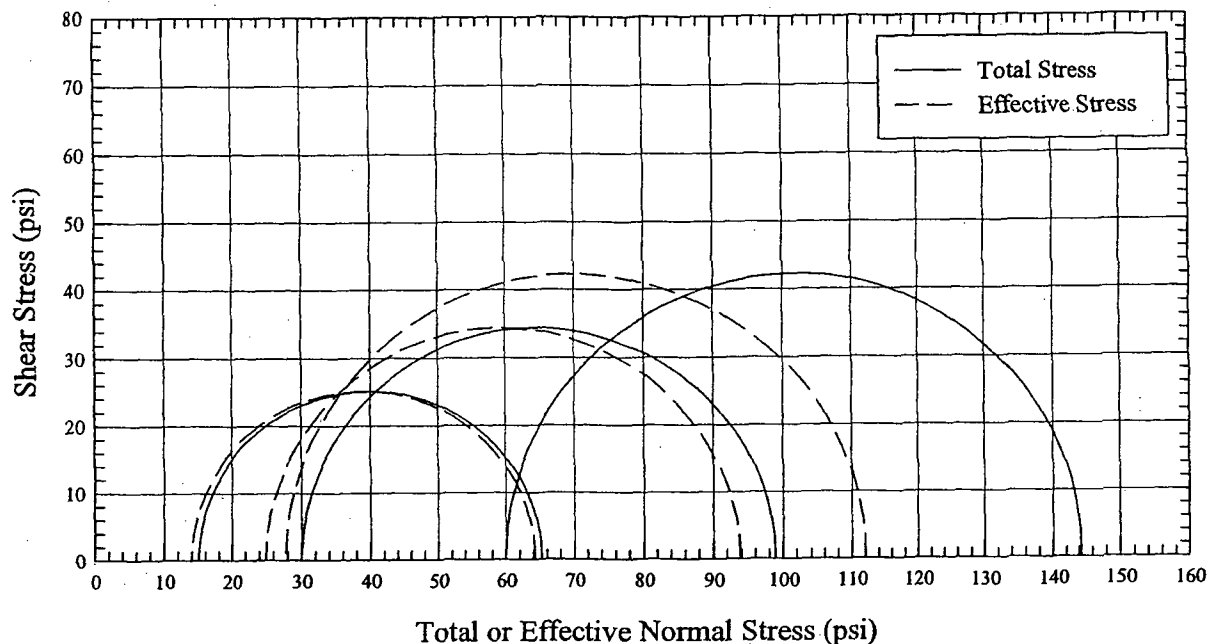
Remarks:

Reading No.	Deviator Load (lbs)	Corrected ¹ Dev. Load (lbs.)	Axial Deformation (in.)	Axial Strain (%)	Pore Pressure (psi)	Change in Pore Press. (psi)	Corrected Area ² (in ²)	σ_1 (psi)	σ_3 (psi)	σ'_1 (psi)	σ'_3 (psi)	Deviator Stress (psi)	Principal Stress Ratio	A _{bar}	P (psi)	P' (psi)	q (psi)
Zero	0.0	0.0	0.000	0.00	25.0	0.0	6.41	40.0	40.0	40.0	40.0	0.0	1.00	0.00	40.0	40.0	0.0
1	4.2	4.1	0.006	0.10	25.8	0.8	6.42	40.6	40.0	39.8	39.2	0.6	1.02	1.26	40.3	39.5	0.3
2	62.3	62.1	0.012	0.21	29.9	4.9	6.43	49.7	40.0	44.8	35.1	9.7	1.28	0.51	44.8	39.9	4.8
3	102.5	102.1	0.018	0.31	34.0	9.0	6.43	55.9	40.0	46.9	31.0	15.9	1.51	0.57	47.9	38.9	7.9
4	124.5	124.0	0.023	0.40	36.6	11.6	6.44	59.3	40.0	47.7	28.4	19.3	1.68	0.60	49.6	38.0	9.6
5	140.8	140.2	0.029	0.50	38.6	13.6	6.44	61.8	40.0	48.2	26.4	21.8	1.82	0.63	50.9	37.3	10.9
6	153.3	152.6	0.035	0.61	40.1	15.1	6.45	63.6	40.0	48.5	24.9	23.6	1.95	0.64	51.8	36.7	11.8
7	163.9	163.1	0.041	0.71	41.4	16.4	6.46	65.2	40.0	48.8	23.6	25.2	2.07	0.65	52.6	36.2	12.6
8	173.4	172.4	0.047	0.82	42.5	17.5	6.47	66.7	40.0	49.2	22.5	26.7	2.19	0.66	53.3	35.8	13.3
9	182.1	181.0	0.053	0.92	43.3	18.3	6.47	68.0	40.0	49.7	21.7	28.0	2.29	0.65	54.0	35.7	14.0
10	190.7	189.5	0.058	1.01	44.0	19.0	6.48	69.3	40.0	50.3	21.0	29.3	2.39	0.65	54.6	35.6	14.6
11	217.6	215.9	0.082	1.43	46.1	21.1	6.51	73.2	40.0	52.1	18.9	33.2	2.76	0.64	56.6	35.5	16.6
12	244.6	242.3	0.111	1.93	47.4	22.4	6.54	77.1	40.0	54.7	17.6	37.1	3.11	0.60	58.5	36.1	18.5
13	267.4	264.9	0.140	2.43	48.2	23.2	6.57	80.3	40.0	57.1	16.8	40.3	3.40	0.58	60.2	37.0	20.2
14	287.8	285.2	0.172	2.99	48.4	23.4	6.61	83.1	40.0	59.7	16.6	43.1	3.60	0.54	61.6	38.2	21.6
15	310.8	308.0	0.228	3.96	48.0	23.0	6.68	86.1	40.0	63.1	17.0	46.1		0.50	63.1	40.1	23.1
16	318.7	315.7	0.286	4.97	47.2	22.2	6.75	88.8	40.0	64.6	17.8		3.63	0.47	63.4	41.2	23.4
17	309.0	305.8	0.344	5.98	46.1	21.1	6.82	84.8	40.0	63.7	18.9	44.8	3.37	0.47	62.4	41.3	22.4
18	288.0	284.5	0.403	7.00	45.8	20.8	6.90	81.3	40.0	60.5	19.2	41.3	3.15	0.50	60.6	39.8	20.6
19	284.2	280.5	0.461	8.01	45.7	20.7	6.97	80.2	40.0	59.5	19.3	40.2	3.09	0.51	60.1	39.4	20.1
20	278.1	274.2	0.514	8.93	45.8	20.6	7.04	78.9	40.0	58.3	19.4	38.9	3.01	0.53	59.5	38.9	19.5
21	273.6	269.5	0.572	9.94	45.5	20.5	7.12	77.9	40.0	57.4	19.5	37.9	2.94	0.54	58.9	38.4	18.9
22	274.2	269.9	0.630	10.95	45.2	20.2	7.20	77.5	40.0	57.3	19.8	37.5	2.89	0.54	58.7	38.5	18.7
23	277.2	272.7	0.689	11.98	45.0	20.0	7.28	77.4	40.0	57.4	20.0	37.4	2.87	0.53	58.7	38.7	18.7
24	283.6	278.9	0.747	12.98	44.7	19.7	7.37	77.8	40.0	58.1	20.3	37.8	2.86	0.52	58.9	39.2	18.9
25	287.0	282.0	0.806	14.01	44.7	19.7	7.46	77.8	40.0	58.1	20.3	37.8	2.86	0.52	58.9	39.2	18.9
26	290.8	285.6	0.859	14.93	44.5	19.5	7.54	77.9	40.0	58.4	20.5	37.9	2.85	0.51	58.9	39.4	18.9

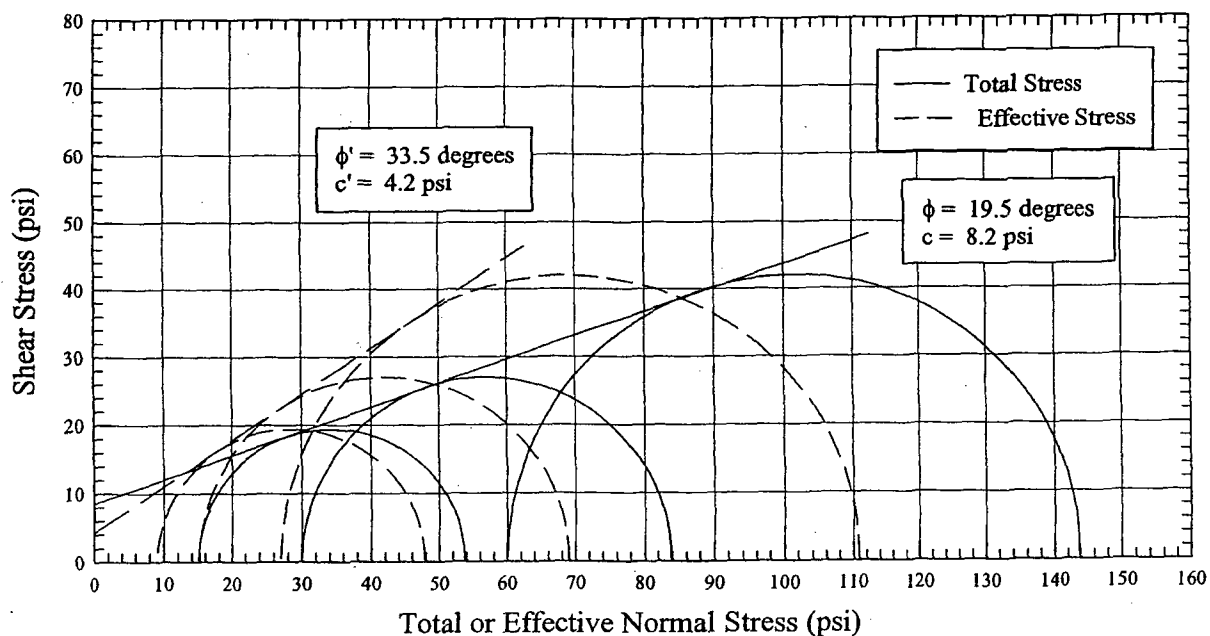
Notes: Deviator load corrected for membrane and filter cage (if applicable) effects.
Right Cylinder Correction Method

Consolidated Undrained (CU) Triaxial Shear (ASTM D4767)

Mohr Stress Circles at Maximum Deviator Stress Criterion



Mohr Stress Circles at Maximum Principal Stress Ratio Criterion



Boring No.: B-317

Depth: 48.5-50.5 ft

SEI Contract: 06120048

Date: 10/12/06

Sample Description: Sandy LEAN CLAY (CL) - gray

Reviewed By: CJS

Specimen Type: Tube Sample

Specific Gravity: 2.70

LL: 35

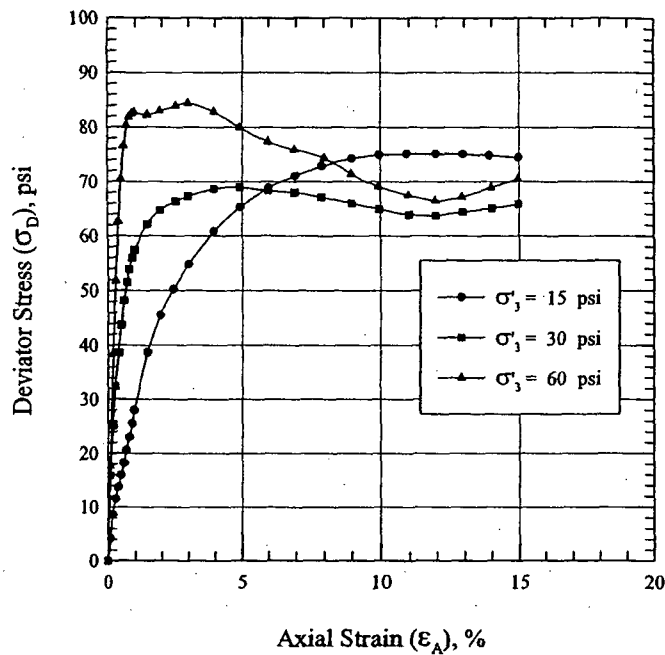
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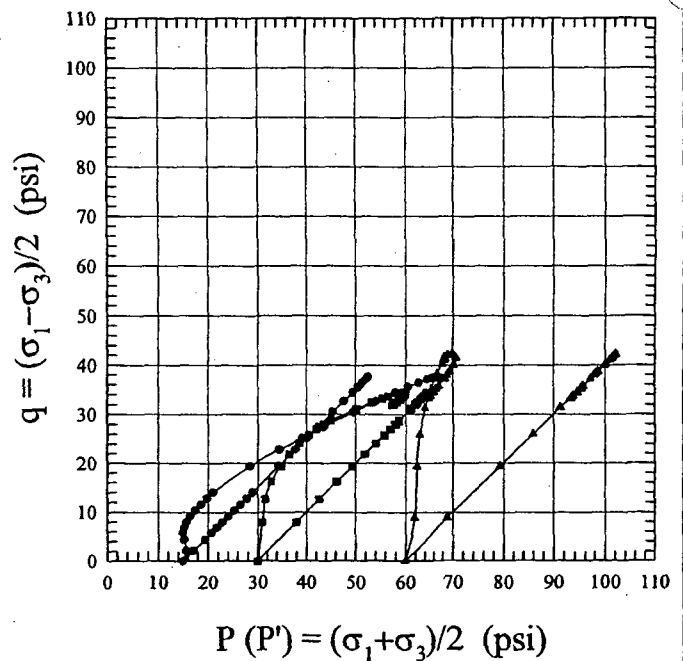


Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

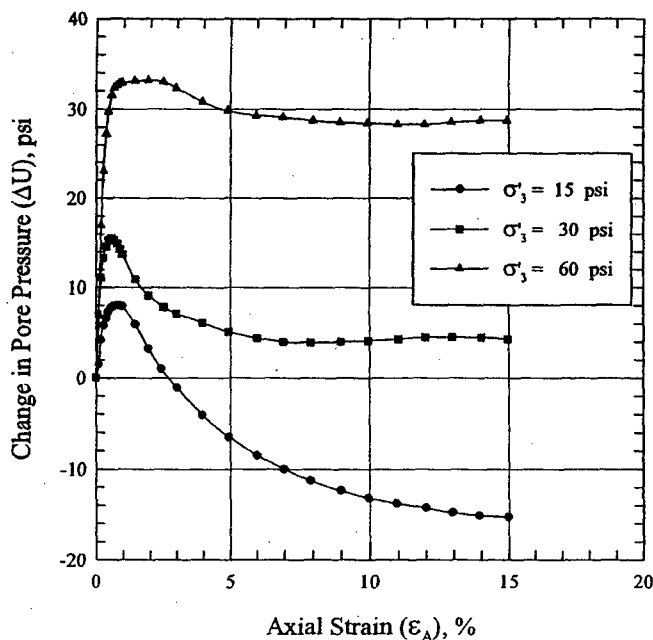
Deviator Stress vs. Axial Strain



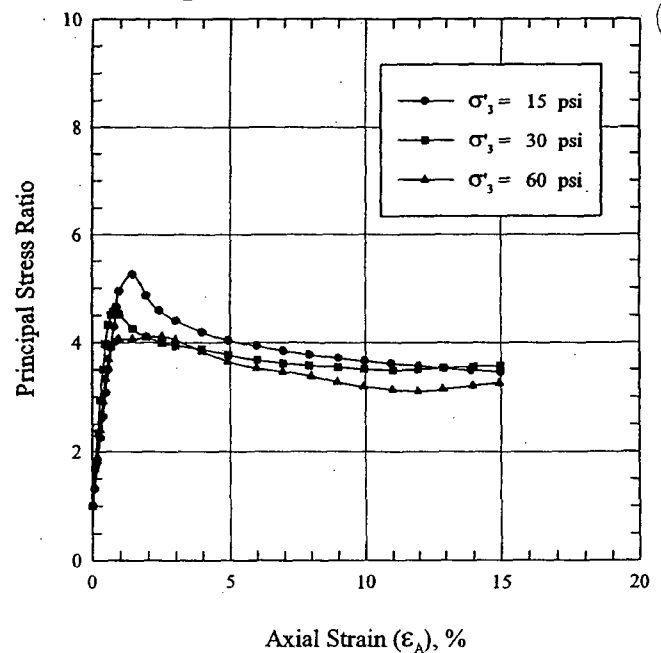
Stress Paths



Change in Pore Pressure vs. Axial Strain



Principal Stress Ratio vs. Axial Strain



Boring No.: B-317

Depth: 48.5-50.5 ft

SEI Contract: 06120048

Date: 10/12/06

Sample Description: Sandy LEAN CLAY (CL) - gray

Reviewed By: CJS

Specimen Type: Tube Sample

Specific Gravity: 2.70

LL: 35

PI: 18

%<200: 69.8



Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland



Consolidated Undrained Triaxial Compression Test

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

ASTM D4767

Schnabel Contract: 06120048

Boring No.: B-317

Depth: 48.5-50.5ft.

Elevation: 45.9 to 43.9

Confining Stress (psi): 15.0

Date: 10/12/2006

Reviewed by: CJS

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.891	2.88
Height (in)	5.823	5.80
Area (in ²)	6.57	6.53
Moisture (%)	24.1	
W _{solids} (lbs)	2.20	
P _{wet} (pcf)	123.6	
P _{dry} (pcf)	99.6	100.5
Void Ratio	0.69	0.68
Saturation, %	94	95

Shear Testing Conditions	
Cell Pressure (psi):	50.0
Back Pressure (psi):	35.0
Eff. Confining Stress (psi):	15.0
Final B check	0.96
t ₅₀ (min.):	0.4
Rate of Strain (%/min):	0.125

Filter strips used? YES

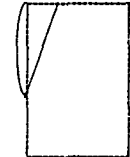
Specimen Type: Tube Sample

Soil Description: Sandy LEAN CLAY (CL) - gray

Liquid Limit: 35
Plasticity Index: 18
% finer than No. 200: 69.8
Specific Gravity: 2.70

Remarks:

Failure Sketch



Reading No.	Deviator Load (lbs)	Corrected ¹ Dev. Load (lbs.)	Axial Deformation (in.)	Axial Strain (%)	Pore Pressure (psi)	Change in Pore Press. (psi)	Corrected Area ² (in ²)	σ ₁ (psi)	σ ₃ (psi)	σ' ₁ (psi)	σ' ₃ (psi)	Deviator Stress (psi)	Principal Stress Ratio	A _{bar}	P (psi)	P' (psi)	q (psi)
Zero	0.0	0.0	0.000	0.00	35.0	0.0	6.53	15.0	15.0	15.0	15.0	0.0	1.00	0.00	15.0	15.0	0.0
1	27.2	27.1	0.006	0.10	36.5	1.5	6.54	18.1	15.0	17.6	13.5	4.1	1.31	0.36	17.1	15.6	2.1
2	57.1	56.9	0.011	0.19	39.2	4.2	6.54	23.7	15.0	19.5	10.8	8.7	1.80	0.48	19.3	15.1	4.3
3	75.5	75.2	0.017	0.29	40.8	5.8	6.55	26.5	15.0	20.7	9.2	11.5	2.25	0.51	20.7	14.9	5.7
4	90.1	89.6	0.023	0.40	41.6	6.6	6.56	28.7	15.0	22.1	8.4	13.7	2.63	0.48	21.8	15.2	6.8
5	104.9	104.3	0.028	0.48	42.3	7.3	6.56	30.9	15.0	23.6	7.7	15.9	3.06	0.46	22.9	15.6	7.9
6	120.1	119.4	0.034	0.59	42.7	7.7	6.57	33.2	15.0	25.5	7.3	18.2	3.49	0.42	24.1	16.4	9.1
7	135.9	135.1	0.039	0.67	42.9	7.9	6.58	35.5	15.0	27.6	7.1	20.5	3.89	0.38	25.3	17.4	10.3
8	152.3	151.4	0.045	0.78	43.0	8.0	6.58	38.0	15.0	30.0	7.0	23.0	4.28	0.35	26.5	18.5	11.5
9	169.2	168.2	0.051	0.88	43.0	8.0	6.59	40.5	15.0	32.5	7.0	25.5	4.65	0.31	27.8	19.8	12.8
10	185.6	184.4	0.056	0.97	42.9	7.9	6.60	43.0	15.0	35.1	7.1	28.0	4.94	0.28	29.0	21.1	14.0
11	258.1	256.4	0.084	1.45	40.9	5.9	6.63	53.7	15.0	47.8	9.1	38.7	5.25	0.15	34.3	28.4	19.3
12	305.2	302.9	0.112	1.93	38.2	3.2	6.66	60.5	15.0	57.3	11.8	45.5	4.85	0.07	37.7	34.5	22.7
13	338.6	336.1	0.140	2.41	36.0	1.0	6.69	65.2	15.0	64.2	14.0	50.2	4.59	0.02	40.1	39.1	25.1
14	371.2	368.6	0.174	3.00	33.9	-1.1	6.73	69.7	15.0	70.8	16.1	54.7	4.40	-0.02	42.4	43.5	27.4
15	416.4	413.6	0.230	3.97	30.9	-4.1	6.80	75.8	15.0	79.9	19.1	60.8	4.18	-0.07	45.4	49.5	30.4
16	451.4	448.4	0.286	4.93	28.5	-8.5	6.87	80.3	15.0	86.8	21.5	65.3	4.04	-0.10	47.6	54.1	32.6
17	481.5	478.2	0.348	6.00	26.5	-8.5	6.95	83.8	15.0	92.3	23.5	68.8	3.93	-0.12	49.4	57.9	34.4
18	502.1	498.6	0.404	6.97	25.0	-10.0	7.02	86.0	15.0	96.0	25.0	71.0	3.84	-0.14	50.5	60.5	35.5
19	520.2	516.5	0.460	7.93	23.7	-11.3	7.09	87.8	15.0	99.1	26.3	72.8	3.77	-0.16	51.4	62.7	36.4
20	536.7	532.8	0.522	9.00	22.6	-12.4	7.18	89.2	15.0	101.6	27.4	74.2	3.71	-0.17	52.1	64.5	37.1
21	547.3	543.2	0.578	9.97	21.8	-13.2	7.26	89.9	15.0	103.1	28.2	74.9	3.65	-0.18	52.4	65.6	37.4
22	554.9	550.6	0.634	10.93	21.2	-13.8	7.33	90.1	15.0	103.9	28.8	75.1	3.61	-0.18	52.5	66.3	37.5
23	561.7	557.1	0.695	11.99	20.7	-14.3	7.42	90.1	15.0	104.4	29.3	75.1	3.56	-0.19	52.5	66.8	37.5
24	567.8	563.0	0.751	12.95	20.2	-14.8	7.50	90.0	15.0	104.8	29.8	75.0	3.52	-0.20	52.5	67.3	37.5
25	572.5	567.5	0.807	13.92	19.9	-15.1	7.59	89.8	15.0	104.9	30.1	74.8	3.48	-0.20	52.4	67.5	37.4
26	576.7	571.5	0.869	14.99	19.7	-15.3	7.68	89.4	15.0	104.7	30.3	74.4	3.45	-0.21	52.2	67.5	37.2

Notes: 1. Deviator load corrected for membrane and filter cage (if applicable) effects.
2. Right Cylinder Correction Method



Consolidated Undrained Triaxial Compression Test

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

ASTM D4767

Schnabel Contract: 06120048

Boring No.: B-317

Depth: 48.5-50.5ft.

Elevation: 45.9 to 43.9

Confining Stress (psi): 30.0

Date: 10/12/2006

Reviewed by: CJS

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.885	2.87
Height (in)	5.826	5.81
Area (in ²)	6.54	6.48
Moisture (%)	24.8	
W _{solids} (lbs)	2.18	
P _{wet} (pcf)	123.7	
P _{dry} (pcf)	99.1	100.4
Void Ratio	0.70	0.68
Saturation, %	96	99

Shear Testing Conditions	
Cell Pressure (psi)	65.0
Back Pressure (psi)	35.0
Eff. Confining Stress (psi)	30.0
Final B check	0.98
t ₉₀ (min.)	0.8
Rate of Strain (%/min)	0.125

Filter strips used? YES

Specimen Type: Tube Sample

Soil Description: Sandy LEAN CLAY (CL) - gray

Liquid Limit: 35

Plasticity Index: 18

% finer than No. 200: 69.8

Specific Gravity: 2.70

Remarks:

Failure Sketch



Reading No.	Deviator Load (lbs)	Corrected ¹ Dev. Load (lbs.)	Axial Deformation (in.)	Axial Strain (%)	Pore Pressure (psi)	Change in Pore Press. (psi)	Corrected Area ² (in ²)	σ ₁ (psi)	σ ₃ (psi)	σ' ₁ (psi)	σ' ₃ (psi)	Deviator Stress (psi)	Principal Stress Ratio	A bar	P (psi)	P' (psi)	q (psi)
Zero	0.0	0.0	0.000	0.00	35.0	0.0	6.48	30.0	30.0	30.0	30.0	0.0	1.00	0.00	30.0	30.0	0.0
1	103.0	103.0	0.006	0.10	42.0	7.0	6.48	45.9	30.0	38.9	23.0	15.9	1.89	0.44	37.9	30.9	7.9
2	164.0	164.0	0.012	0.21	46.1	11.1	6.49	55.3	30.0	44.2	18.9	25.3	2.34	0.44	42.6	31.5	12.6
3	210.4	210.3	0.017	0.29	48.3	13.3	6.50	62.4	30.0	49.1	16.7	32.4	2.94	0.41	46.2	32.9	16.2
4	251.4	251.3	0.023	0.40	49.6	14.6	6.50	68.6	30.0	54.0	15.4	38.6	3.51	0.38	49.3	34.7	19.3
5	284.8	284.7	0.028	0.48	50.3	15.3	6.51	73.7	30.0	58.4	14.7	43.7	3.98	0.35	51.9	36.6	21.9
6	313.9	313.8	0.034	0.59	50.5	15.5	6.52	78.2	30.0	62.7	14.5	48.2	4.32	0.32	54.1	38.6	24.1
7	336.0	335.9	0.040	0.69	50.3	15.3	6.52	81.5	30.0	66.2	14.7	51.5	4.50	0.30	55.7	40.4	25.7
8	351.9	351.7	0.045	0.78	49.9	14.9	6.53	83.9	30.0	69.0	15.1	53.9	4.57	0.28	56.9	42.0	26.9
9	365.7	365.5	0.051	0.88	49.3	14.3	6.53	85.9	30.0	71.6	15.7	55.9	4.56	0.26	58.0	43.7	28.0
10	375.8	375.6	0.056	0.96	48.7	13.7	6.54	87.4	30.0	73.7	16.3	57.4	4.52	0.24	58.7	45.0	28.7
11	408.6	408.3	0.084	1.45	45.9	10.9	6.57	92.1	30.0	81.2	19.1	62.1	4.25	0.18	61.1	50.2	31.1
12	427.8	427.4	0.112	1.93	44.1	9.1	6.60	94.7	30.0	85.6	20.9	64.7	4.10	0.14	62.4	53.3	32.4
13	441.8	441.3	0.146	2.51	42.8	7.8	6.64	96.4	30.0	88.6	22.2	66.4	3.99	0.12	63.2	55.4	33.2
14	449.8	449.2	0.174	3.00	42.1	7.1	6.68	97.3	30.0	90.2	22.9	67.3	3.94	0.11	63.6	56.5	33.6
15	463.8	462.9	0.230	3.96	41.1	6.1	6.74	98.6	30.0	92.5	23.9	68.6	3.87	0.09	64.3	58.2	34.3
16	470.5	469.4	0.286	4.93	40.1	5.1	6.81	98.9	30.0	93.8	24.9	69.3	3.77	0.07	64.5	59.4	34.5
17	472.1	470.8	0.348	5.99	39.4	4.4	6.89	98.3	30.0	93.9	25.6	68.3	3.67	0.06	64.2	59.8	34.2
18	474.5	473.0	0.404	6.96	39.0	4.0	6.96	97.9	30.0	93.9	26.0	67.9	3.61	0.06	64.0	60.0	34.0
19	473.8	472.1	0.460	7.92	38.9	3.9	7.03	97.1	30.0	93.2	26.1	67.1	3.57	0.06	63.6	59.7	33.6
20	471.6	469.7	0.522	8.99	39.0	4.0	7.12	96.0	30.0	92.0	26.0	66.0	3.54	0.06	63.0	59.0	33.0
21	469.2	467.0	0.578	9.96	39.1	4.1	7.19	94.9	30.0	90.8	25.9	64.9	3.51	0.06	62.5	58.4	32.5
22	467.2	464.8	0.639	11.01	39.3	4.3	7.28	93.9	30.0	89.6	25.7	63.9	3.48	0.07	61.9	57.6	31.9
23	471.5	466.9	0.695	11.97	39.5	4.5	7.36	93.7	30.0	89.2	25.5	63.7	3.50	0.07	61.9	57.4	31.9
24	481.7	478.9	0.751	12.94	39.5	4.5	7.44	94.4	30.0	89.9	25.5	64.4	3.52	0.07	62.2	57.7	32.2
25	493.2	490.2	0.813	14.00	39.5	4.5	7.53	95.1	30.0	90.6	25.5	65.1	3.55	0.07	62.5	58.0	32.5
26	505.1	501.9	0.869	14.97	39.3	4.3	7.62	95.9	30.0	91.6	25.7	65.9	3.56	0.07	62.9	58.6	32.9

Notes: Deviator load corrected for membrane and filter cage (if applicable) effects.
Right Cylinder Correction Method



Consolidated Undrained Triaxial Compression Test

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

ASTM D4767

Schnabel Contract: 06120048

Boring No.: B-317

Depth: 48.5-50.5ft.

Elevation: 45.9 to 43.9

Confining Stress (psi): 60.0

Date: 10/12/2006

Reviewed by: CJS

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.882	2.88
Height (in)	5.847	5.81
Area (in ²)	6.53	6.44
Moisture (%)	25.6	
W _{solids} (lbs)	2.11	
p _{wet} (pcf)	119.8	
p _{dry} (pcf)	95.4	97.2
Void Ratio	0.77	0.73
Saturation, %	90	100

Shear Testing Conditions	
Cell Pressure (psi):	95.0
Back Pressure (psi):	35.0
Eff. Confining Stress (psi):	60.0
Final B check	0.96
t ₉₀ (min.):	1.9
Rate of Strain (%/min):	0.125

Filter strips used? YES

Specimen Type: Tube Sample

Soil Description: Sandy LEAN CLAY (CL) - gray

Liquid Limit: 35
Plasticity Index: 18
% finer than No. 200: 69.8
Specific Gravity: 2.70

Failure Sketch

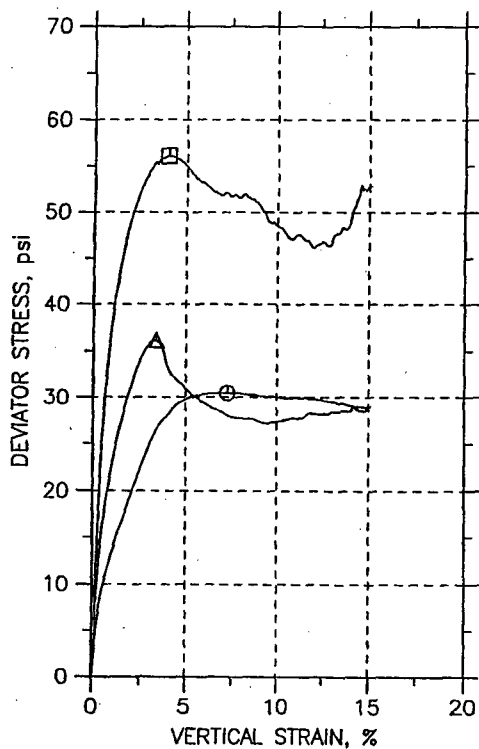
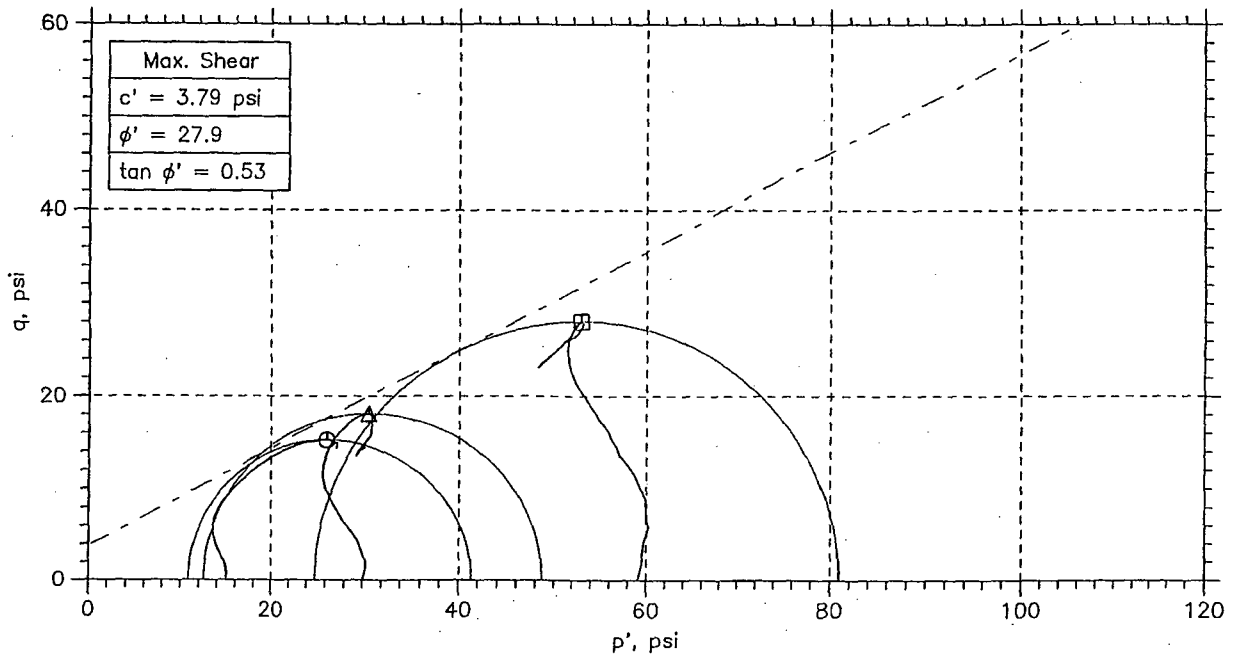


Remarks:

Reading No.	Deviator Load (lbs)	Corrected ¹ Dev. Load (lbs.)	Axial Deformation (in.)	Axial Strain (%)	Pore Pressure (psi)	Change in Pore Press. (psi)	Corrected Area ² (in ²)	σ ₁ (psi)	σ ₃ (psi)	σ' ₁ (psi)	σ' ₃ (psi)	Deviator Stress (psi)	Principal Stress Ratio	A _{bar}	P (psi)	P' (psi)	q (psi)
Zero	0.0	0.0	0.000	0.00	35.0	0.0	6.44	60.0	60.0	60.0	60.0	0.0	1.00	0.00	60.0	60.0	0.0
1	114.1	114.0	0.006	0.10	42.0	7.0	6.45	77.7	60.0	70.7	53.0	17.7	1.33	0.40	68.8	61.8	8.8
2	249.1	248.9	0.012	0.21	52.0	17.0	6.45	98.6	60.0	81.6	43.0	38.6	1.90	0.44	79.3	62.3	19.3
3	334.6	334.3	0.017	0.29	58.0	23.0	6.46	111.7	60.0	88.7	37.0	51.7	2.40	0.44	85.9	62.9	25.9
4	405.5	405.0	0.023	0.40	62.2	27.2	6.47	122.6	60.0	95.4	32.8	62.6	2.91	0.43	91.3	64.1	31.3
5	456.5	455.9	0.028	0.48	64.7	29.7	6.47	130.5	60.0	100.8	30.3	70.5	3.33	0.42	95.2	65.5	35.2
6	496.8	496.1	0.034	0.58	66.5	31.5	6.48	136.6	60.0	105.1	28.5	76.6	3.69	0.41	98.3	66.8	38.3
7	521.8	521.0	0.040	0.69	67.3	32.3	6.48	140.3	60.0	108.0	27.7	80.3	3.90	0.40	100.2	67.9	40.2
8	532.2	531.3	0.045	0.77	67.6	32.6	6.49	141.9	60.0	109.3	27.4	81.9	3.99	0.40	100.9	68.3	40.9
9	536.5	535.5	0.051	0.88	67.8	32.8	6.50	142.4	60.0	109.6	27.2	82.4	4.03	0.40	101.2	68.4	41.2
10	539.0	537.9	0.056	0.96	67.9	32.9	6.50	142.7	60.0	109.8	27.1	82.7	4.05	0.40	101.4	68.5	41.4
11	539.2	537.5	0.084	1.44	68.1	33.1	6.53	142.2	60.0	109.1	26.9	82.2	4.06	0.40	101.1	68.0	41.1
12	547.0	544.7	0.112	1.93	68.2	33.2	6.57	142.9	60.0	109.7	26.8	82.9	4.10	0.40	101.5	68.3	41.5
13	556.6	554.1	0.146	2.51	68.0	33.0	6.61	143.9	60.0	110.9	27.0	83.9	4.13	0.39	101.9	68.9	41.9
14	562.7	560.1	0.174	2.99	67.3	32.3	6.64	144.4	60.0	112.1	27.7	84.8	4.05	0.38	102.2	69.9	42.2
15	558.1	555.3	0.230	3.96	65.8	30.8	6.71	142.8	60.0	112.0	29.2	82.8	3.84	0.37	101.4	70.6	41.4
16	544.0	541.0	0.286	4.92	64.8	29.8	6.77	139.9	60.0	110.1	30.2	79.9	3.64	0.37	99.9	70.1	39.9
17	532.9	529.7	0.348	5.99	64.3	29.3	6.85	137.3	60.0	108.0	30.7	77.3	3.52	0.38	98.7	69.4	38.7
18	528.4	524.9	0.404	6.95	64.1	29.1	6.92	135.8	60.0	106.7	30.9	75.8	3.45	0.38	97.9	68.8	37.9
19	523.9	520.2	0.466	8.02	63.7	28.7	7.00	134.3	60.0	105.8	31.3	74.3	3.37	0.39	97.2	68.5	37.2
20	508.9	505.0	0.522	8.98	63.5	28.5	7.08	131.4	60.0	102.9	31.5	71.4	3.27	0.40	95.7	67.2	35.7
21	497.8	493.7	0.578	9.94	63.4	28.4	7.15	129.0	60.0	100.6	31.6	69.0	3.18	0.41	94.5	66.1	34.5
22	492.4	488.1	0.639	10.99	63.3	28.3	7.24	127.6	60.0	99.2	31.7	67.5	3.13	0.42	93.7	65.4	33.7
23	490.8	486.3	0.695	11.95	63.3	28.3	7.31	126.5	60.0	98.2	31.7	66.5	3.10	0.43	93.2	64.9	33.2
24	501.3	496.6	0.751	12.92	63.5	28.5	7.40	127.1	60.0	98.6	31.5	67.1	3.13	0.42	93.6	65.1	33.6
25	520.7	515.7	0.813	13.98	63.7	28.7	7.49	128.9	60.0	100.2	31.3	68.9	3.20	0.42	94.4	65.7	34.4
26	538.8	533.6	0.869	14.95	63.7	28.7	7.57	130.5	60.0	101.8	31.3	70.5	3.25	0.41	95.2	66.5	35.2

Notes: 1. Deviator load corrected for membrane and filter cage (if applicable) effects.
2. Right Cylinder Correction Method

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767



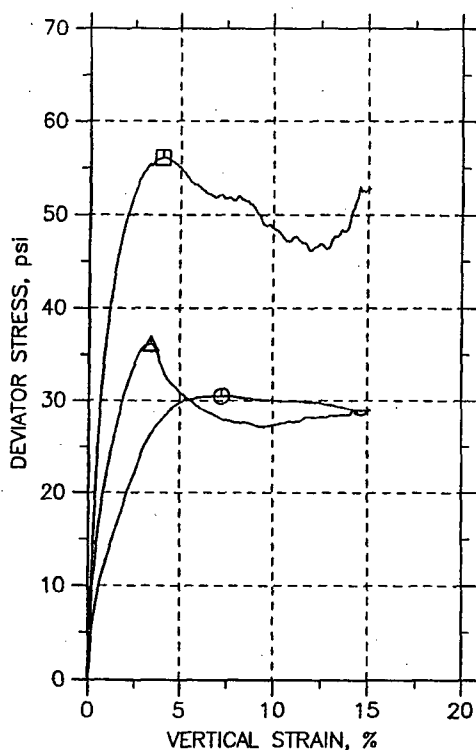
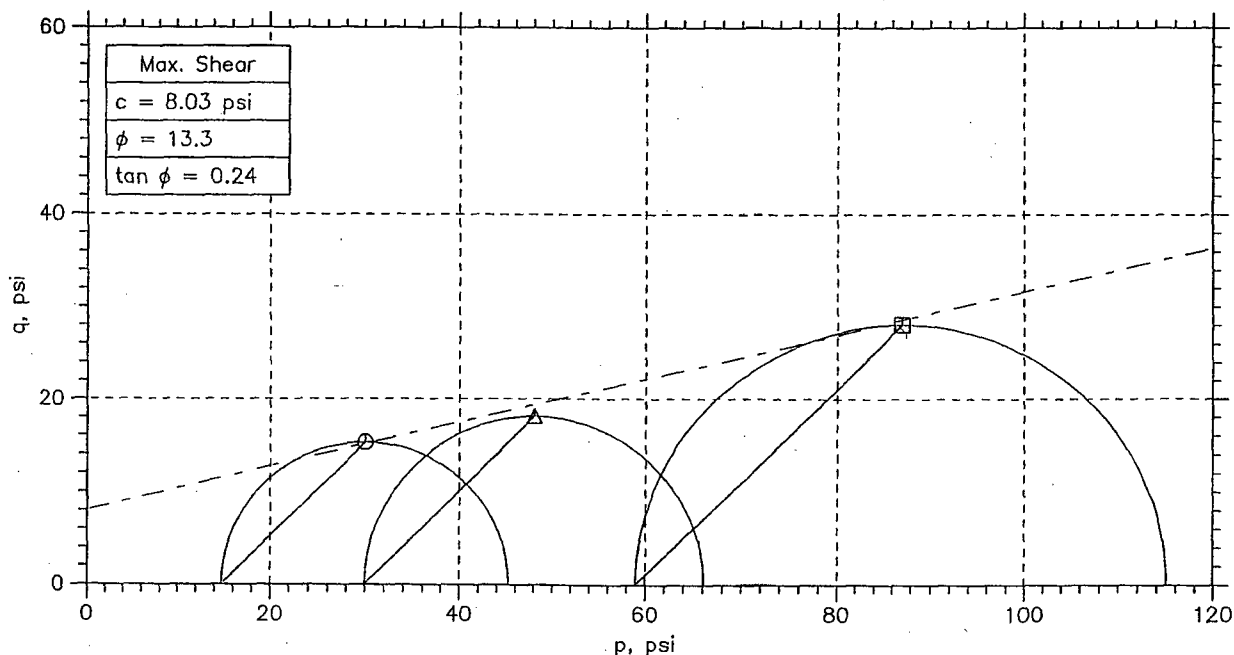
Symbol	⊙	Δ	□	
Sample No.	S-11	S-11	S-11	
Test No.	CU7	CU8	CU9	
Depth	38.5-40.5	38.5-40.5	38.5-40.5	
Initial	Diameter, in	2.87	2.87	2.87
	Height, in	5.96	5.85	6.05
	Water Content, %	24.6	28.4	26.6
	Dry Density, pcf	99.56	93.62	95.99
	Saturation, %	99.9	99.0	98.7
Before Shear	Void Ratio	0.649	0.754	0.71
	Water Content, %	28.1	27.2	26.0
	Dry Density, pcf	94.41	95.77	97.51
	Saturation*, %	100.0	100.0	100.0
	Void Ratio	0.739	0.714	0.684
	Back Press., psi	100.	100.	57.99
	Ver. Eff. Cons. Stress, psi	14.99	30.	60.01
	Shear Strength, psi	15.24	18.08	28.05
	Strain at Failure, %	7.29	3.4	3.99
	Strain Rate, %/min	0.032	0.032	0.032
	B-Value	0.95	0.95	0.96
	Measured Specific Gravity	2.63	2.63	2.63
	Liquid Limit	36	36	36
	Plastic Limit	16	16	16

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	
	Location: Calvert County, MD	
	Project No.: GTX-6880	
	Boring No.: B-320	
	Sample Type: tube	
	Description: Moist, very dark gray clayey sand (SC), 49% passing #200 sieve	
	Remarks: System B - t50 = 12.5 min, Triaxial Rev 1.0.6.318	

Phase calculations based on start and end of test.

* Saturation is set to 100% for phase calculations.

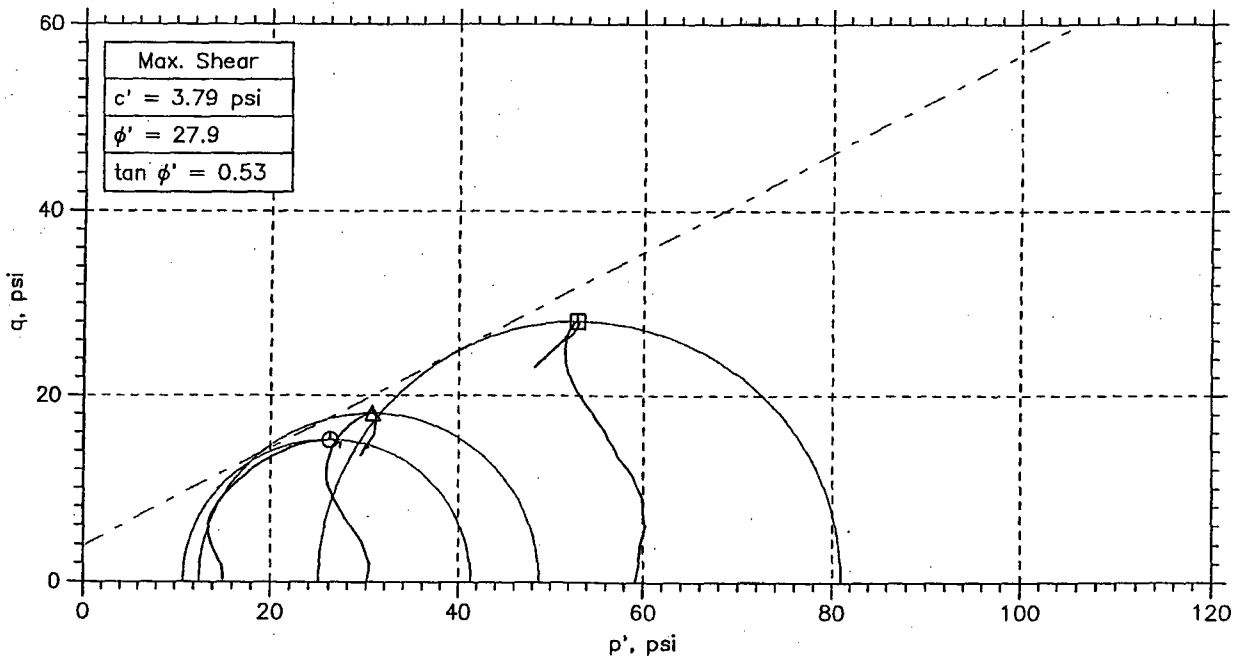
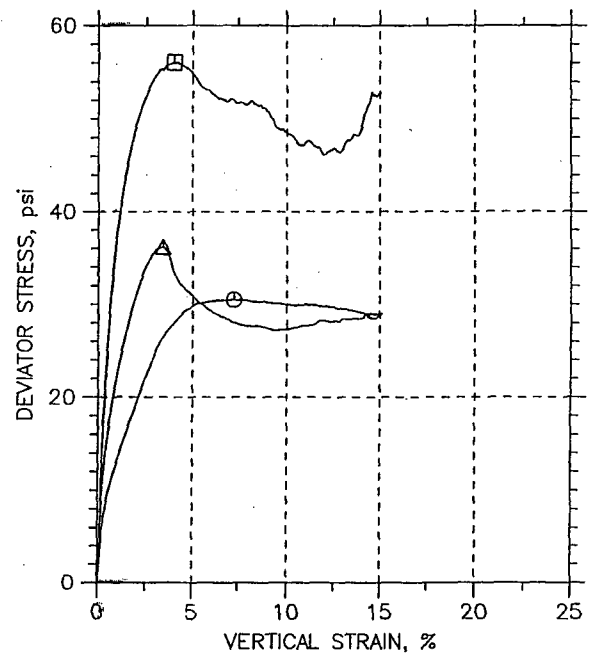
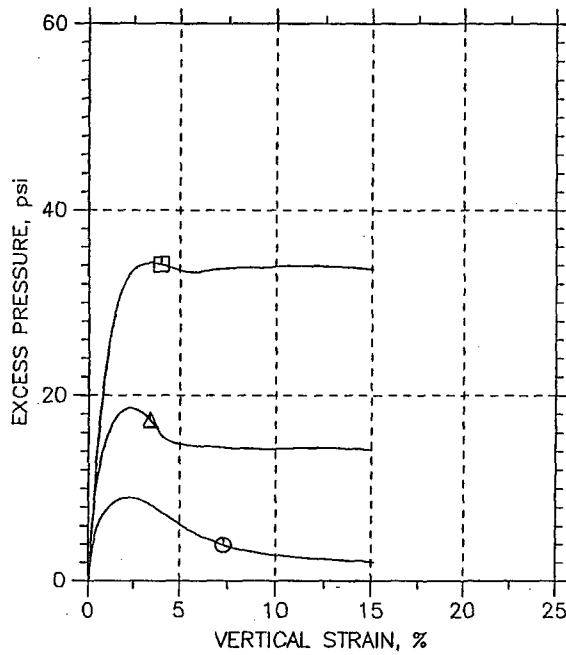
CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767



Symbol	○	△	□	
Sample No.	S-11	S-11	S-11	
Test No.	CU7	CU8	CU9	
Depth	38.5-40.5	38.5-40.5	38.5-40.5	
Initial	Diameter, in	2.87	2.87	2.87
	Height, in	5.96	5.85	6.05
	Water Content, %	24.6	28.4	26.6
	Dry Density, pcf	99.56	93.62	95.99
	Saturation, %	99.9	99.0	98.7
Before Shear	Void Ratio	0.649	0.754	0.71
	Water Content, %	28.1	27.2	26.0
	Dry Density, pcf	94.41	95.77	97.51
	Saturation*, %	100.0	100.0	100.0
	Void Ratio	0.739	0.714	0.684
	Back Press., psi	100.	100.	57.99
	Ver. Eff. Cons. Stress, psi	14.99	30.	60.01
	Shear Strength, psi	15.24	18.08	28.05
	Strain at Failure, %	7.29	3.4	3.99
	Strain Rate, %/min	0.032	0.032	0.032
	B-Value	0.95	0.95	0.96
	Measured Specific Gravity	2.63	2.63	2.63
	Liquid Limit	36	36	36
	Plastic Limit	16	16	16

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	
	Location: Calvert County, MD	
	Project No.: GTX-6880	
	Boring No.: B-320	
	Sample Type: tube	
	Description: Moist, very dark gray clayey sand (SC), 49% passing #200 sieve	
	Remarks: System B - t50 = 12.5 min, Triaxial Rev 1.0.6.318	

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767

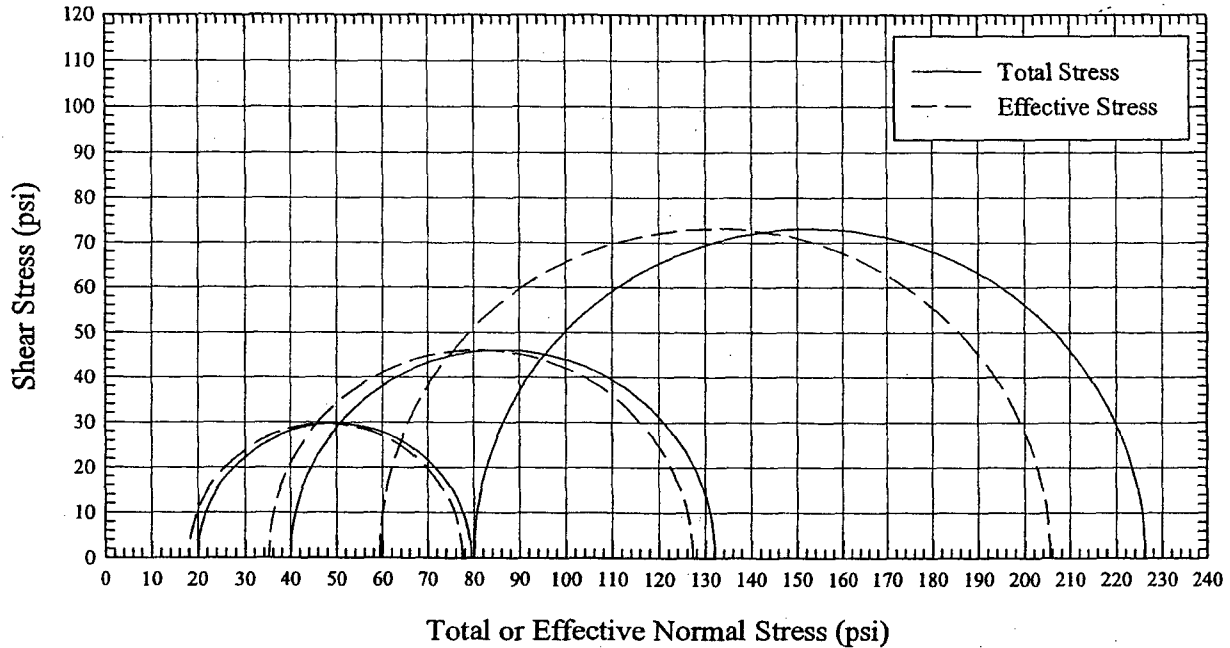


	Sample No.	Test No.	Depth	Tested By	Test Date	Checked By	Check Date	Test File
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△	S-11	CU8	38.5-40.5	njh	10/18/06	jdt		6880-CU8n.dat
□	S-11	CU9	38.5-40.5	njh	10/18/06	jdt		6880-CU9n.dat

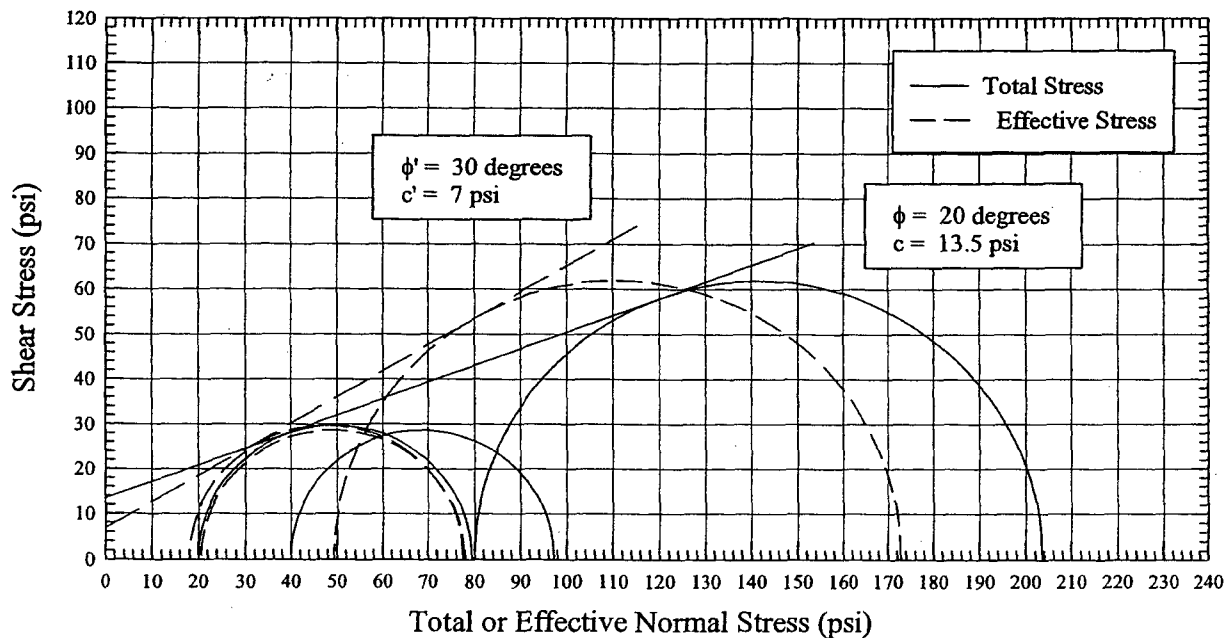
GeoTesting express a subsidiary of Geocomp Corporation			
	Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-320	Sample Type: tube	
	Description: Moist, very dark gray clayey sand (SC), 49% passing #200 sieve		
	Remarks: System B - t50 = 12.5 min, Triaxial Rev 1.0.6.318		

Consolidated Undrained (CU) Triaxial Shear (ASTM D4767)

Mohr Stress Circles at Maximum Deviator Stress Criterion



Mohr Stress Circles at Maximum Principal Stress Ratio Criterion



Boring No.: B-321

Depth: 73.5-75.5 ft

SEI Contract: 06120048

Date: 10/20/06

Sample Description: Fine SILTY SAND (SM) - gray

Reviewed By: CJS

Specimen Type: Tube Sample

Specific Gravity: 2.67

LL: ---

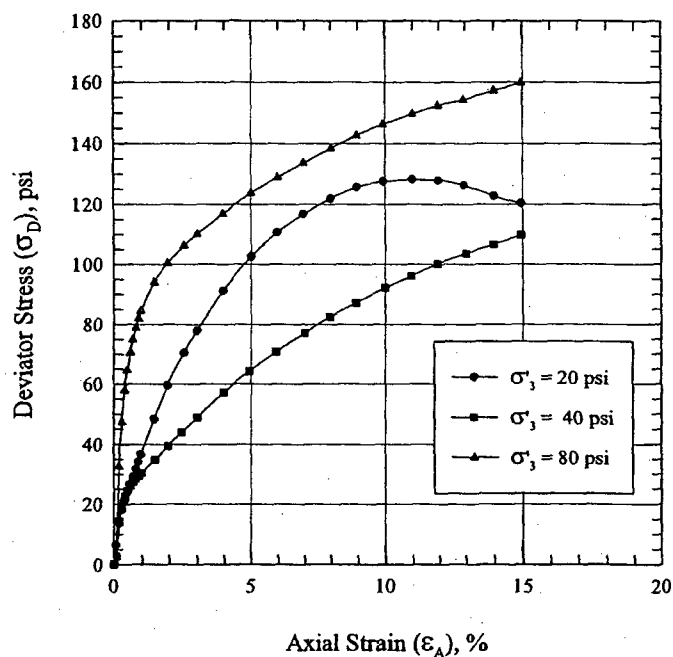
PI: NP

%<200: 15.3

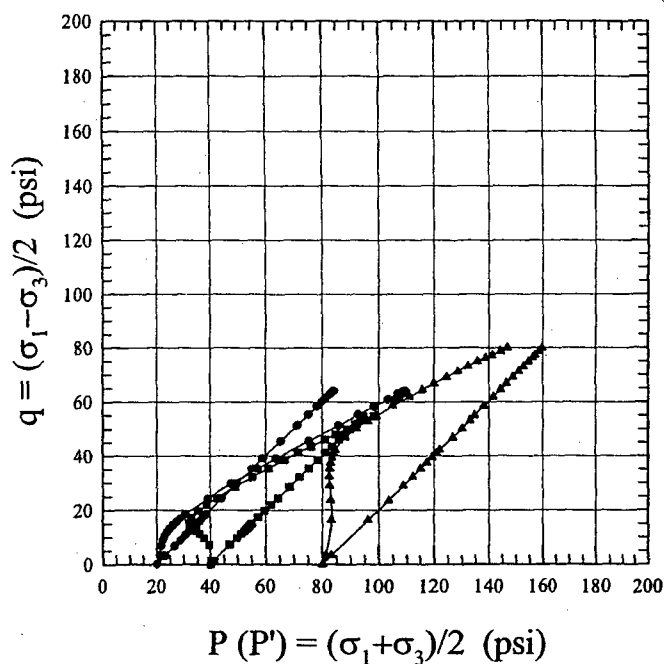


Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland

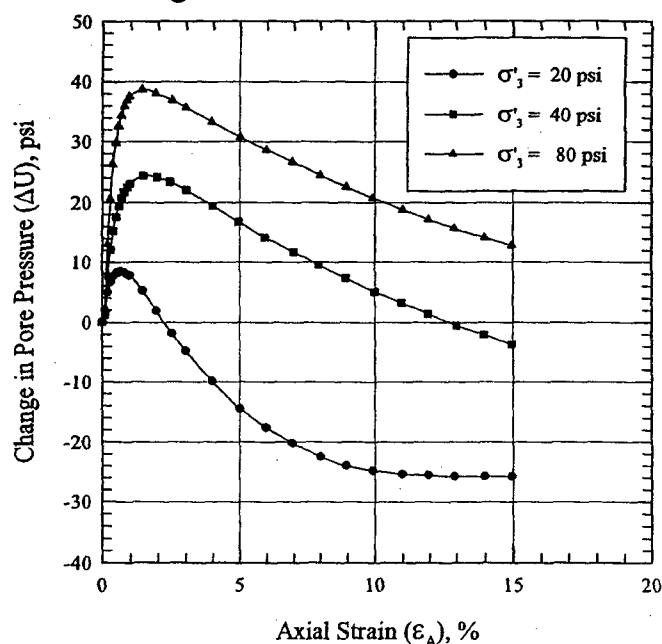
Deviator Stress vs. Axial Strain



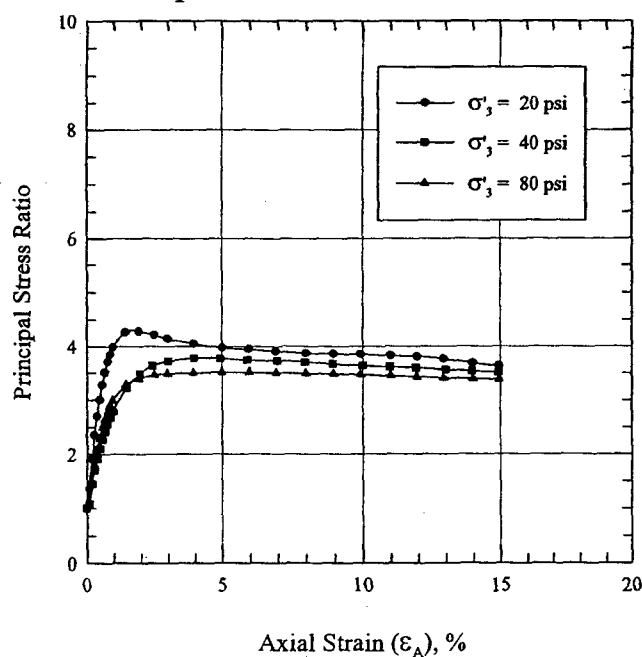
Stress Paths



Change in Pore Pressure vs. Axial Strain



Principal Stress Ratio vs. Axial Strain



Boring No.: B-321

Depth: 73.5-75.5 ft

SEI Contract: 06120048

Date: 10/20/06

Sample Description: Fine SILTY SAND (SM) - gray

Reviewed By: CJS

Specimen Type: Tube Sample

Specific Gravity: 2.67

LL: ---

PI: NP

%<200: 15.3



Calvert Cliffs Nuclear Power Plant
Calvert County, Maryland



Consolidated Undrained Triaxial Compression Test

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

ASTM D4767

Schnabel Contract: 06120048

Boring No.: B-321

Depth: 73.5-75.5ft.

Elevation: -2.8 to -4.8

Confining Stress (psi): 20.0

Date: 10/20/2006

Reviewed by: CJS

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.896	2.88
Height (in)	5.833	5.81
Area (in ²)	6.59	6.53
Moisture (%)	21.9	
W _{solids} (lbs)	2.23	
P _{wet} (pcf)	122.0	
P _{dry} (pcf)	100.1	101.3
Void Ratio	0.66	0.64
Saturation, %	88	100

Shear Testing Conditions	
Cell Pressure (psi):	40.0
Back Pressure (psi):	20.0
Eff. Confining Stress (psi):	20.0
Final B check	0.95
t ₉₀ (min.):	0.1
Rate of Strain (%/min):	0.125

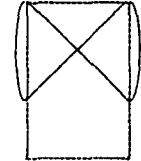
Filter strips used? NO

Specimen Type: Tube Sample

Soil Description: Fine SILTY SAND (SM) - gray

Liquid Limit: ---
Plasticity Index: NP
% finer than No. 200: 15.3
Specific Gravity: 2.67

Failure Sketch



Remarks:

Reading No.	Deviator Load (lbs)	Corrected ¹ Dev. Load (lbs.)	Axial Deformation (in.)	Axial Strain (%)	Pore Pressure (psi)	Change in Pore Press. (psi)	Corrected Area ² (in ²)	σ ₁ (psi)	σ ₃ (psi)	σ ₁ ' (psi)	σ ₃ ' (psi)	Deviator Stress (psi)	Principal Stress Ratio	A _{bar}	P (psi)	P' (psi)	q (psi)
Zero	0.0	0.0	0.000	0.00	20.0	0.0	6.53	20.0	20.0	20.0	20.0	0.0	1.00	0.00	20.0	20.0	0.0
1	41.9	41.9	0.005	0.09	22.0	2.0	6.54	26.4	20.0	24.4	18.0	6.4	1.36	0.31	23.2	21.2	3.2
2	89.5	89.5	0.011	0.19	24.9	4.9	6.55	33.7	20.0	28.8	15.1	13.7	1.91	0.36	26.8	21.9	6.8
3	118.7	118.6	0.017	0.29	26.6	6.6	6.55	38.1	20.0	31.5	13.4	18.1	2.35	0.36	29.1	22.5	9.1
4	139.9	139.8	0.022	0.38	27.5	7.5	6.58	41.3	20.0	33.8	12.5	21.3	2.71	0.35	30.7	23.2	10.7
5	157.9	157.8	0.028	0.48	28.0	8.0	6.57	44.0	20.0	36.0	12.0	24.0	3.00	0.33	32.0	24.0	12.0
6	175.2	175.1	0.033	0.57	28.3	8.3	6.57	46.6	20.0	38.3	11.7	26.6	3.28	0.31	33.3	25.0	13.3
7	191.9	191.8	0.039	0.67	28.4	8.4	6.58	49.2	20.0	40.8	11.6	29.2	3.51	0.29	34.6	26.2	14.6
8	208.9	208.7	0.045	0.77	28.3	8.3	6.58	51.7	20.0	43.4	11.7	31.7	3.71	0.26	35.8	27.5	15.8
9	225.0	224.8	0.050	0.86	28.0	8.0	6.59	54.1	20.0	46.1	12.0	34.1	3.84	0.23	37.1	29.1	17.1
10	241.8	241.6	0.056	0.96	27.7	7.7	6.60	56.6	20.0	48.9	12.3	36.6	3.98	0.21	38.3	30.6	18.3
11	320.8	320.5	0.084	1.45	25.2	5.2	6.63	88.3	20.0	63.1	14.8	48.3	4.27	0.11	44.2	39.0	24.2
12	395.9	395.5	0.112	1.93	21.9	1.9	6.66	79.4	20.0	77.5	18.1	59.4	4.28	0.03	49.7	47.8	29.7
13	472.1	471.6	0.146	2.51	18.1	-1.9	6.70	90.4	20.0	92.3	21.9	70.4	4.21	-0.03	55.2	57.1	35.2
14	525.2	524.5	0.174	2.99	15.2	-4.8	6.74	97.9	20.0	102.7	24.8	77.9	4.14	-0.06	58.9	63.7	38.9
15	620.7	619.8	0.230	3.96	10.1	-9.9	6.80	111.1	20.0	121.0	29.9	91.1	4.05	-0.11	65.6	75.5	45.6
16	706.2	705.1	0.291	5.01	5.5	-14.5	6.88	122.5	20.0	137.0	34.5	102.5	3.97	-0.14	71.3	85.8	51.3
17	769.6	768.3	0.347	5.97	2.4	-17.6	6.95	130.6	20.0	148.2	37.6	110.6	3.94	-0.16	75.3	92.9	55.3
18	820.2	818.7	0.403	6.94	-0.2	-20.2	7.02	136.6	20.0	156.8	40.2	116.6	3.90	-0.17	78.3	98.5	58.3
19	866.5	864.8	0.465	8.00	-2.5	-22.5	7.10	141.8	20.0	164.3	42.5	121.8	3.86	-0.18	80.9	103.4	60.9
20	903.4	901.4	0.521	8.97	-4.0	-24.0	7.18	145.6	20.0	169.6	44.0	125.6	3.85	-0.19	82.8	108.8	62.8
21	927.0	924.8	0.577	9.93	-4.8	-24.8	7.25	147.5	20.0	172.3	44.8	127.5	3.85	-0.19	83.7	108.5	63.7
22	942.7	940.3	0.639	11.00	-5.4	-25.4	7.34	148.1	20.0	173.5	45.4	128.1	3.82	-0.20	84.0	109.4	64.0
23	951.5	948.9	0.695	11.96	-5.6	-25.6	7.42	147.9	20.0	173.5	45.6	127.9	3.80	-0.20	83.9	109.5	63.9
24	950.3	947.5	0.751	12.92	-5.8	-25.8	7.50	148.3	20.0	172.1	45.8	126.3	3.76	-0.20	83.1	108.9	63.1
25	935.1	932.1	0.813	13.99	-5.8	-25.8	7.60	142.7	20.0	168.5	45.8	122.7	3.68	-0.21	81.3	107.1	61.3
26	927.1	923.8	0.869	14.95	-5.8	-25.8	7.88	140.2	20.0	166.0	45.8	120.2	3.63	-0.21	80.1	105.9	60.1

Notes: 1. Deviator load corrected for membrane and filter cage (if applicable) effects.
2. Right Cylinder Correction Method



Consolidated Undrained Triaxial Compression Test

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

ASTM D4767

Schnabel Contract: 06120048

Boring No.: B-321

Depth: 73.5-75.5ft.

Elevation: -2.8 to -4.8

Confining Stress (psi): 40.0

Date: 10/20/2006

Reviewed by: CJS

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.881	2.86
Height (in)	5.808	5.78
Area (in ²)	6.52	6.41
Moisture (%)	28.5	
W _{solids} (lbs)	2.04	
ρ _{wet} (pcf)	119.7	
ρ _{dry} (pcf)	93.2	95.3
Void Ratio	0.79	0.75
Saturation, %	97	98

Shear Testing Conditions	
Cell Pressure (psi):	55.0
Back Pressure (psi):	15.0
Eff. Confining Stress (psi):	40.0
Final B check	0.98
t ₉₀ (min.):	0.1
Rate of Strain (%/min):	0.125

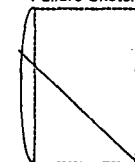
Filter strips used? NO

Specimen Type: Tube Sample

Soil Description: Fine SILTY SAND (SM) - gray

Liquid Limit: —
 Plasticity Index: NP
 % finer than No. 200: 15.3
 Specific Gravity: 2.67

Failure Sketch



Remarks:

Reading No.	Deviator Load (lbs)	Corrected ¹ Dev. Load (lbs.)	Axial Deformation (in.)	Axial Strain (%)	Pore Pressure (psi)	Change in Pore Press. (psi)	Corrected Area ² (in ²)	σ ₁ (psi)	σ ₃ (psi)	σ' ₁ (psi)	σ' ₃ (psi)	Deviator Stress (psi)	Principal Stress Ratio	A bar	P (psi)	P' (psi)	q (psi)
Zero	0.0	0.0	0.000	0.00	15.0	0.0	6.41	40.0	40.0	40.0	40.0	0.0	1.00	0.00	40.0	40.0	0.0
1	18.2	18.2	0.006	0.10	16.2	1.2	6.42	42.8	40.0	41.6	38.8	2.8	1.07	0.42	41.4	40.2	1.4
2	92.8	92.8	0.012	0.21	22.6	7.6	6.42	54.4	40.0	46.8	32.4	14.4	1.45	0.53	47.2	39.6	7.2
3	125.4	125.3	0.017	0.29	27.1	12.1	6.43	59.5	40.0	47.4	27.9	19.5	1.70	0.62	49.7	37.6	9.7
4	145.4	145.3	0.023	0.40	30.3	15.3	6.43	62.6	40.0	47.3	24.7	22.6	1.81	0.68	51.3	36.0	11.3
5	158.4	158.3	0.028	0.48	32.6	17.6	6.44	64.6	40.0	47.0	22.4	24.6	2.10	0.72	52.3	34.7	12.3
6	168.6	168.5	0.034	0.59	34.4	19.4	6.45	66.1	40.0	46.7	20.8	26.1	2.27	0.74	53.1	33.7	13.1
7	177.0	176.9	0.040	0.69	35.7	20.7	6.45	67.4	40.0	46.7	19.3	27.4	2.42	0.76	53.7	33.0	13.7
8	183.8	183.6	0.045	0.78	36.7	21.7	6.46	68.4	40.0	46.7	18.3	28.4	2.55	0.76	54.2	32.5	14.2
9	190.3	190.1	0.051	0.88	37.4	22.4	6.47	69.4	40.0	47.0	17.6	29.4	2.67	0.76	54.7	32.3	14.7
10	196.8	196.6	0.057	0.99	38.0	23.0	6.47	70.4	40.0	47.4	17.0	30.4	2.79	0.76	55.2	32.2	15.2
11	226.8	226.5	0.085	1.47	39.3	24.3	6.50	74.8	40.0	50.5	15.7	34.8	3.22	0.70	57.4	33.1	17.4
12	257.9	257.6	0.113	1.95	39.1	24.1	6.54	79.4	40.0	55.3	15.9	39.4	3.48	0.61	59.7	35.6	19.7
13	289.1	288.6	0.141	2.44	38.3	23.3	6.57	83.9	40.0	60.6	16.7	43.9	3.63	0.53	62.0	38.7	22.0
14	323.8	323.2	0.174	3.01	37.0	22.0	6.61	88.9	40.0	66.9	18.0	48.9	3.72	0.45	64.5	42.5	24.5
15	382.3	381.4	0.230	3.98	34.4	19.4	6.67	97.2	40.0	77.8	20.6	57.2	3.77	0.34	68.8	49.2	28.6
16	434.0	432.9	0.286	4.95	31.8	16.8	6.74	104.2	40.0	87.4	23.2	64.2	3.77	0.26	72.1	55.3	32.1
17	482.8	481.5	0.342	5.92	29.2	14.2	6.81	110.7	40.0	96.5	25.8	70.7	3.74	0.20	75.3	61.1	35.3
18	532.6	531.1	0.404	6.99	26.7	11.7	6.89	117.1	40.0	105.4	28.3	77.1	3.72	0.15	78.5	66.8	38.5
19	575.7	574.0	0.460	7.96	24.5	9.5	6.96	122.4	40.0	112.9	30.5	82.4	3.70	0.12	81.2	71.7	41.2
20	614.8	612.9	0.516	8.93	22.3	7.3	7.04	127.1	40.0	119.8	32.7	87.1	3.66	0.08	83.5	76.2	43.5
21	658.6	656.4	0.578	10.00	20.0	5.0	7.12	132.2	40.0	127.2	35.0	92.2	3.63	0.05	86.1	81.1	46.1
22	694.2	691.8	0.634	10.97	18.2	3.2	7.20	136.1	40.0	132.9	36.8	96.1	3.61	0.03	88.1	84.9	48.1
23	731.3	728.7	0.690	11.94	16.4	1.4	7.28	140.1	40.0	138.7	38.6	100.1	3.59	0.01	90.1	88.7	50.1
24	766.1	763.3	0.752	13.01	14.5	-0.5	7.37	143.6	40.0	144.1	40.5	103.6	3.56	0.00	91.8	92.3	51.8
25	797.0	794.0	0.808	13.98	12.9	-2.1	7.45	146.6	40.0	148.7	42.1	106.6	3.53	-0.02	93.3	95.4	53.3
26	829.2	826.0	0.864	14.95	11.3	-3.7	7.53	149.8	40.0	153.3	43.7	109.8	3.51	-0.03	94.8	98.5	54.8

Notes: Deviator load corrected for membrane and filter cage (if applicable) effects.

Right Cylinder Correction Method

CU 8/2006 R



Consolidated Undrained Triaxial Compression Test

Project: Calvert Cliffs Nuclear Power Plant

Location: Calvert County, MD

ASTM D4767

Schnabel Contract: 06120048

Boring No.: B-321

Depth: 73.5-75.5ft.

Elevation: -2.8 to -4.8

Confining Stress (psi): 80.0

Date: 10/20/2006

Reviewed by: CJS

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.893	2.87
Height (in)	5.838	5.81
Area (in ²)	6.58	6.46
Moisture (%)	25.0	
W _{solids} (lbs)	2.15	
ρ _{wet} (pcf)	120.8	
ρ _{dry} (pcf)	96.6	98.7
Void Ratio	0.72	0.69
Saturation, %	92	100

Shear Testing Conditions	
Cell Pressure (psi):	100.0
Back Pressure (psi):	20.0
Eff. Confining Stress (psi):	80.0
Final B check	0.97
t ₅₀ (min.):	0.1
Rate of Strain (%/min):	0.125

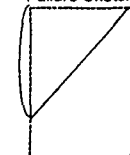
Filter strips used? NO

Specimen Type: Tube Sample

Soil Description: Fine SILTY SAND (SM) - gray

Liquid Limit: —
Plasticity Index: NP
% finer than No. 200: 15.3
Specific Gravity: 2.67

Failure Sketch

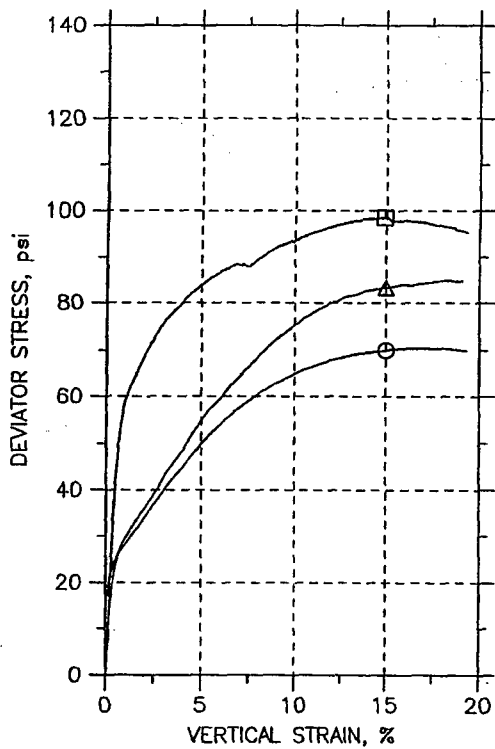
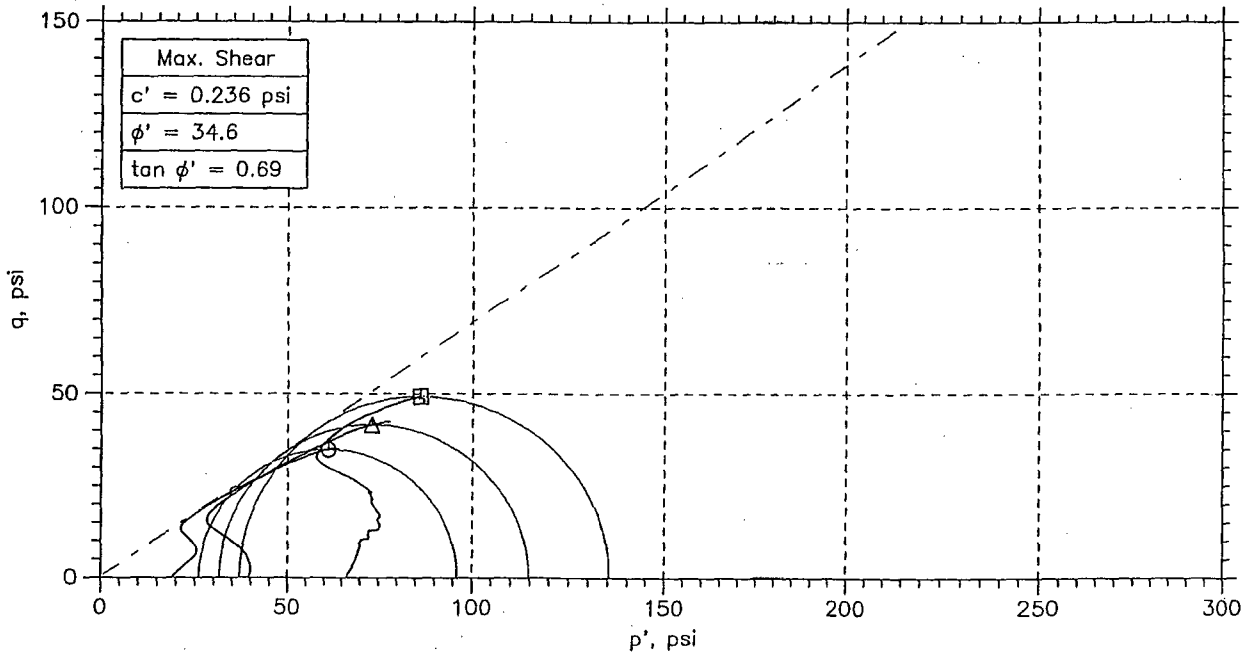


Remarks:

Reading No.	Deviator Load (lbs)	Corrected ¹ Dev. Load (lbs.)	Axial Deformation (in.)	Axial Strain (%)	Pore Pressure (psi)	Change in Pore Press. (psi)	Corrected Area ² (in ²)	σ ₁ (psi)	σ ₃ (psi)	σ' ₁ (psi)	σ' ₃ (psi)	Deviator Stress (psi)	Principal Stress Ratio	A _{bar}	P (psi)	P' (psi)	q (psi)
Zero	0.0	0.0	0.000	0.00	20.0	0.0	6.46	80.0	80.0	80.0	80.0	0.0	1.00	0.00	80.0	80.0	0.0
1	43.6	43.6	0.006	0.10	22.0	2.0	6.47	86.7	80.0	84.7	78.0	6.7	1.09	0.30	83.4	81.4	3.4
2	211.8	211.8	0.011	0.19	33.0	13.0	6.48	112.7	80.0	99.7	67.0	32.7	1.49	0.40	98.3	83.3	16.3
3	306.9	306.8	0.017	0.29	40.6	20.6	6.48	127.3	80.0	106.7	59.4	47.3	1.80	0.44	103.7	83.1	23.7
4	375.0	374.9	0.022	0.38	46.2	26.2	6.49	137.8	80.0	111.6	53.8	57.8	2.07	0.45	108.9	82.7	28.9
5	419.5	419.4	0.028	0.48	49.8	29.8	6.50	144.6	80.0	114.8	50.2	64.6	2.29	0.46	112.3	82.5	32.3
6	458.8	458.7	0.034	0.59	52.8	32.8	6.50	150.5	80.0	117.9	47.4	70.5	2.49	0.46	115.3	82.7	35.3
7	487.4	487.3	0.039	0.67	54.4	34.4	6.51	154.9	80.0	120.5	45.6	74.9	2.64	0.46	117.4	83.0	37.4
8	513.9	513.7	0.045	0.77	55.9	35.9	6.51	158.9	80.0	123.0	44.1	78.9	2.79	0.46	119.4	83.5	39.4
9	534.9	534.7	0.050	0.86	56.9	36.9	6.52	162.0	80.0	125.1	43.1	82.0	2.90	0.45	121.0	84.1	41.0
10	552.0	551.8	0.056	0.96	57.5	37.5	6.53	164.5	80.0	127.0	42.5	84.5	2.99	0.44	122.3	84.8	42.3
11	616.8	616.5	0.084	1.45	58.7	38.7	6.56	174.0	80.0	135.3	41.3	94.0	3.28	0.41	127.0	88.3	47.0
12	661.3	660.9	0.112	1.93	58.1	38.1	6.59	180.3	80.0	142.2	41.9	100.3	3.39	0.38	130.1	92.0	50.1
13	704.4	703.9	0.146	2.51	56.9	36.9	6.63	186.2	80.0	149.3	43.1	106.2	3.46	0.35	133.1	96.2	53.1
14	733.5	732.9	0.174	3.00	55.7	35.7	6.66	190.0	80.0	154.3	44.3	110.0	3.48	0.32	135.0	99.3	55.0
15	786.4	785.5	0.230	3.96	53.3	33.3	6.73	196.7	80.0	163.4	46.7	116.7	3.50	0.29	138.4	105.1	58.4
16	842.3	841.2	0.291	5.01	50.7	30.7	6.80	203.6	80.0	172.9	49.3	123.6	3.55	0.25	141.8	111.1	61.8
17	887.2	885.9	0.348	5.99	48.6	28.6	6.88	208.8	80.0	180.2	51.4	128.8	3.51	0.22	144.4	115.8	64.4
18	929.0	927.5	0.404	6.95	46.6	26.6	6.95	213.5	80.0	186.9	53.4	133.5	3.50	0.20	146.8	120.2	66.8
19	973.5	971.8	0.465	8.01	44.4	24.4	7.03	218.3	80.0	193.9	55.6	138.3	3.49	0.18	149.2	124.8	69.2
20	1014.6	1012.7	0.521	8.97	42.5	22.5	7.10	222.6	80.0	200.1	57.5	142.6	3.48	0.16	151.3	128.8	71.3
21	1051.8	1049.7	0.577	9.93	40.7	20.7	7.18	226.3	80.0	205.6	59.3	146.3	3.47	0.14	153.1	132.4	73.1
22	1089.0	1086.6	0.639	11.00	38.8	18.8	7.26	229.6	80.0	210.8	61.2	149.6	3.44	0.13	154.8	136.0	74.8
23	1121.5	1118.9	0.695	11.96	37.2	17.2	7.34	232.4	80.0	215.2	62.8	152.4	3.43	0.11	156.2	139.0	76.2
24	1148.3	1145.5	0.751	12.93	35.7	15.7	7.42	234.3	80.0	218.6	64.3	154.3	3.40	0.10	157.2	141.5	77.2
25	1184.2	1181.2	0.813	14.00	34.1	14.1	7.52	237.2	80.0	223.1	65.9	157.2	3.38	0.09	158.6	144.5	78.6
26	1217.5	1214.3	0.869	14.96	32.8	12.8	7.60	239.8	80.0	227.0	67.2	159.8	3.38	0.08	159.9	147.1	79.9

Notes: 1. Deviator load corrected for membrane and filter cage (if applicable) effects.
2. Right Cylinder Correction Method

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767



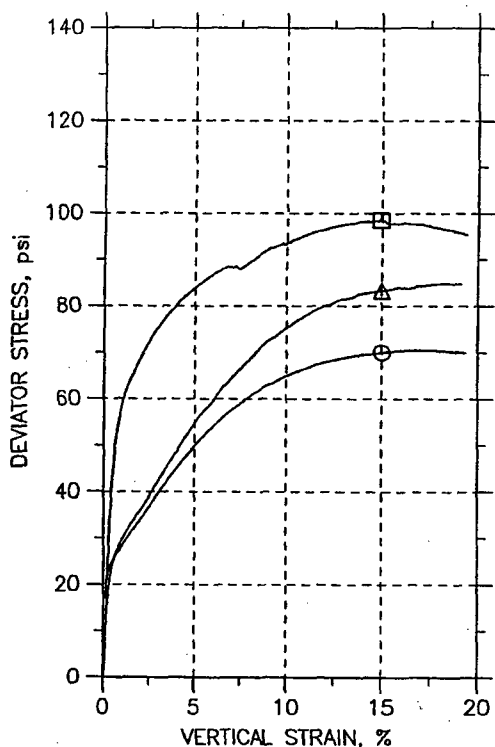
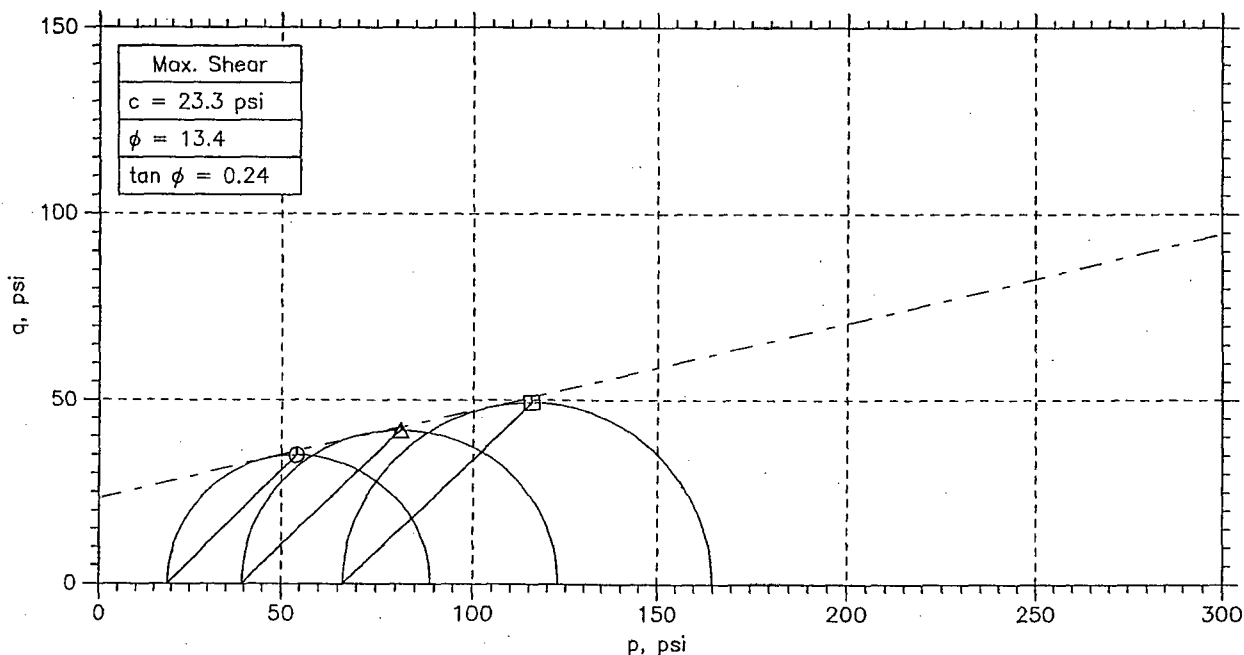
Symbol	⊙	Δ	□	
Sample No.	S-16	S-16	S-16	
Test No.	CU4	CU5	CU6	
Depth	63.5-65.5	63.5-65.5	63.5-65.5	
Initial	Diameter, in	2.87	2.87	2.87
	Height, in	6.05	6	6.2
	Water Content, %	27.0	26.8	23.2
	Dry Density, pcf	94.64	96.94	98.
	Saturation, %	95.2	99.8	88.8
Before Shear	Void Ratio	0.755	0.713	0.695
	Water Content, %	27.4	25.4	20.0
	Dry Density, pcf	96.04	99.1	108.4
	Saturation*, %	100.0	100.0	100.0
	Void Ratio	0.729	0.676	0.532
	Back Press., psi	64.	60.98	57.99
	Ver. Eff. Cons. Stress, psi	20.	40.	70.
	Shear Strength, psi	34.99	41.66	49.27
	Strain at Failure, %	15	15	14.9
	Strain Rate, %/min	0.005	0.005	0.005
	B-Value	0.96	0.95	0.95
	Measured Specific Gravity	2.66	2.66	2.66
	Liquid Limit	72	72	72
	Plastic Limit	41	41	41

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear			
	Location: Calvert County, MD			
	Project No.: GTX-6880			
	Boring No.: B-328			
	Sample Type: tube			
	Description: Moist, dark gray organic silt (OH), 87% passing #200 sieve			
Remarks: System 0 - t50 = 84.5 min, Triaxial Rev 1.0.6.318				

Phase calculations based on start and end of test.

* Saturation is set to 100% for phase calculations.

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767



Symbol	⊙	△	□	
Sample No.	S-16	S-16	S-16	
Test No.	CU4	CU5	CU6	
Depth	63.5-65.5	63.5-65.5	63.5-65.5	
Initial	Diameter, in	2.87	2.87	2.87
	Height, in	6.05	6	6.2
	Water Content, %	27.0	26.8	23.2
	Dry Density, pcf	94.64	96.94	98.
	Saturation, %	95.2	99.8	88.8
Before Shear	Void Ratio	0.755	0.713	0.695
	Water Content, %	27.4	25.4	20.0
	Dry Density, pcf	96.04	99.1	108.4
	Saturation*, %	100.0	100.0	100.0
	Void Ratio	0.729	0.676	0.532
	Back Press., psi	64.	60.98	57.99
	Ver. Eff. Cons. Stress, psi	20.	40.	70.
	Shear Strength, psi	34.99	41.66	49.27
	Strain at Failure, %	15	15	14.9
	Strain Rate, %/min	0.005	0.005	0.005
	B-Value	0.96	0.95	0.95
	Measured Specific Gravity	2.66	2.66	2.66
	Liquid Limit	72	72	72
	Plastic Limit	41	41	41

GeoTesting
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Project: Calvert Cliffs Nuclear

Location: Calvert County, MD

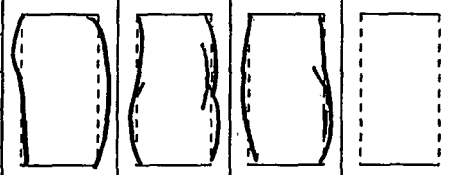
Project No.: GTX-6880

Boring No.: B-328

Sample Type: tube

Description: Moist, dark gray organic silt (OH), 87% passing #200 sieve

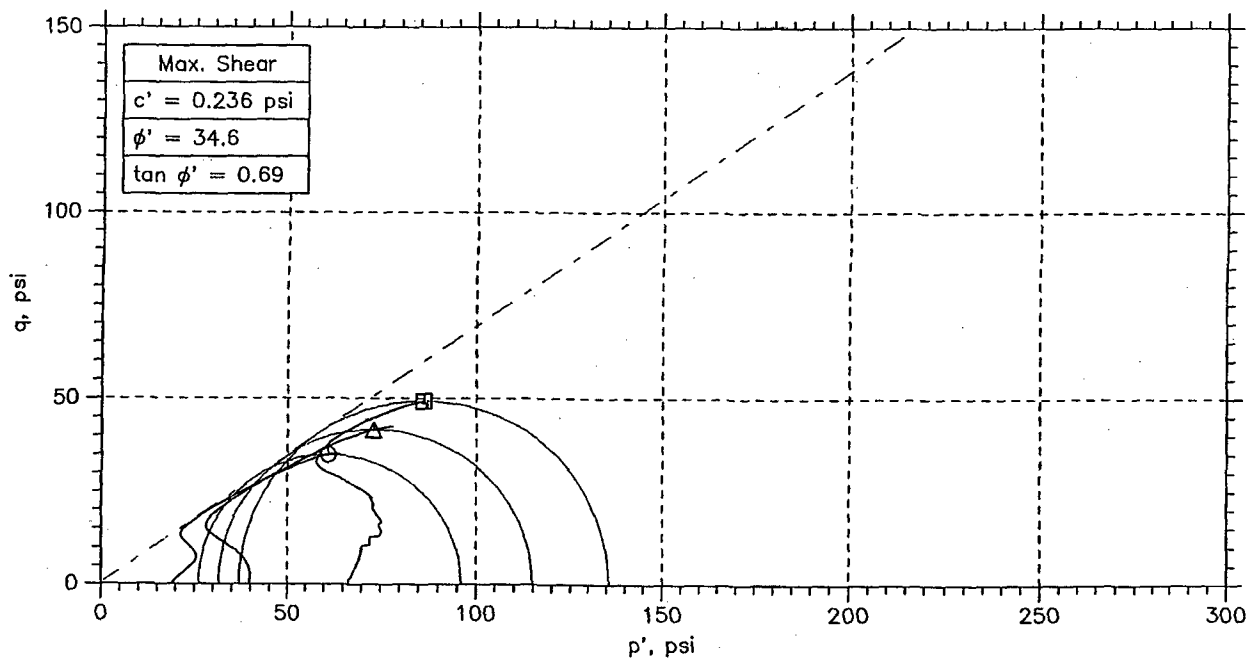
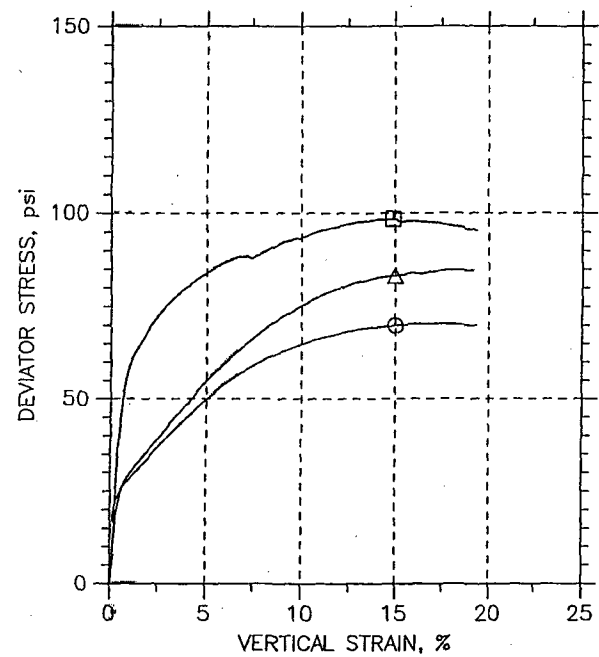
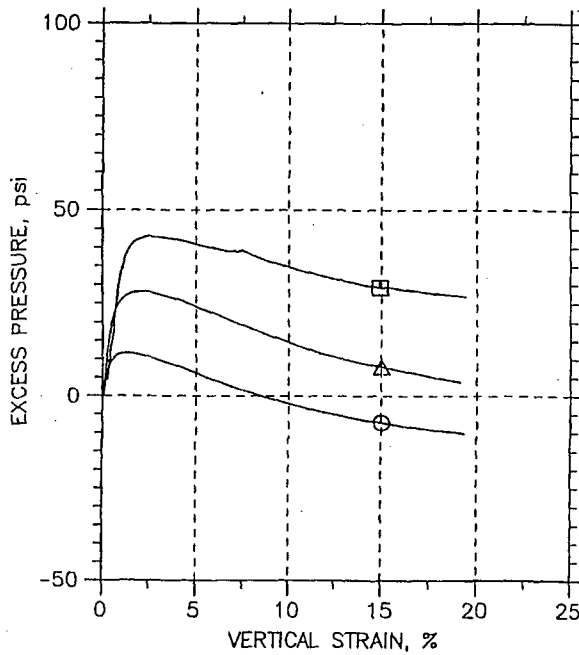
Remarks: System O - t50 = 84.5 min, Triaxial Rev 1.0.6.318



Phase calculations based on start and end of test.

* Saturation is set to 100% for phase calculations.

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767



	Sample No.	Test No.	Depth	Tested By	Test Date	Checked By	Check Date	Test File
○	S-16	CU4	63.5-65.5	njh	09/21/06	jdt		6880-cu4n.dat
△	S-16	CU5	63.5-65.5	njh	09/20/06	jdt		6880-CU5n.dat
□	S-16	CU6	63.5-65.5	njh	09/19/06	jdt		6880-CU6an.dat

GeoTesting
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Project: Calvert Cliffs Nuclear

Location: Calvert County, MD

Project No.: GTX-6880

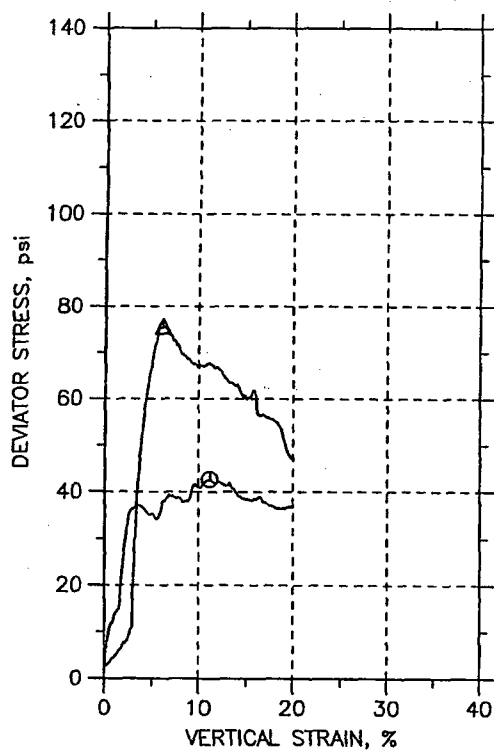
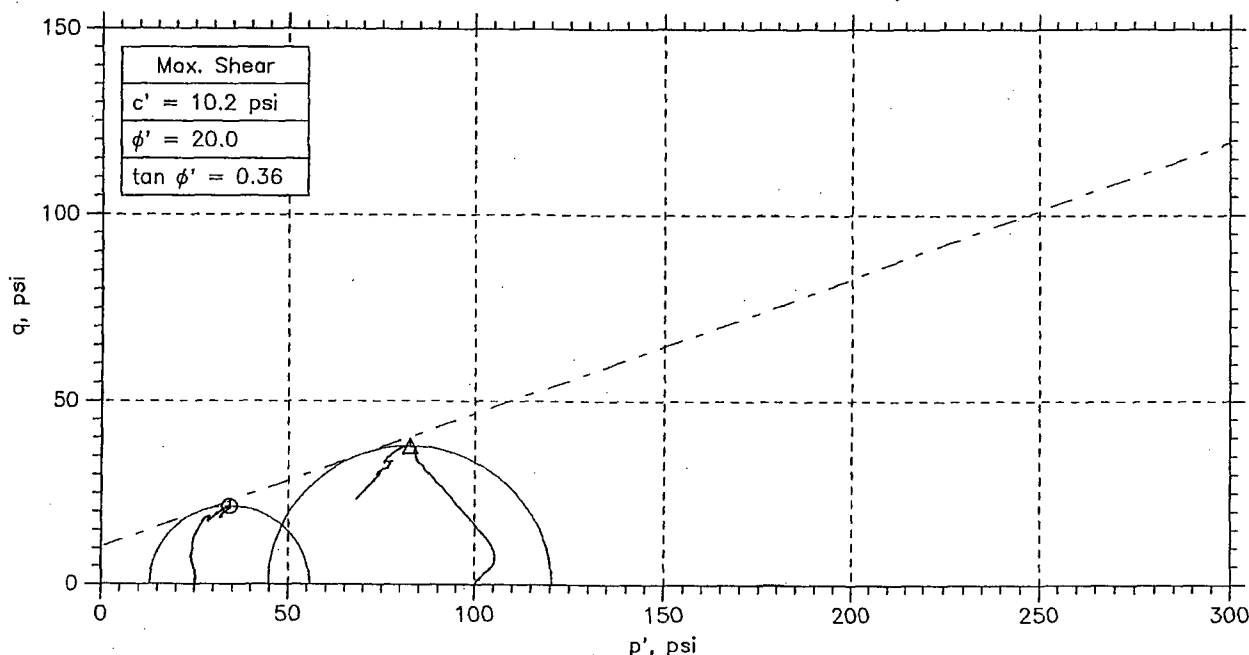
Boring No.: B-328

Sample Type: tube

Description: Moist, dark gray organic silt (OH), 87% passing #200 sieve

Remarks: System O - $t_{50} = 84.5$ min, Triaxial Rev 1.0.6.318

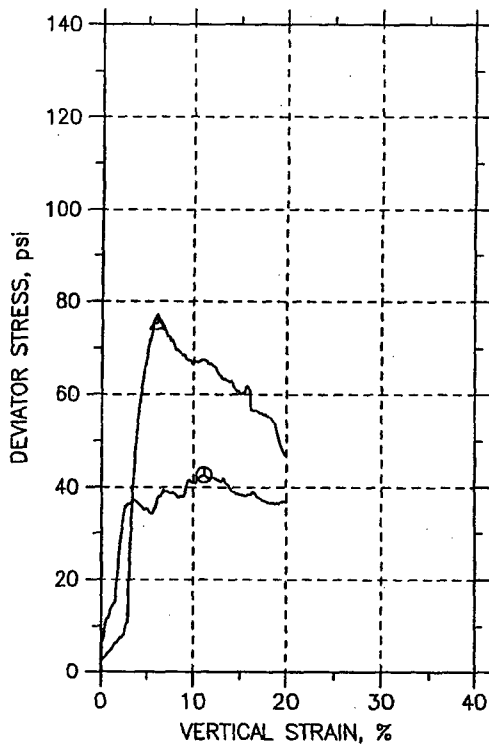
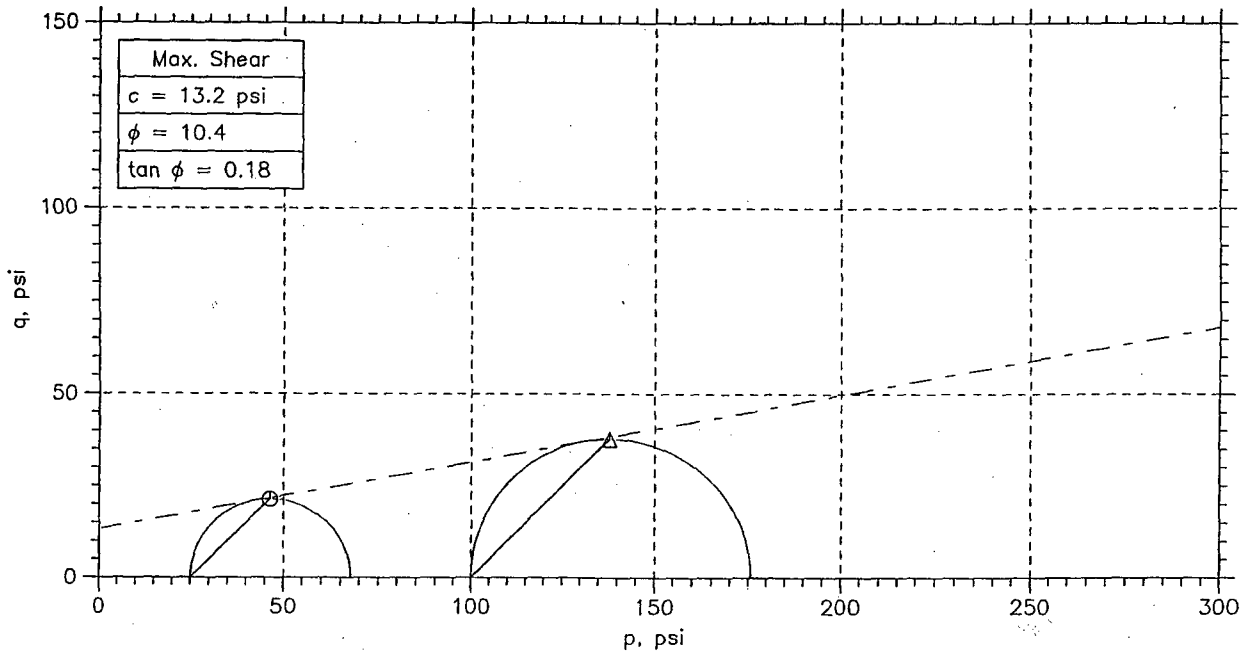
CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767



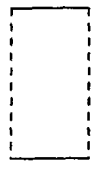
Symbol	⊙	Δ		
Sample No.	S-17	S-17		
Test No.	CU18	CU19		
Depth	68-70	68-70		
Initial	Diameter, in	2.87	2.87	
	Height, in	6.07	5.9	
	Water Content, %	35.1	36.5	
	Dry Density, pcf	84.52	83.09	
	Saturation, %	92.6	93.1	
Before Shear	Void Ratio	1.05	1.09	
	Water Content, %	38.5	33.6	
	Dry Density, pcf	83.86	89.77	
	Saturation*, %	100.0	100.0	
	Void Ratio	1.07	0.933	
	Back Press., psi	115.	87.83	
	Ver. Eff. Cons. Stress, psi	25.	100.	
	Shear Strength, psi	21.35	37.82	
	Strain at Failure, %	11.2	6.06	
	Strain Rate, %/min	0.0036	0.0036	
	B-Value	0.95	0.94	
	Measured Specific Gravity	2.78	2.78	
	Liquid Limit	51	51	
	Plastic Limit	15	15	

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear				
	Location: Calvert County, MD				
	Project No.: GTX-6880				
	Boring No.: B-414				
	Sample Type: tube				
	Description: Moist, dark greenish gray clay (CH), 97% passing the #200 sieve				
	Remarks: System B - t50 = 112.5 min, Triaxial 1.0.6.318				

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767



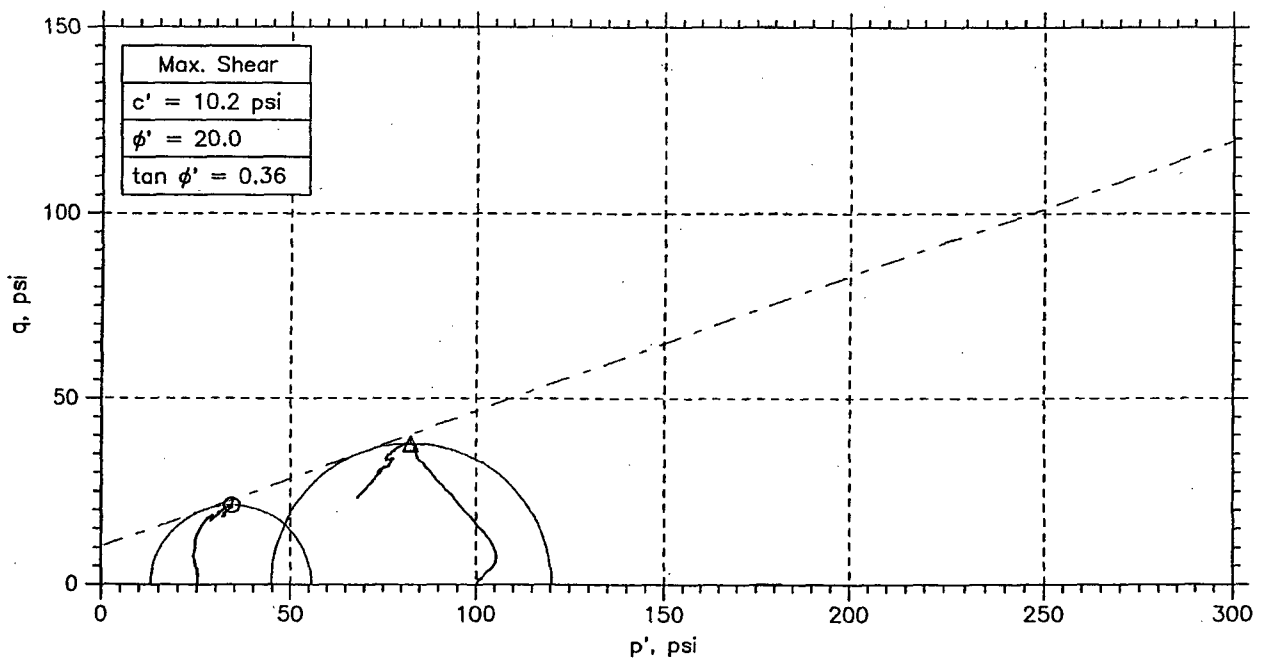
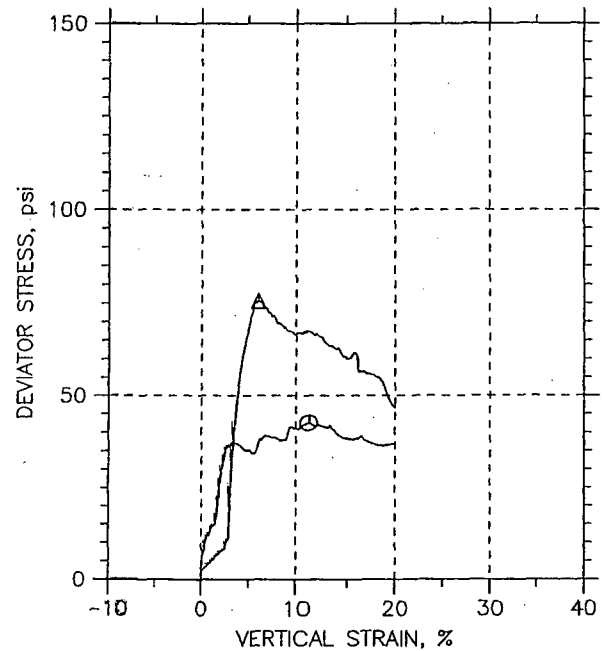
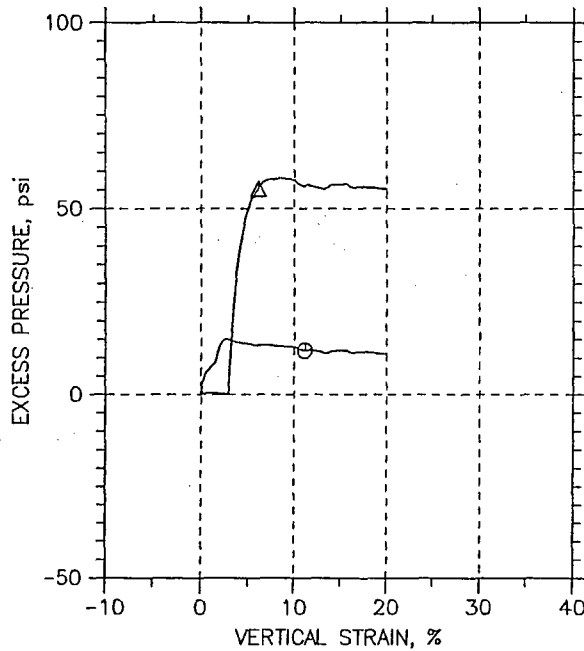
Symbol	⊙	Δ		
Sample No.	S-17	S-17		
Test No.	CU18	CU19		
Depth	68-70	68-70		
Initial	Diameter, in	2.87	2.87	
	Height, in	6.07	5.9	
	Water Content, %	35.1	36.5	
	Dry Density, pcf	84.52	83.09	
	Saturation, %	92.6	93.1	
Before Shear	Void Ratio	1.05	1.09	
	Water Content, %	38.5	33.6	
	Dry Density, pcf	83.86	89.77	
	Saturation*, %	100.0	100.0	
	Void Ratio	1.07	0.933	
	Back Press., psi	115.	87.83	
	Ver. Eff. Cons. Stress, psi	25.	100.	
	Shear Strength, psi	21.35	37.82	
	Strain at Failure, %	11.2	6.06	
	Strain Rate, %/min	0.0036	0.0036	
	B-Value	0.95	0.94	
	Measured Specific Gravity	2.78	2.78	
	Liquid Limit	51	51	
	Plastic Limit	15	15	

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear	   
	Location: Calvert County, MD	
	Project No.: GTX-6880	
	Boring No.: B-414	
	Sample Type: tube	
Description: Moist, dark greenish gray clay (CH), 97% passing the #200 sieve		
Remarks: System B - t50 = 112.5 min, Triaxial 1.0.6.318		

Phase calculations based on start and end of test.

* Saturation is set to 100% for phase calculations.

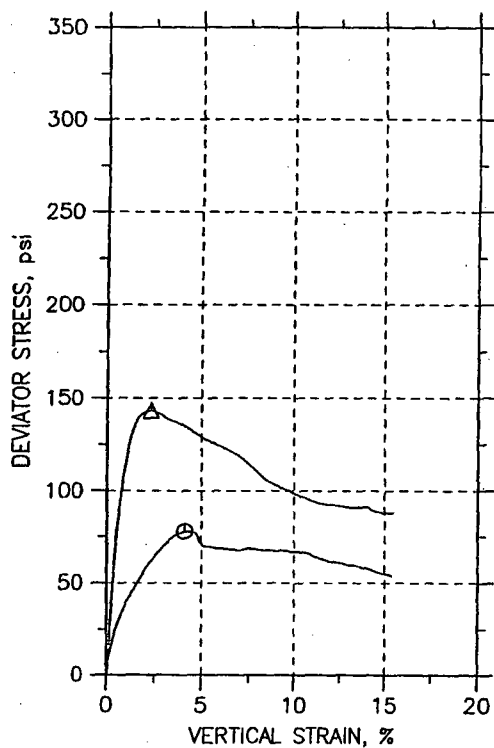
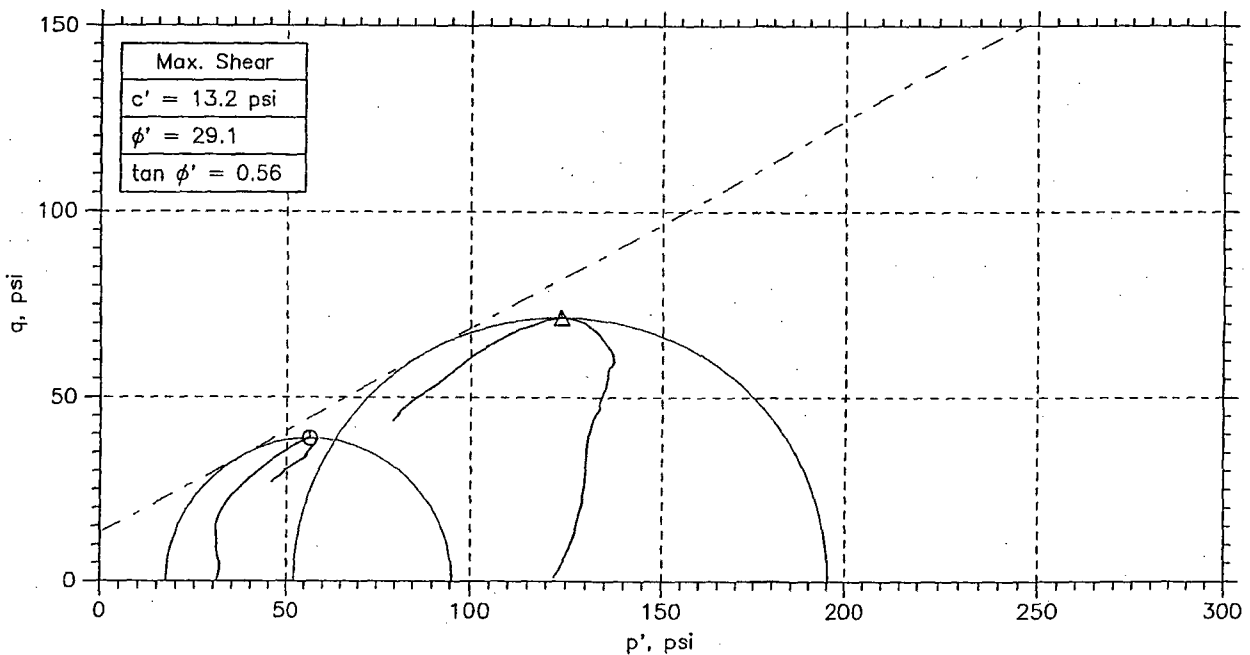
CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767



Sample No.	Test No.	Depth	Tested By	Test Date	Checked By	Check Date	Test File
○ S-17	CU18	68-70	njh	11/06/06	jdt		6880-CU18.dat
△ S-17	CU19	68-70	njh	11/06/06	jdt		6880-CU19.dat

GeoTesting express a subsidiary of Geocomp Corporation			
	Project: Calvert Cliffs Nuclear	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-414	Sample Type: tube	
	Description: Moist, dark greenish gray clay (CH), 97% passing the #200 sieve		
	Remarks: System B - t50 = 112.5 min, Triaxial 1.0.6.318		

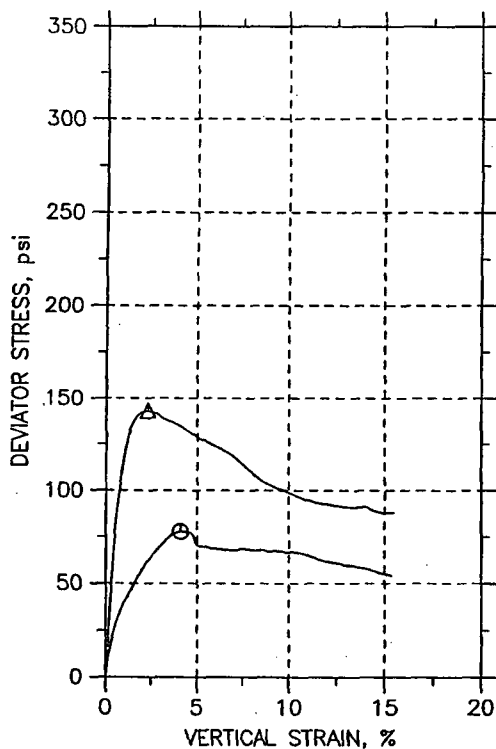
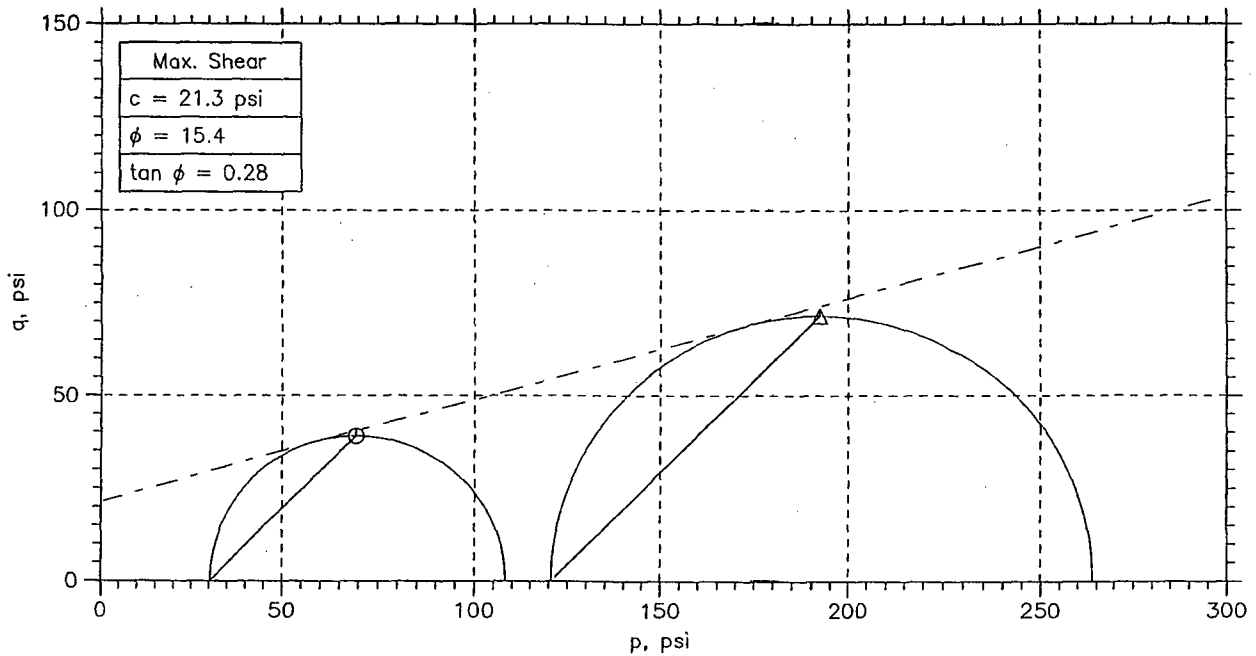
CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767



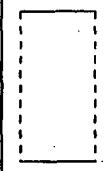
Symbol	⊙	Δ		
Sample No.	S-29	S-29		
Test No.	CU16	CU17		
Depth	128.5	128.5		
Initial	Diameter, in	2.87	2.86	
	Height, in	5.9	5.78	
	Water Content, %	32.6	35.5	
	Dry Density, pcf	87.99	80.59	
	Saturation, %	99.5	90.2	
Before Shear	Void Ratio	0.859	1.03	
	Water Content, %	37.9	35.6	
	Dry Density, pcf	82.05	84.62	
	Saturation*, %	100.0	100.0	
	Void Ratio	0.994	0.933	
	Back Press., psi	52.01	37.	
	Ver. Eff. Cons. Stress, psi	29.98	120.	
	Shear Strength, psi	38.91	71.57	
	Strain at Failure, %	4.11	2.3	
	Strain Rate, %/min	0.02	0.02	
	B-Value	0.95	0.95	
	Measured Specific Gravity	2.62	2.62	
	Liquid Limit	59	59	
	Plastic Limit	34	34	

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear	   
	Location: Calvert County, MD	
	Project No.: GTX-6880	
	Boring No.: B-420	
	Sample Type: tube	
	Description: Moist, very dark grayish brown sandy organic silt (OH), 50% passing #200 sieve	
Remarks: System B - t50 = 18 min, Triaxial Rev 1.0.6.318		

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767



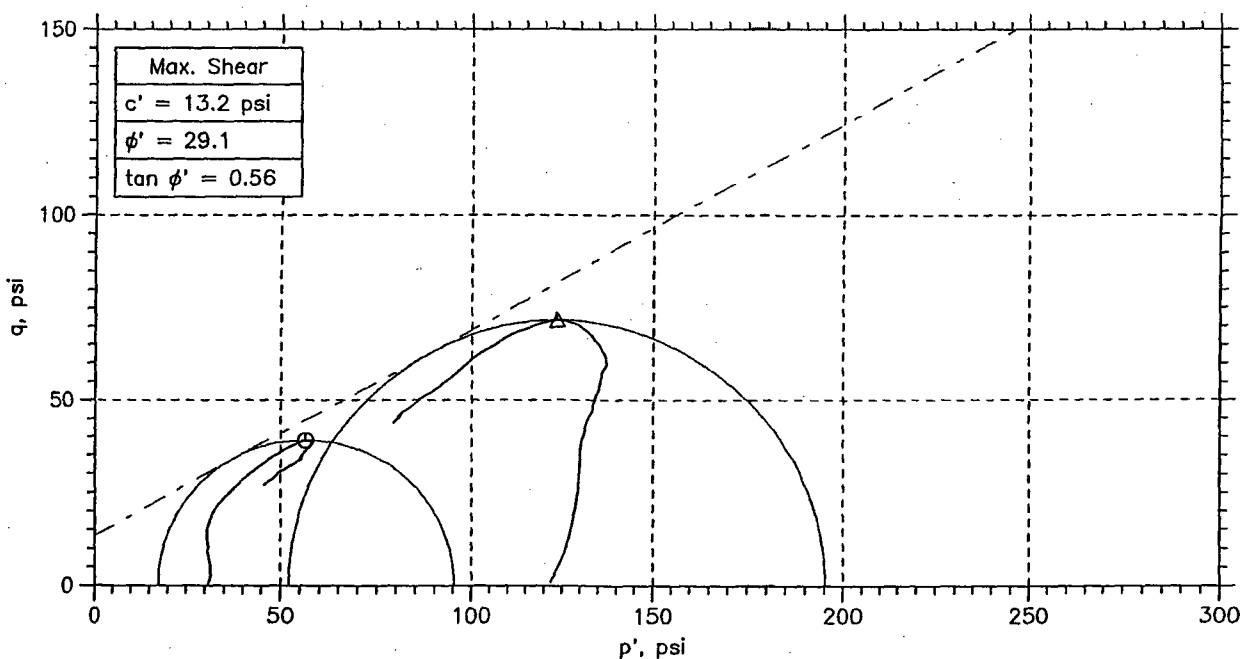
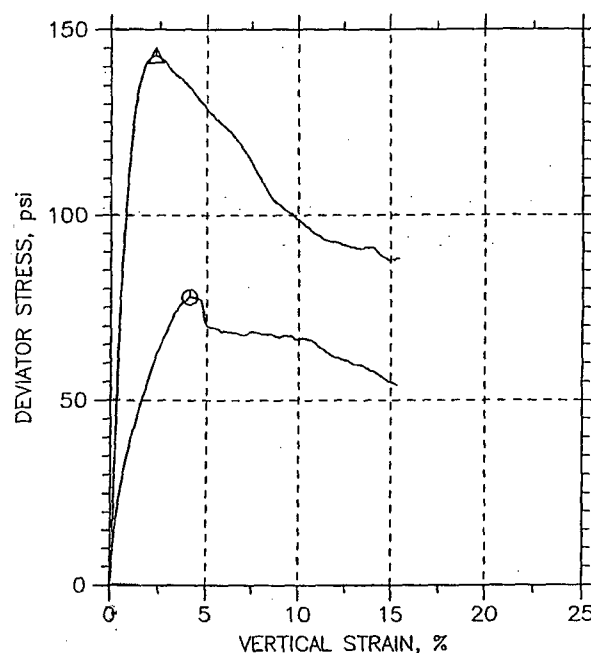
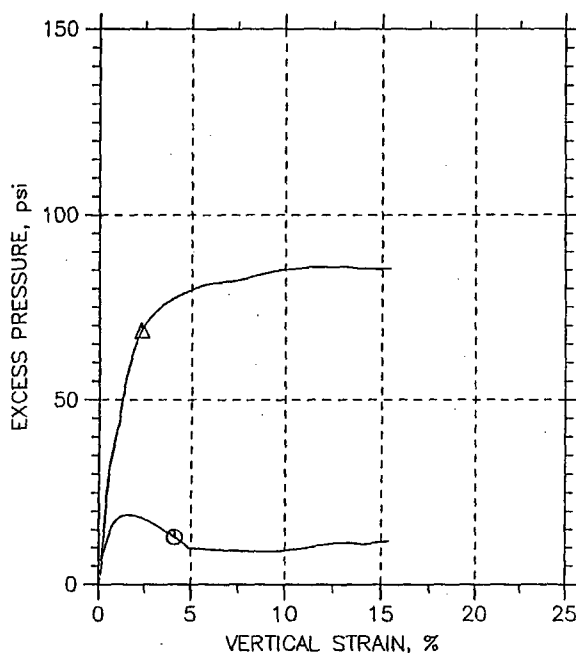
Symbol	⊙	Δ		
Sample No.	S-29	S-29		
Test No.	CU16	CU17		
Depth	128.5	128.5		
Initial	Diameter, in	2.87	2.86	
	Height, in	5.9	5.78	
	Water Content, %	32.6	35.5	
	Dry Density, pcf	87.99	80.59	
	Saturation, %	99.5	90.2	
Before Shear	Void Ratio	0.859	1.03	
	Water Content, %	37.9	35.6	
	Dry Density, pcf	82.05	84.62	
	Saturation*, %	100.0	100.0	
	Void Ratio	0.994	0.933	
	Back Press., psi	52.01	37.	
	Ver. Eff. Cons. Stress, psi	29.98	120.	
	Shear Strength, psi	38.91	71.57	
	Strain at Failure, %	4.11	2.3	
	Strain Rate, %/min	0.02	0.02	
	B-Value	0.95	0.95	
	Measured Specific Gravity	2.62	2.62	
	Liquid Limit	59	59	
	Plastic Limit	34	34	

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear	   
	Location: Calvert County, MD	
	Project No.: GTX-6880	
	Boring No.: B-420	
	Sample Type: tube	
	Description: Moist, very dark grayish brown sandy organic silt (OH), 50% passing #200 sieve	
Remarks: System B - t50 = 18 min, Triaxial Rev 1.0.8.318		

Phase calculations based on start and end of test.

* Saturation is set to 100% for phase calculations.

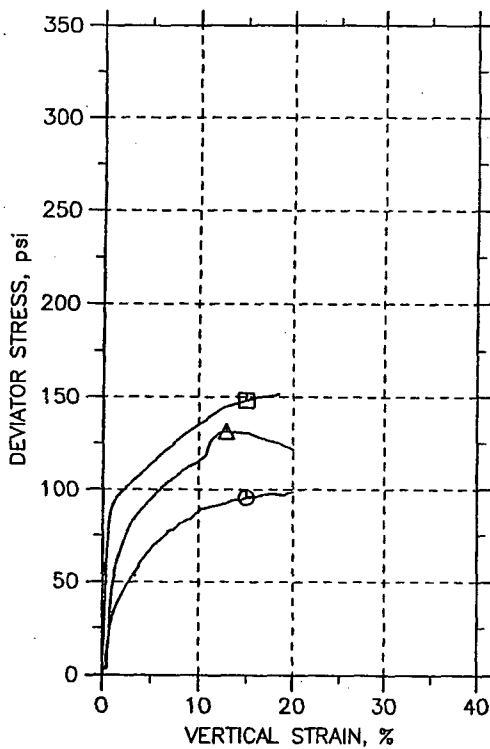
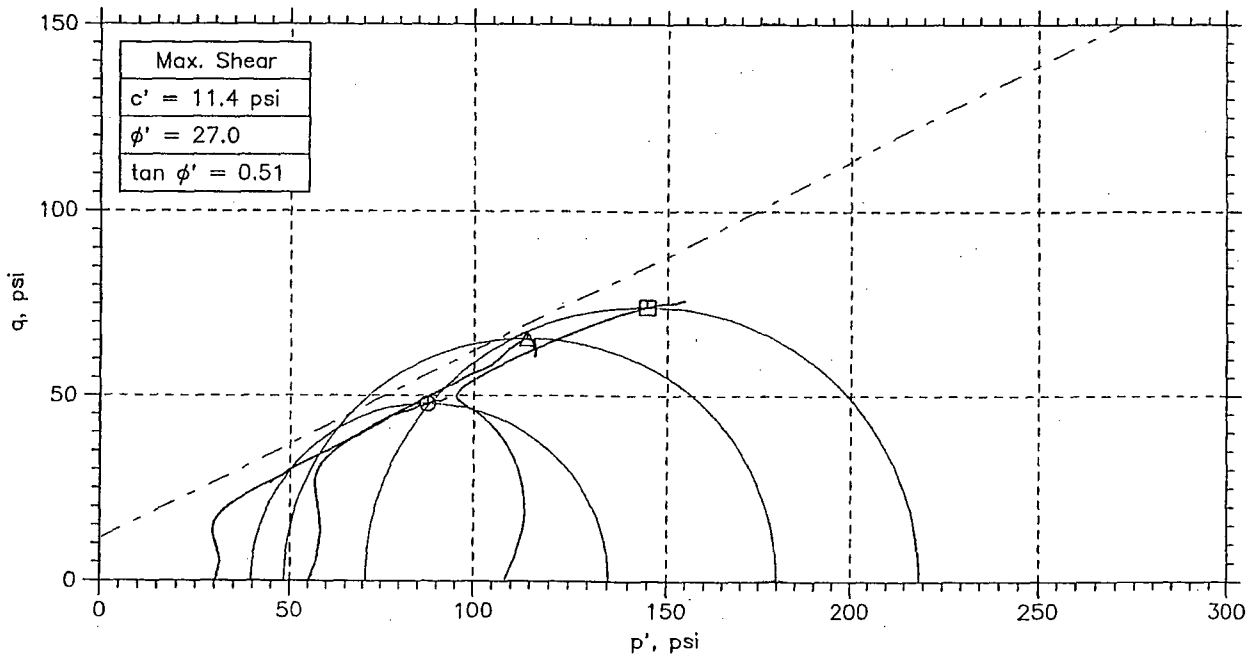
CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767



	Sample No.	Test No.	Depth	Tested By	Test Date	Checked By	Check Date	Test File
○	S-29	CU16	128.5	njh	11/03/06	jdt		6880-CU16n.dat
△	S-29	CU17	128.5	njh	11/03/06	jdt		6880-CU17n.dat

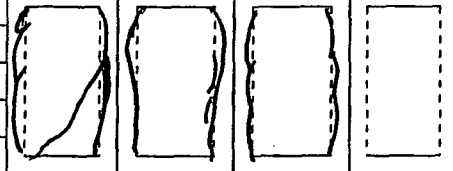
GeoTesting express a subsidiary of Geocomp Corporation			
	Project: Calvert Cliffs Nuclear	Location: Calvert County, MD	Project No.: GTX-6880
	Boring No.: B-420	Sample Type: tube	
	Description: Moist, very dark grayish brown sandy organic silt (OH), 50% passing #200 sieve		
	Remarks: System B - t50 = 18 min, Triaxial Rev 1.0.6.318		

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767

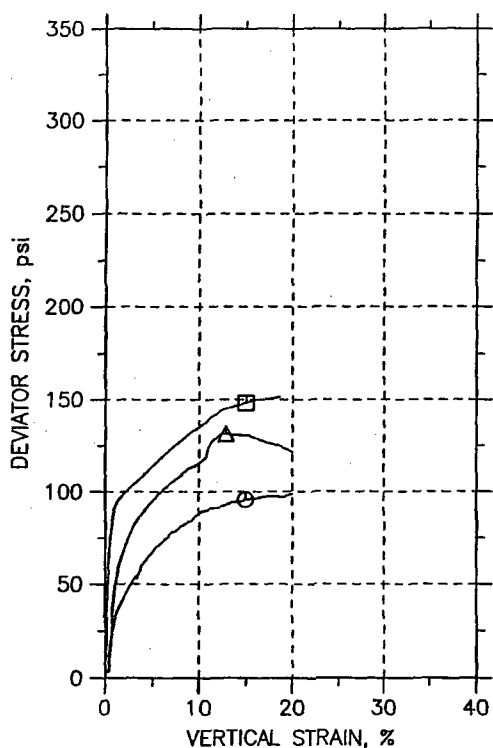
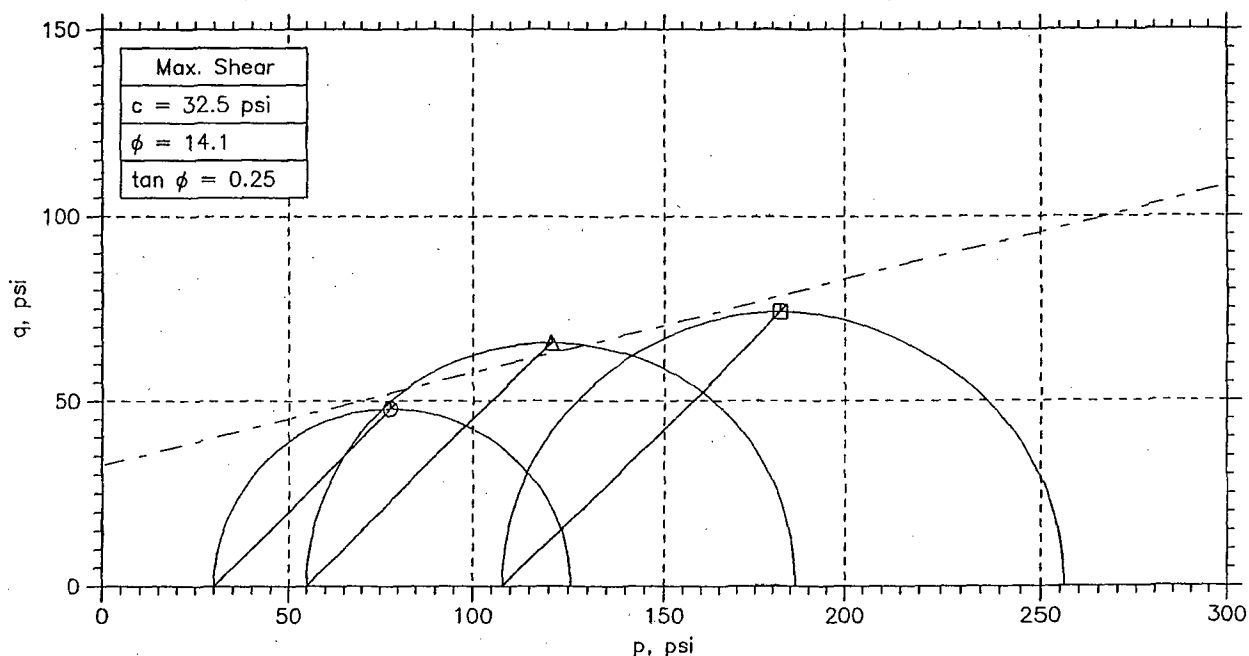


Symbol	○	△	□	
Sample No.	S-24	S-24	S-24	
Test No.	CU10	CU11A	CU12	
Depth	103.5	103.5	103.5	
Initial	Diameter, in	2.87	2.87	2.87
	Height, in	5.82	5.85	5.85
	Water Content, %	26.6	22.6	23.1
	Dry Density, pcf	93.43	95.13	97.17
	Saturation, %	87.7	77.7	83.1
Before Shear	Void Ratio	0.831	0.798	0.76
	Water Content, %	27.2	26.9	26.3
	Dry Density, pcf	98.04	98.36	99.47
	Saturation*, %	100.0	99.9	100.0
	Void Ratio	0.745	0.739	0.72
	Back Press., psi	85.	79.	70.
	Ver. Eff. Cons. Stress, psi	29.99	55.	110.
	Shear Strength, psi	47.81	65.67	74.09
	Strain at Failure, %	15	12.9	15
	Strain Rate, %/min	0.01	0.01	0.01
	B-Value	0.95	0.95	0.95
	Measured Specific Gravity	2.74	2.74	2.74
	Liquid Limit	24	24	24
	Plastic Limit	18	18	18

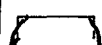
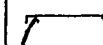
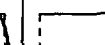
GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP			
	Location: Calvert County, MD			
	Project No.: GTX-6880			
	Boring No.: B-423			
	Sample Type: tube			
	Description: Moist, dark olive gray sand with silty clay (SP-SC), 10% passing #200 sieve			
Remarks: System F - t50 = 40.5 min, Triaxial Rev 1.0.6.318				



CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767



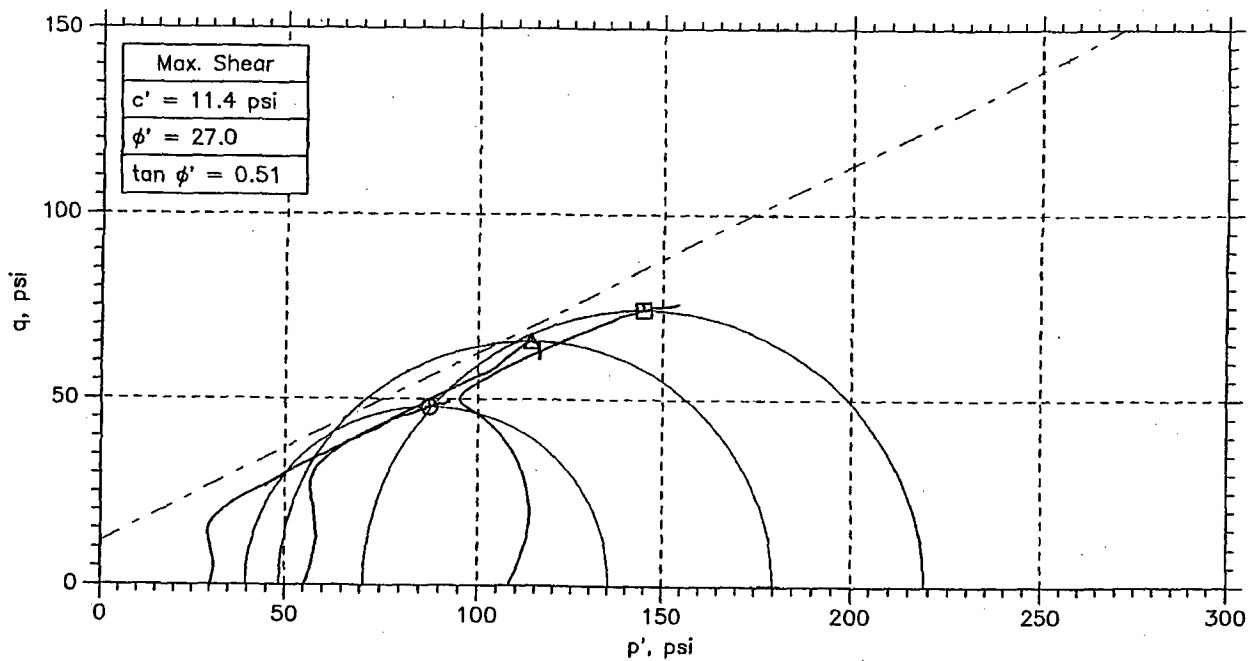
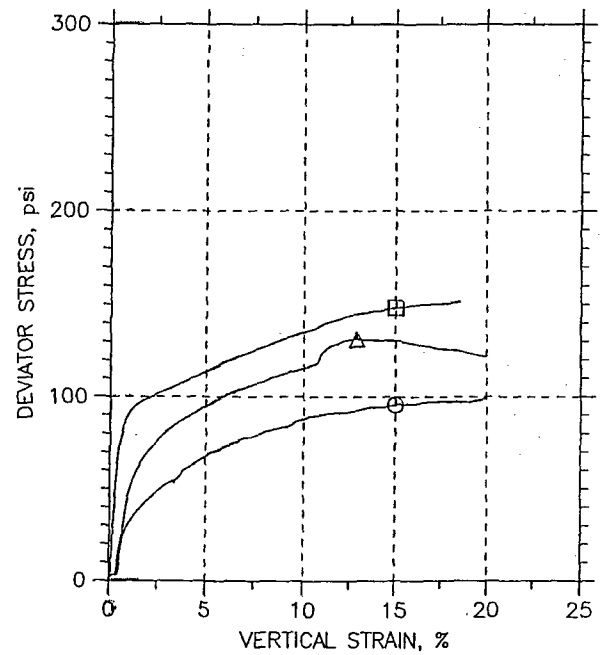
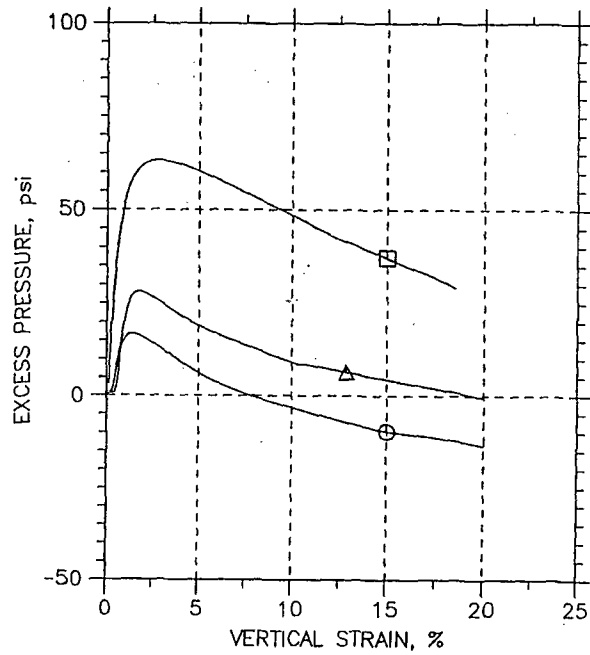
Symbol	○	△	□	
Sample No.	S-24	S-24	S-24	
Test No.	CU10	CU11A	CU12	
Depth	103.5	103.5	103.5	
Initial	Diameter, in	2.87	2.87	2.87
	Height, in	5.82	5.85	5.85
	Water Content, %	26.6	22.6	23.1
	Dry Density, pcf	93.43	95.13	97.17
	Saturation, %	87.7	77.7	83.1
Before Shear	Void Ratio	0.831	0.798	0.76
	Water Content, %	27.2	26.9	26.3
	Dry Density, pcf	98.04	98.36	99.47
	Saturation*, %	100.0	99.9	100.0
	Void Ratio	0.745	0.739	0.72
	Back Press., psi	85.	79.	70.
	Ver. Eff. Cons. Stress, psi	29.99	55.	110.
	Shear Strength, psi	47.81	65.67	74.09
	Strain at Failure, %	15	12.9	15
	Strain Rate, %/min	0.01	0.01	0.01
	B-Value	0.95	0.95	0.95
	Measured Specific Gravity	2.74	2.74	2.74
	Liquid Limit	24	24	24
	Plastic Limit	18	18	18

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear PP	   
	Location: Calvert County, MD	
	Project No.: GTX-6880	
	Boring No.: B-423	
	Sample Type: tube	
	Description: Moist, dark olive gray sand with silty clay (SP-SC), 10% passing #200 sieve	
	Remarks: System F - t50 = 40.5 min, Triaxial Rev 1.0.6.318	

Phase calculations based on start and end of test.

* Saturation is set to 100% for phase calculations.

CONSOLIDATED UNDRAINED TRIAXIAL TEST by ASTM D4767

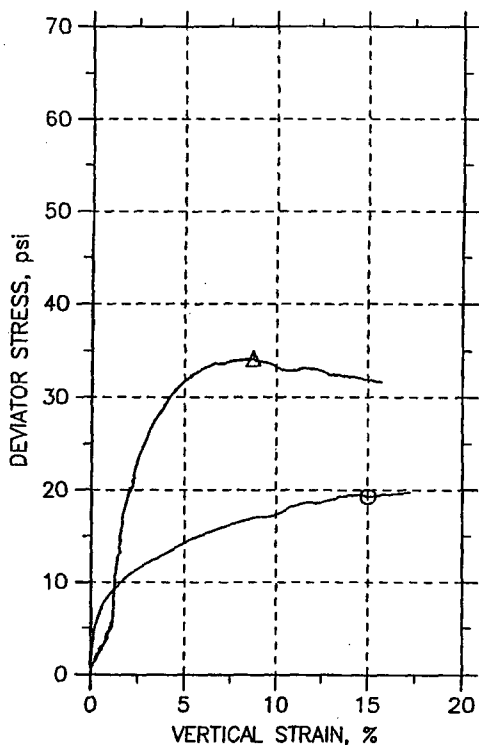
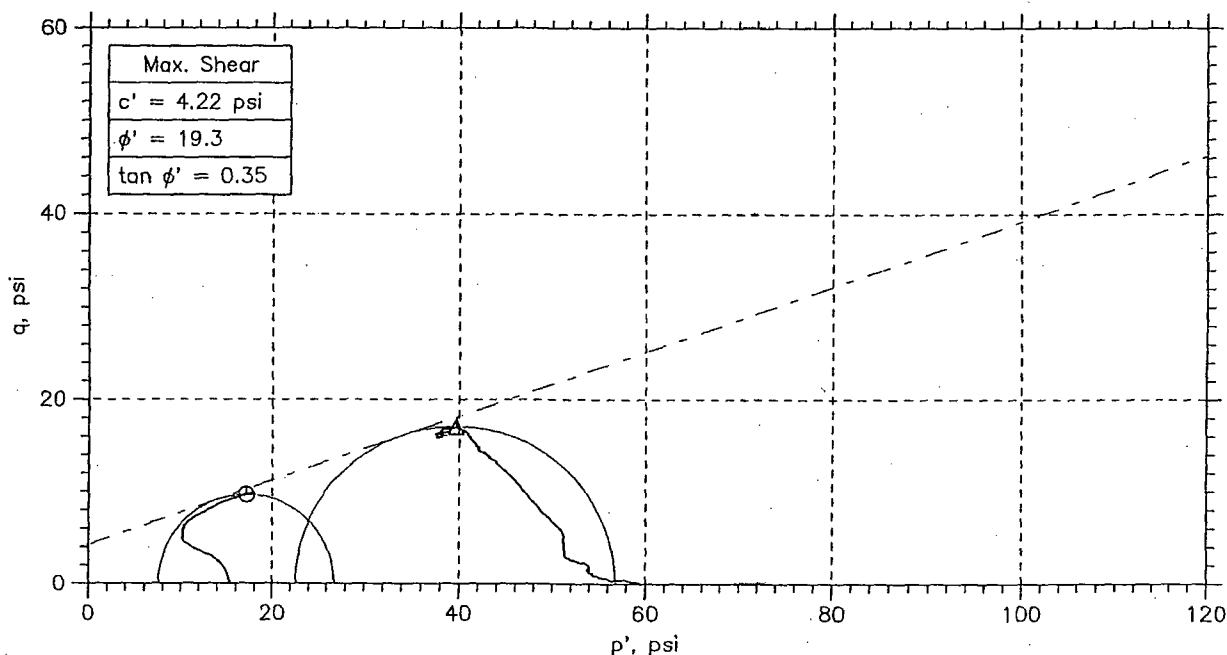


	Sample No.	Test No.	Depth	Tested By	Test Date	Checked By	Check Date	Test File
○	S-24	CU10	103.5	njh	10/28/06	jdt		6880-CU10n.dat
△	S-24	CU11A	103.5	njh	10/25/06	jdt		6880-CU11an.dat
□	S-24	CU12	103.5	njh	10/20/06	jdt		6880-CU12n.dat

**GeoTesting
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Project: Calvert Cliffs Nuclear PP	Location: Calvert County, MD	Project No.: GTX-6880
Boring No.: B-423	Sample Type: tube	
Description: Moist, dark olive gray sand with silty clay (SP-SC), 10% passing #200 sieve		
Remarks: System F - t50 = 40.5 min, Triaxial Rev 1.0.6.31B		

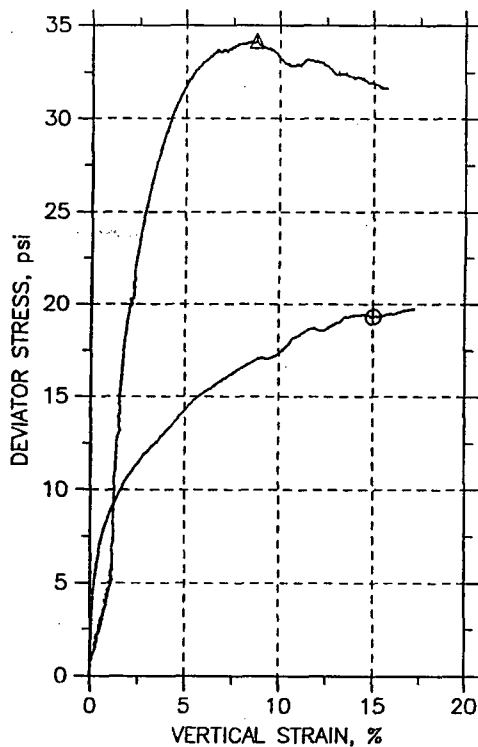
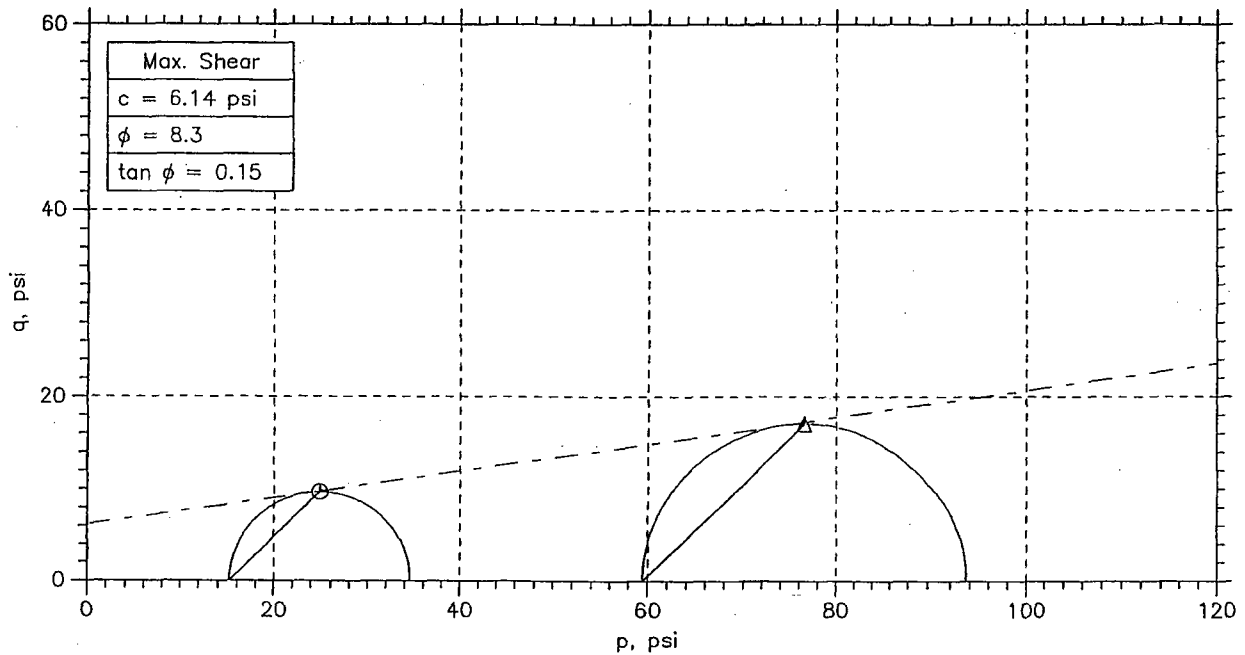
CONSOLIDATED UNDRAINED TRIAXIAL TEST



Symbol	⊙	Δ		
Sample No.	S-13	S-13		
Test No.	CU13	CU15a		
Depth	48.5-50.5	48.5-50.5		
Initial	Diameter, in	2.87	2.87	
	Height, in	5.89	5.95	
	Water Content, %	34.0	47.3	
	Dry Density, pcf	85.03	70.77	
	Saturation, %	95.0	93.4	
Before Shear	Void Ratio	0.953	1.35	
	Water Content, %	38.7	35.5	
	Dry Density, pcf	81.85	85.45	
	Saturation*, %	100.0	100.0	
	Void Ratio	1.03	0.943	
	Back Press., psi	99.99	103.	
	Ver. Eff. Cons. Stress, psi	15.	60.	
	Shear Strength, psi	9.653	17.09	
	Strain at Failure, %	15	8.73	
	Strain Rate, %/min	0.002	0.002	
	B-Value	0.95	0.95	
	Measured Specific Gravity	2.66	2.66	
	Liquid Limit	64	64	
	Plastic Limit	23	23	

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear		
	Location: Calvert County, MD		
	Project No.: GTX-6880		
	Boring No.: B-433		
	Sample Type: tube		
	Description: Moist, black clay, 95% passing #200 sieve		
Remarks: System B - t50 = 200 min, Triaxial Rev 1.0.6.318			

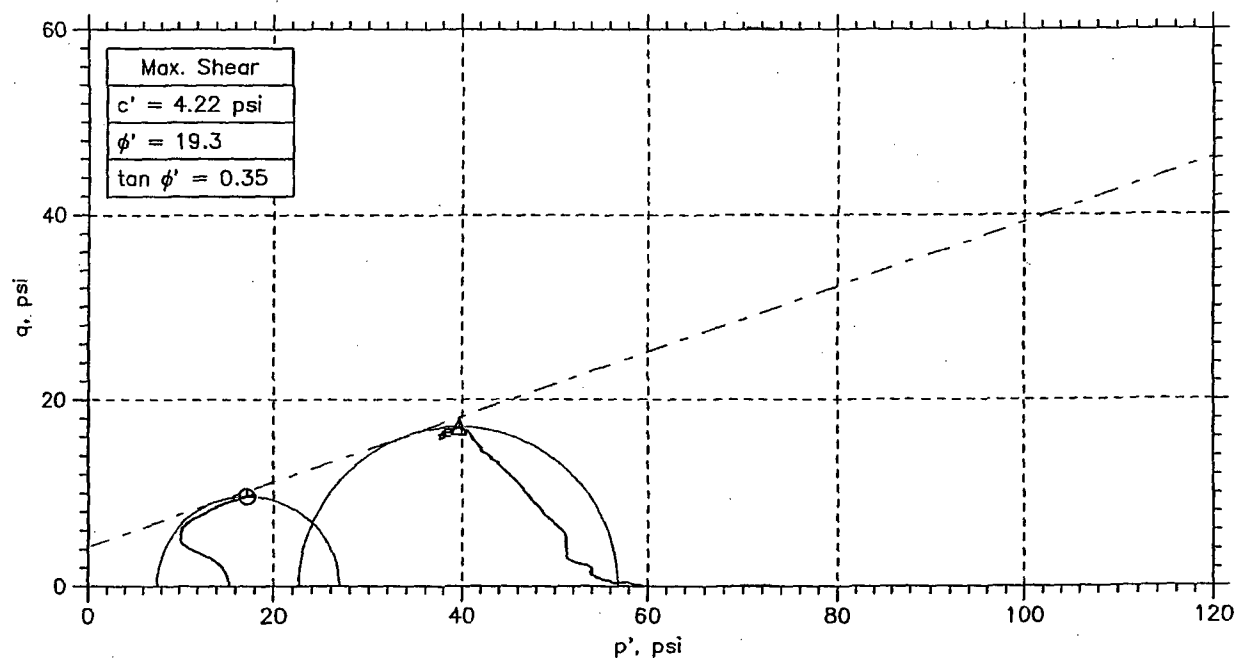
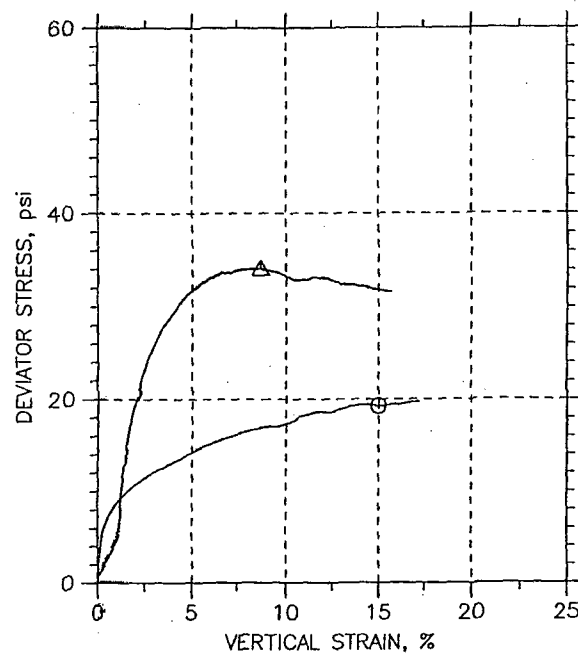
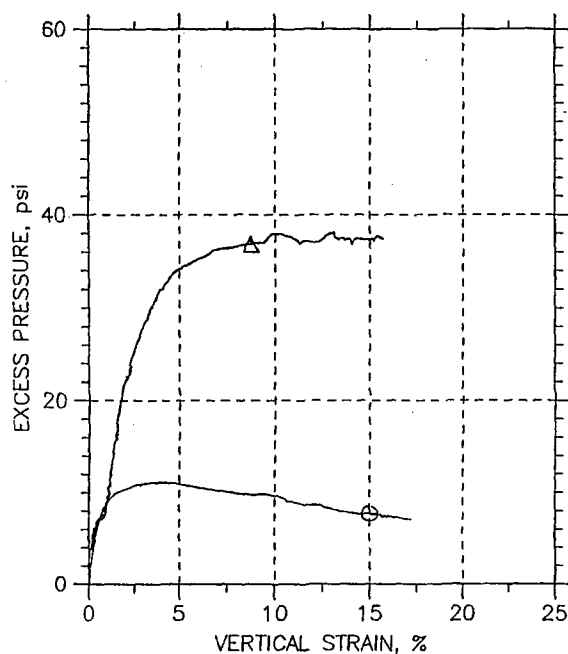
CONSOLIDATED UNDRAINED TRIAXIAL TEST



Symbol	⊙	Δ		
Sample No.	S-13	S-13		
Test No.	CU13	CU15a		
Depth	48.5-50.5	48.5-50.5		
Initial	Diameter, in	2.87	2.87	
	Height, in	5.89	5.95	
	Water Content, %	34.0	47.3	
	Dry Density, pcf	85.03	70.77	
	Saturation, %	95.0	93.4	
	Void Ratio	0.953	1.35	
Before Shear	Water Content, %	38.7	35.5	
	Dry Density, pcf	81.85	85.45	
	Saturation*, %	100.0	100.0	
	Void Ratio	1.03	0.943	
	Back Press., psi	99.99	103.	
	Ver. Eff. Cons. Stress, psi	15.	60.	
	Shear Strength, psi	9.653	17.09	
	Strain at Failure, %	15	8.73	
	Strain Rate, %/min	0.002	0.002	
	B-Value	0.95	0.95	
	Measured Specific Gravity	2.66	2.66	
	Liquid Limit	64	64	
	Plastic Limit	23	23	

GeoTesting express a subsidiary of Geocomp Corporation	Project: Calvert Cliffs Nuclear	   
	Location: Calvert County, MD	
	Project No.: GTX-6880	
	Boring No.: B-433	
	Sample Type: tube	
	Description: Moist, black clay, 95% passing #200 sieve	
Remarks: System B - t50 = 200 min, Triaxial Rev 1.0.6.318		

CONSOLIDATED UNDRAINED TRIAXIAL TEST



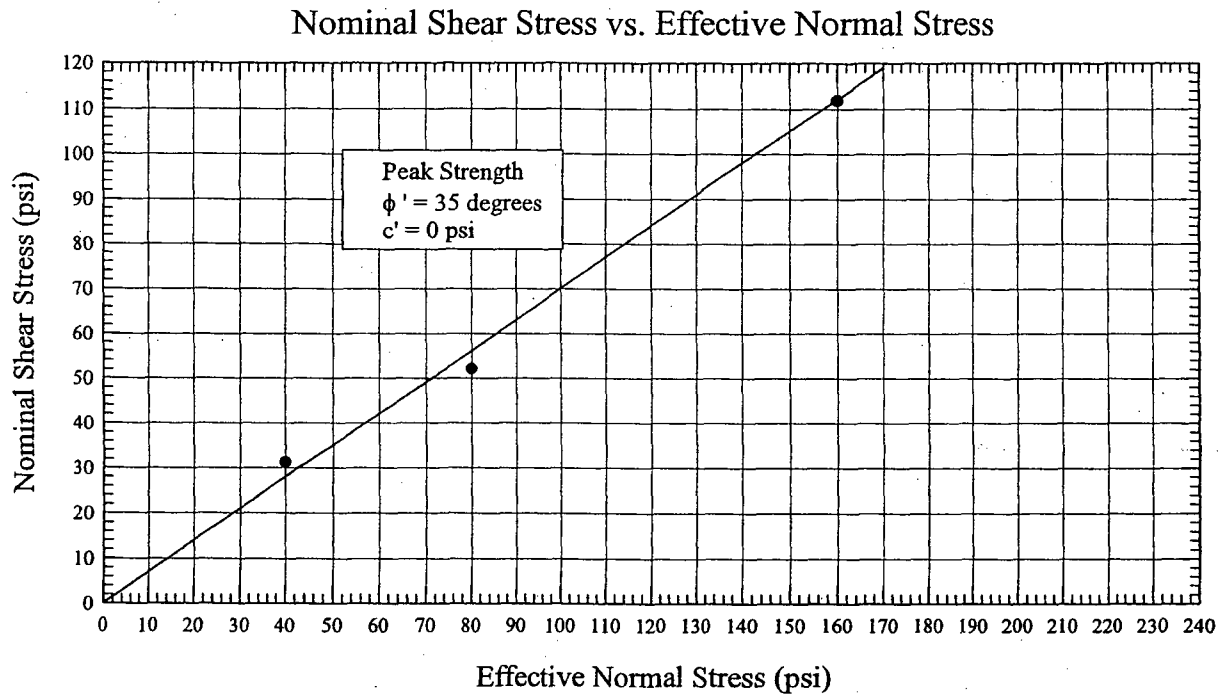
	Sample No.	Test No.	Depth	Tested By	Test Date	Checked By	Check Date	Test File
○	S-13	CU13	48.5-50.5	njh	10/20/06	jdt		6880-CU13na.dat
△	S-13	CU15a	48.5-50.5	njh	10/25/06	jdt		6880-CU15Anan.dat

GeoTesting
express
a subsidiary of Geocomp Corporation

Project: Calvert Cliffs Nuclear	Location: Calvert County, MD	Project No.: GTX-6880
Boring No.: B-433	Sample Type: tube	
Description: Moist, black clay, 95% passing #200 sieve		
Remarks: System B - $t_{50} = 200$ min, Triaxial Rev 1.0.6.318		

DIRECT SHEAR RESULTS

Consolidated Drained Direct Shear (ASTM D3080)



Boring No.: B-307

Depth: 178.5-180.4 ft

SEI Contract: 06120048

Date: 12/12/06

Sample Description: F-m CLAYEY SAND (SC), contains shell fragments - green gray

Reviewed By: CJS

Specimen Type: Tube Sample

Specific Gravity: 2.67

LL: 41

PI: 16

%<200: 37.7



Calvert Cliffs Nuclear Power Plant
 Calvert County, MD



Consolidated Drained Direct Shear Test

ASTM D3080

Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

Date: 10/20/2006

Boring No.: B-307

Depth: 178.5-180.4ft.

Elev: -59.2 to -61.1

Location: Calvert County, MD

Effective Normal Stress (psi): 40.0

Reviewed by: CJS

	Specimen Conditions	
	Initial	Consolidated
Diameter (in.)	2.50	2.50
Height (in.)	0.975	0.96
Area (in ²)	4.91	4.91
Volume (in ³)	4.8	4.7
Weight (lbs)	0.32	0.33
ρ_{wet} (pcf)	114.9	120.7
ρ_{dry} (pcf)	88.0	89.3
Void Ratio	0.89	0.86
Saturation, %	92	100

Shear Testing Conditions	
Effective Normal Stress (psi)	40.0
Consolidation Stress (psi)	40.0
t_{50} (min.)	0.1
Rate of Displ. (in./min)	0.00313

Soil Description: Fine to medium CLAYEY SAND (SC), contains shell fragments - green gray

Specimen Type: Tube Sample

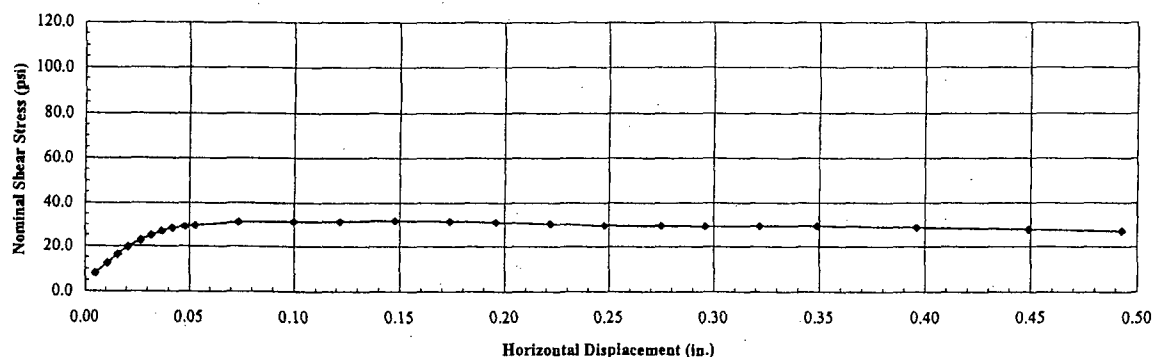
Remarks:

Liquid Limit: 41
Plasticity Index: 16
% finer than No. 200: 37.7
Specific Gravity: 2.67
Initial Moisture, %: 30.5
Final Moisture, %: 35.2

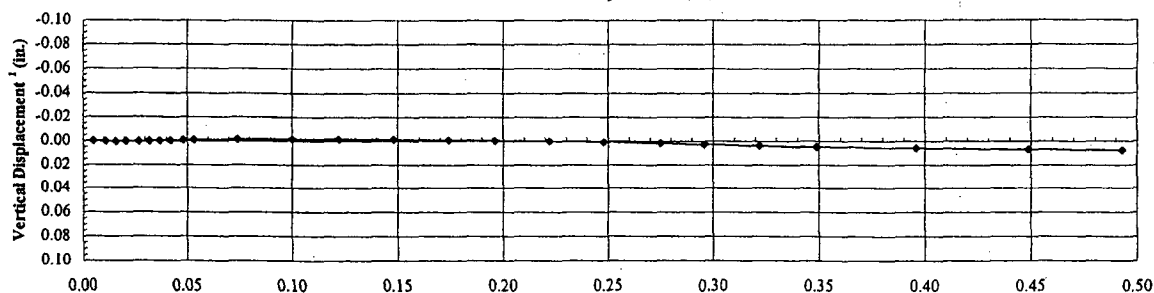
Reading No.	Horizontal Displacement (in.)	Vertical Displacement (in.)	Shear Force (lbs)	Nominal Shear Stress (psi)
1	0.005	0.0002	38.9	7.9
2	0.011	0.0004	61.2	12.5
3	0.016	0.0005	80.4	16.4
4	0.021	0.0006	96.8	19.7
5	0.027	0.0006	110.6	22.5
6	0.032	0.0004	121.7	24.8
7	0.037	0.0002	130.9	26.7
8	0.042	0.0000	138.1	28.1
9	0.048	-0.0003	141.6	28.8
10	0.053	-0.0007	144.5	29.4
11	0.074	-0.0012	152.1	31.0
12	0.100	-0.0014	153.3	31.2
13	0.122	-0.0014	153.8	31.3
14	0.148	-0.0010	155.7	31.7
15	0.174	-0.0005	154.1	31.4
16	0.196	0.0000	151.9	30.9
17	0.222	0.0004	148.6	30.3
18	0.248	0.0011	144.3	29.4
19	0.275	0.0022	143.4	29.2
20	0.296	0.0031	142.4	29.0
21	0.322	0.0042	143.2	29.2
22	0.349	0.0050	143.0	29.1
23	0.396	0.0062	140.0	28.5
24	0.449	0.0072	135.4	27.6
25	0.493	0.0079	130.9	26.7

Notes: 1 - Positive vertical displacement represents compression.

Nominal Shear Stress vs. Horizontal Displacement



Vertical Displacement vs. Horizontal Displacement





Consolidated Drained Direct Shear Test

ASTM D3080

Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

Date: 10/20/2006

Boring No.: B-307

Depth: 178.5-180.4 ft

Elev: -59.2 to -61.1

Location: Calvert County, MD

Effective Normal Stress (psi): 80.0

Reviewed by: CJS

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.50	2.50
Height (in)	0.971	0.94
Area (in ²)	4.91	4.91
Volume (in ³)	4.8	4.6
Weight (lbs)	0.32	0.33
ρ_{wet} (pcf)	115.9	123.4
ρ_{dry} (pcf)	89.6	92.9
Void Ratio	0.85	0.79
Saturation, %	92	100

Shear Testing Conditions	
Effective Normal Stress (psi):	80.0
Consolidation Stress (psi):	80.0
t_{50} (min.):	0.1
Rate of Displ. (in./min):	0.00313

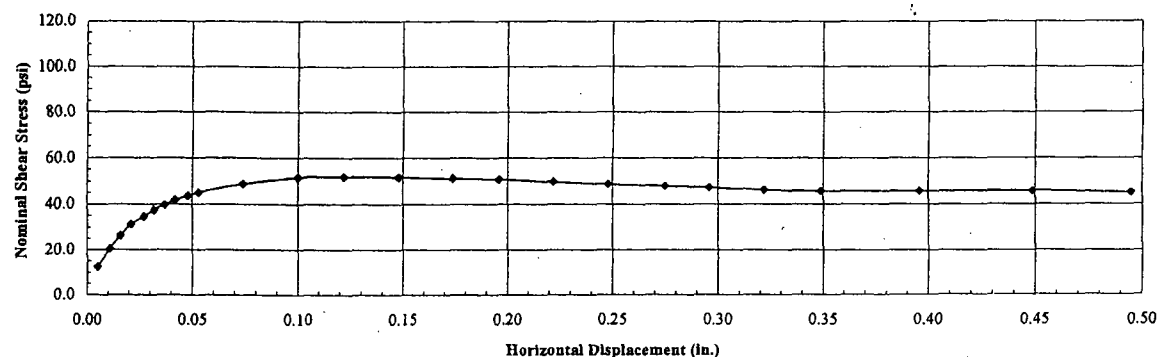
Soil Description: Fine to medium CLAYEY SAND (SC), contains shell fragments - green gray

Specimen Type: Tube Sample

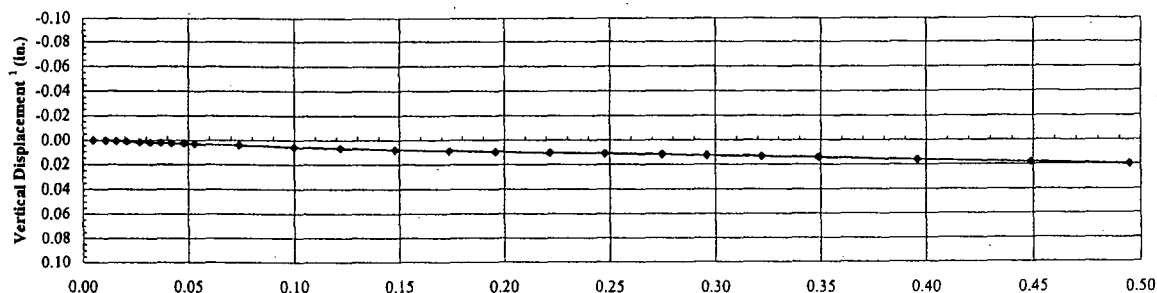
Remarks:

Liquid Limit: 41
Plasticity Index: 16
% finer than No. 200: 37.7
Specific Gravity: 2.67
Initial Moisture, %: 29.3
Final Moisture, %: 32.9

Nominal Shear Stress vs. Horizontal Displacement



Vertical Displacement vs. Horizontal Displacement



Notes: 1 - Positive vertical displacement represents compression.



Consolidated Drained Direct Shear Test

ASTM D3080

Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

Date: 10/20/2006

Boring No.: B-307

Depth: 178.5-180.4 ft

Elev: -59.2 to -61.1

Location: Calvert County, MD

Effective Normal Stress (psi): 160.0

Reviewed by: CJS

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.50	2.50
Height (in)	0.973	0.93
Area (in ²)	4.91	4.91
Volume (in ³)	4.8	4.6
Weight (lbs)	0.32	0.32
ρ_{wet} (pcf)	115.0	123.2
ρ_{dry} (pcf)	88.1	92.5
Void Ratio	0.88	0.80
Saturation, %	92	100

Shear Testing Conditions	
Effective Normal Stress (psi)	160.0
Consolidation Stress (psi)	160.0
t_{90} (min.)	0.5
Rate of Displ. (in./min)	0.0031

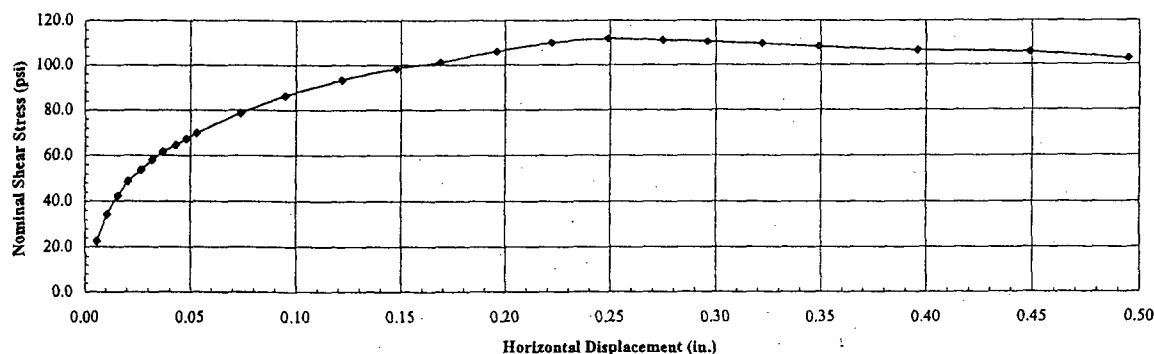
Soil Description: Fine to medium CLAYEY SAND (SC), contains shell fragments - green gray

Specimen Type: Tube Sample

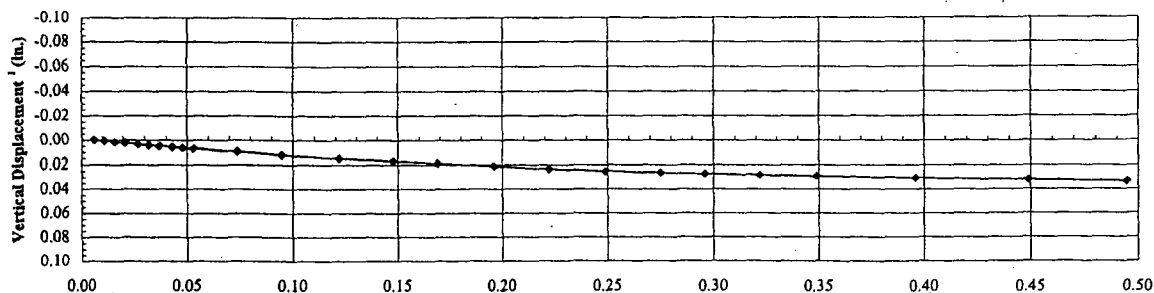
Remarks:

Liquid Limit: 41
Plasticity Index: 16
% finer than No. 200: 37.7
Specific Gravity: 2.67
Initial Moisture, %: 30.5
Final Moisture, %: 33.2

Nominal Shear Stress vs. Horizontal Displacement



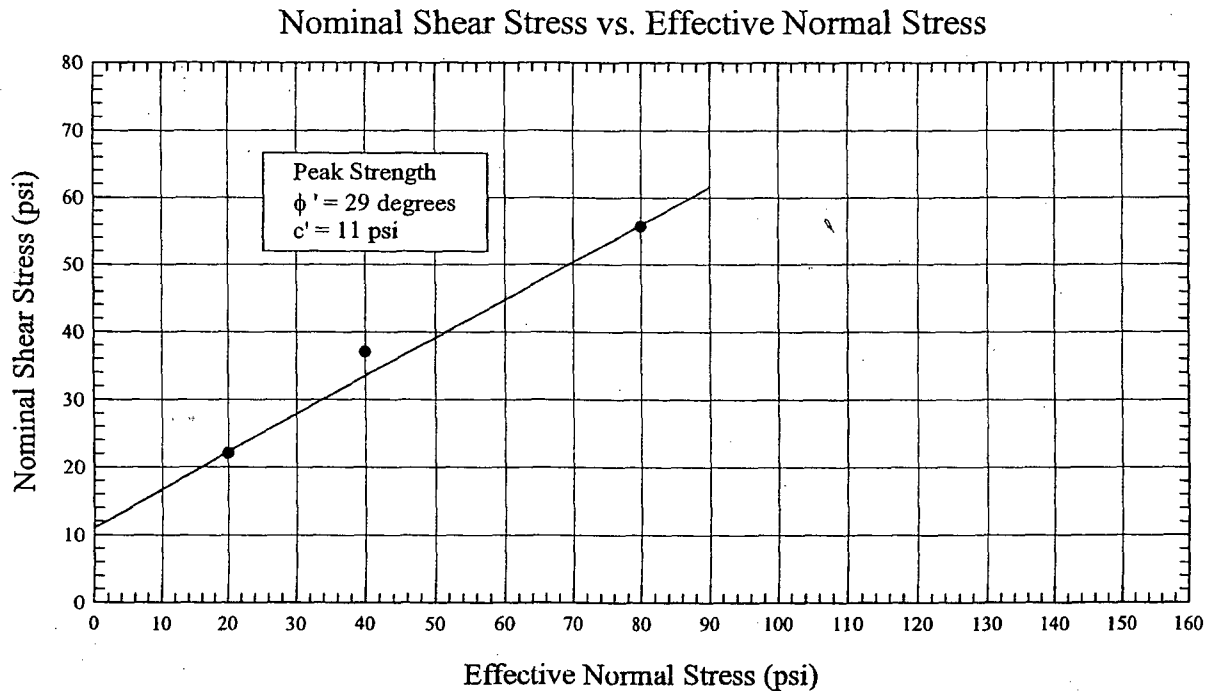
Vertical Displacement vs. Horizontal Displacement



Reading No.	Horizontal Displacement (in.)	Vertical Displacement (in.)	Shear Force (lbs)	Nominal Shear Stress (psi)
1	0.006	0.0003	110.8	22.6
2	0.011	0.0009	168.2	34.3
3	0.016	0.0018	207.9	42.3
4	0.021	0.0027	238.6	48.6
5	0.027	0.0035	263.0	53.6
6	0.032	0.0043	284.0	57.8
7	0.037	0.0051	301.6	61.4
8	0.043	0.0058	316.5	64.5
9	0.048	0.0065	329.9	67.2
10	0.053	0.0071	342.2	69.7
11	0.074	0.0097	385.3	78.5
12	0.095	0.0121	423.1	86.2
13	0.122	0.0148	457.4	93.1
14	0.148	0.0171	482.8	98.3
15	0.169	0.0189	496.7	101.1
16	0.196	0.0213	520.7	106.0
17	0.222	0.0237	539.7	109.9
18	0.249	0.0254	548.9	111.8
19	0.275	0.0266	545.6	111.1
20	0.296	0.0276	542.6	110.5
21	0.322	0.0287	538.0	109.6
22	0.349	0.0296	531.6	108.3
23	0.396	0.0311	523.3	106.6
24	0.449	0.0325	518.5	105.6
25	0.495	0.0338	504.0	102.6

Notes: 1 - Positive vertical displacement represents compression.

Consolidated Drained Direct Shear (ASTM D3080)



Boring No.: B-313

Depth: 93.5-94.7 ft

SEI Contract: 06120048

Date: 12/12/06

Sample Description: Sandy LEAN CLAY (CL), contains shells - gray

Reviewed By: CJS

Specimen Type: Tube Sample

Specific Gravity: 2.69

LL: 49

PI: 24

%<200: NA



Calvert Cliffs Nuclear Power Plant
Calvert County, MD



Consolidated Drained Direct Shear Test

ASTM D3080

Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

Date: 11/9/2006

Boring No.: B-313

Depth: 93.5-94.7ft.

Elev: -42.8 to -44.0 ft

Location: Calvert County, MD

Effective Normal Stress (psi): 20.0

Reviewed by: CJS

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.50	2.50
Height (in)	0.974	0.97
Area (in ²)	4.91	4.91
Volume (in ³)	4.8	4.7
Weight (lbs)	0.30	0.32
ρ_{wet} (pcf)	108.0	117.3
ρ_{dry} (pcf)	80.3	81.0
Void Ratio	1.09	1.07
Saturation, %	86	100

Shear Testing Conditions	
Effective Normal Stress (psi):	20.0
Consolidation Stress (psi):	20.0
t_{90} (min.):	0.1
Rate of Displ. (in./min):	0.00417

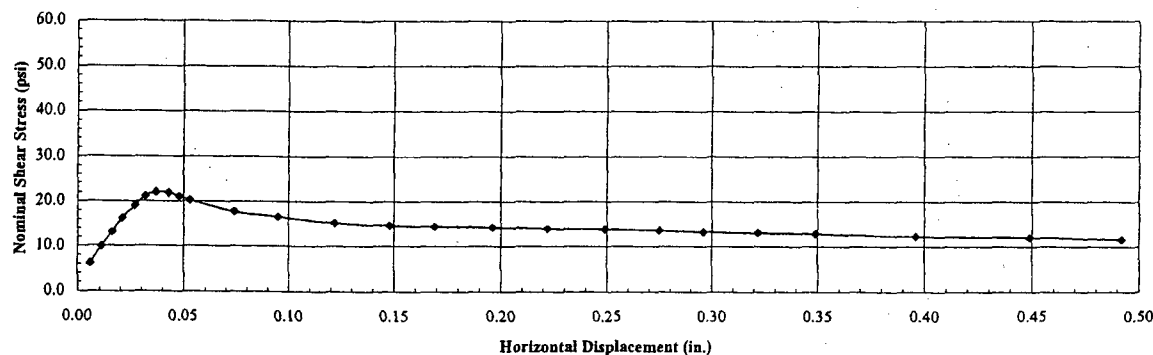
Soil Description: Sandy LEAN CLAY(CL) contains shells - gray

Specimen Type: Tube Sample

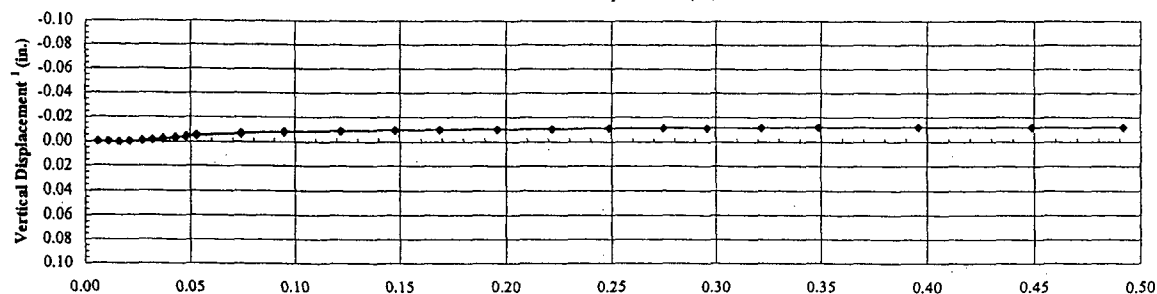
Remarks:

Liquid Limit: 49
Plasticity Index: 24
% finer than No. 200: na
Specific Gravity: 2.69
Initial Moisture, %: 34.5
Final Moisture, %: 44.8

Nominal Shear Stress vs. Horizontal Displacement



Vertical Displacement vs. Horizontal Displacement



Notes: 1 - Positive vertical displacement represents compression.



Consolidated Drained Direct Shear Test

ASTM D3080

Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

Date: 11/9/2006

Boring No.: B-313

Depth: 93.5-94.7ft.

Elev: -42.8 to -44.0 ft

Location: Calveert County, MD

Effective Normal Stress (psi): 40.0

Reviewed by: CJS

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.50	2.50
Height (in)	0.972	0.95
Area (in ²)	4.91	4.91
Volume (in ³)	4.8	4.7
Weight (lbs)	0.30	0.31
P_{wet} (pcf)	108.9	114.9
P_{dry} (pcf)	78.8	80.3
Void Ratio	1.12	1.08
Saturation, %	91	100

Shear Testing Conditions	
Effective Normal Stress (psi)	40.0
Consolidation Stress (psi)	40.0
t_{50} (min.)	0.1
Rate of Displ. (in./min)	0.00417

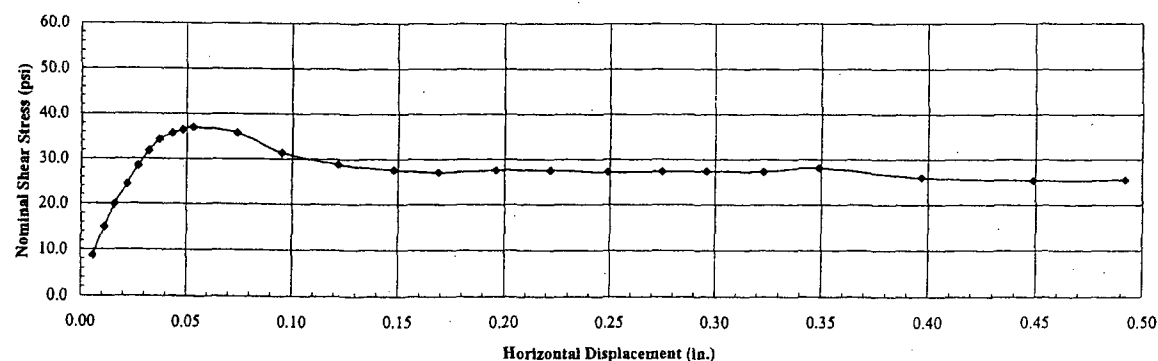
Soil Description: Sandy LEAN CLAY(CL) contains shells - gray

Specimen Type: Tube Sample

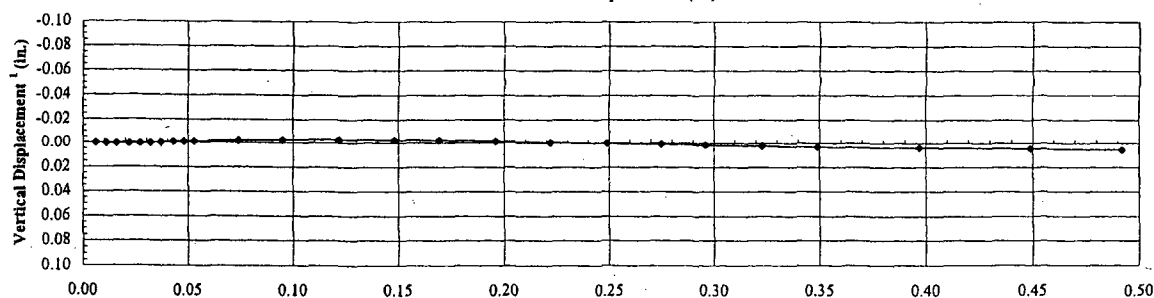
Remarks:

Liquid Limit: 49
Plasticity Index: 24
% finer than No. 200: na
Specific Gravity: 2.69
Initial Moisture, %: 38.2
Final Moisture, %: 43.1

Nominal Shear Stress vs. Horizontal Displacement



Vertical Displacement vs. Horizontal Displacement



Reading No.	Horizontal Displacement (in.)	Vertical Displacement (in.)	Shear Force (lbs)	Nominal Shear Stress (psi)
1	0.006	0.0003	42.4	8.6
2	0.011	0.0006	73.1	14.9
3	0.016	0.0008	97.6	19.9
4	0.022	0.0008	119.6	24.4
5	0.027	0.0008	139.6	28.4
6	0.032	0.0005	155.9	31.7
7	0.037	0.0001	168.2	34.3
8	0.043	-0.0003	175.0	35.6
9	0.048	-0.0006	178.6	36.4
10	0.053	-0.0009	181.5	37.0
11	0.074	-0.0018	175.8	35.8
12	0.095	-0.0024	154.3	31.4
13	0.122	-0.0025	141.6	28.8
14	0.148	-0.0024	135.9	27.7
15	0.169	-0.0021	133.2	27.1
16	0.196	-0.0013	135.6	27.6
17	0.222	-0.0003	135.3	27.6
18	0.249	0.0004	133.5	27.2
19	0.275	0.0012	134.3	27.3
20	0.296	0.0018	134.5	27.4
21	0.323	0.0026	134.0	27.3
22	0.349	0.0035	138.0	28.1
23	0.397	0.0043	127.5	26.0
24	0.449	0.0052	124.4	25.3
25	0.492	0.0062	125.0	25.5

Notes: 1 - Positive vertical displacement represents compression.



Consolidated Drained Direct Shear Test

ASTM D3080

Project: Calvert Cliffs Nuclear Power Plant

Schnabel Contract: 06120048

Date: 11/9/2006

Boring No.: B-313

Depth: 93.5-94.7ft.

Elev: -42.8 to -44.0 ft.

Location: Calvert County, MD

Effective Normal Stress (psi): 80.0

Reviewed by: CJS

	Specimen Conditions	
	Initial	Consolidated
Diameter (in)	2.50	2.50
Height (in)	0.976	0.93
Area (in ²)	4.91	4.91
Volume (in ³)	4.8	4.6
Weight (lbs)	0.29	0.30
ρ_{wet} (pcf)	106.3	114.8
ρ_{dry} (pcf)	78.6	82.4
Void Ratio	1.13	1.03
Saturation, %	84	100

Shear Testing Conditions	
Effective Normal Stress (psi)	80.0
Consolidation Stress (psi)	80.0
t_{50} (min.)	0.1
Rate of Displ. (in./min.)	0.00417

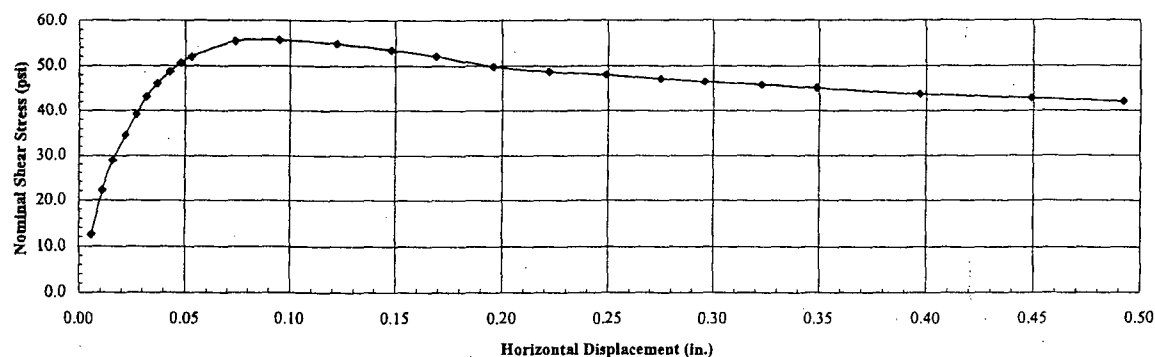
Soil Description: Sandy LEAN CLAY(CL) contains shell - gray

Specimen Type: Tube Sample

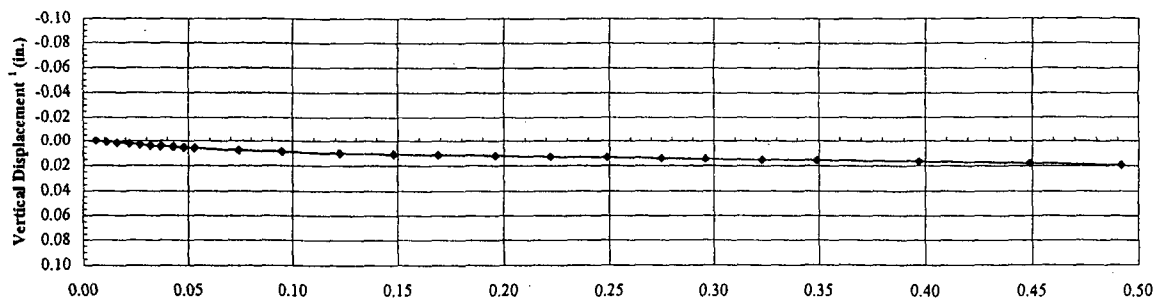
Remarks:

Liquid Limit: 49
Plasticity Index: 24
% finer than No. 200: na
Specific Gravity: 2.69
Initial Moisture, %: 35.3
Final Moisture, %: 39.3

Nominal Shear Stress vs. Horizontal Displacement



Vertical Displacement vs. Horizontal Displacement



Reading No.	Horizontal Displacement (in.)	Vertical Displacement (in.)	Shear Force (lbs)	Nominal Shear Stress (psi)
1	0.006	0.0003	61.7	12.6
2	0.011	0.0011	108.7	22.1
3	0.016	0.0019	141.8	28.9
4	0.022	0.0027	169.3	34.5
5	0.027	0.0034	192.2	39.1
6	0.032	0.0040	211.6	43.1
7	0.037	0.0046	226.4	46.1
8	0.043	0.0051	238.8	48.6
9	0.048	0.0057	248.4	50.6
10	0.053	0.0061	255.5	52.0
11	0.074	0.0076	272.3	55.5
12	0.095	0.0086	273.6	55.7
13	0.122	0.0098	269.6	54.9
14	0.148	0.0106	262.8	53.5
15	0.169	0.0112	255.9	52.1
16	0.196	0.0118	244.5	49.8
17	0.222	0.0125	238.9	48.6
18	0.249	0.0132	235.6	48.0
19	0.275	0.0139	231.3	47.1
20	0.296	0.0145	228.2	46.5
21	0.323	0.0151	224.8	45.8
22	0.349	0.0156	221.2	45.0
23	0.397	0.0167	214.6	43.7
24	0.449	0.0179	210.3	42.8
25	0.492	0.0193	206.3	42.0

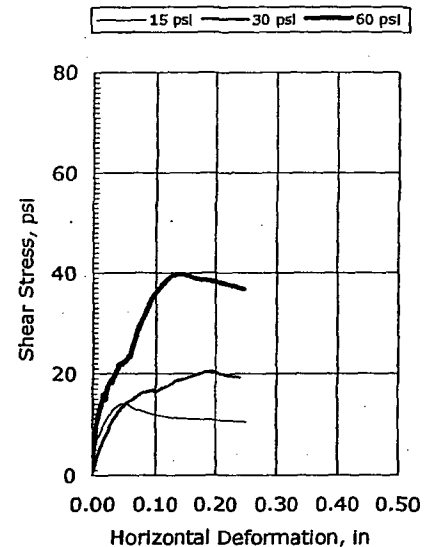
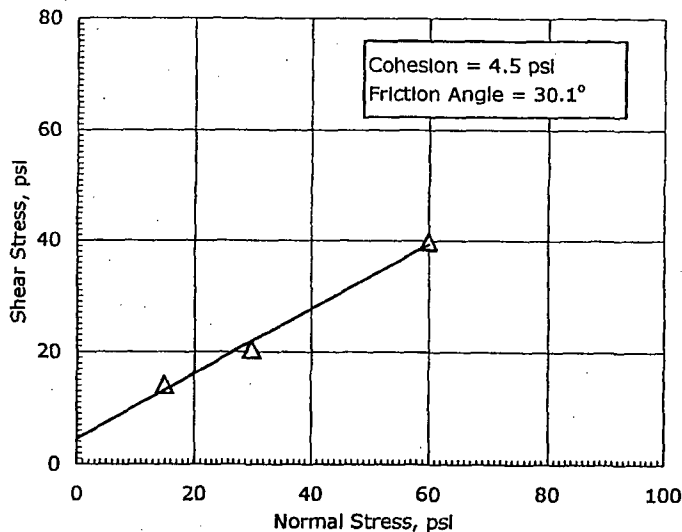
Notes: 1 - Positive vertical displacement represents compression.

GeoTesting express

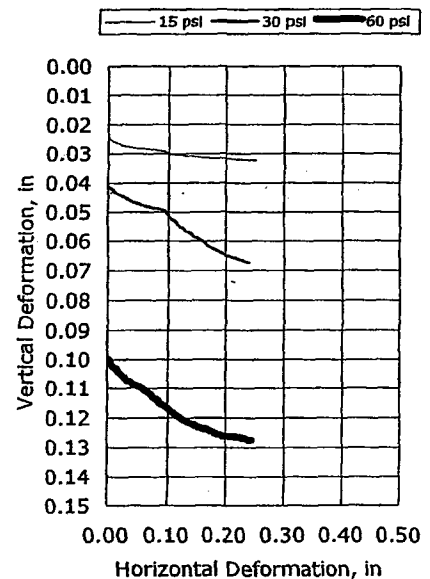
a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/5/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-316
Sample ID:	S-14
Depth, ft:	53.5-55.5
Visual Description:	Moist, dark olive gray sandy clay

Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D 3080-04



Test No.:	DS1	DS2	DS3
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	144.7	138.5	145.7
Initial Dry Density, pcf:	84.6	80.3	84.5
Initial Moisture Content, %:	32.8	33.8	33.7
Initial Bulk Density, pcf:	112	107	113
Initial Degree of Saturation:	86.9	81.2	89.3
Initial Void Ratio:	0.978	1.15	1.05
Final Dry Density, pcf:	87.4	86.1	96.9
Final Moisture Content, %:	36.7	41.87	33.52
Final Bulk Density, pcf:	119.5	122.1	129.4
Normal Stress, psi:	15.0	30.0	60.0
Maximum Shear Stress, psi	14.1	20.4	39.7
Shear Rate, in/min:	0.0005	0.0005	0.0005
t ₅₀ :	---	---	0.5
Sample Type:	Tube		
Measured Specific Gravity:	2.77		
Liquid Limit:	33		
Plastic Limit:	11		
Plasticity Index:	22		
% Passing #200 sieve:	50		
Soil Classification:	Sandy Lean Clay		
Group Symbol:	CL		



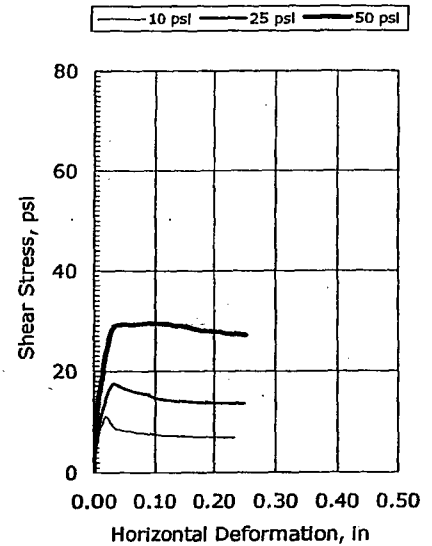
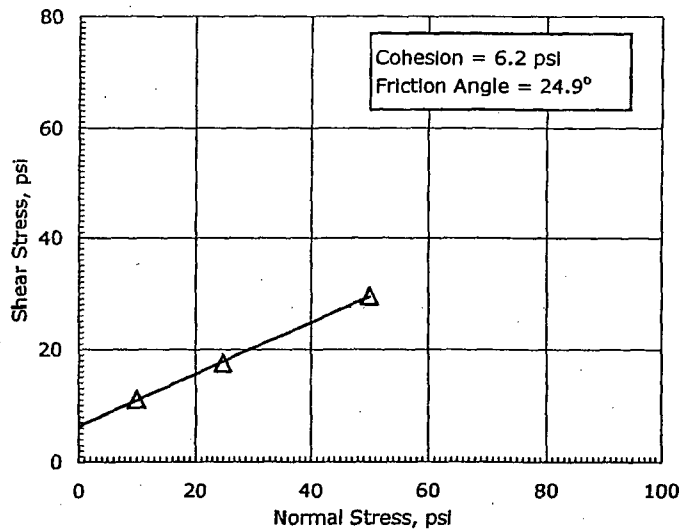
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

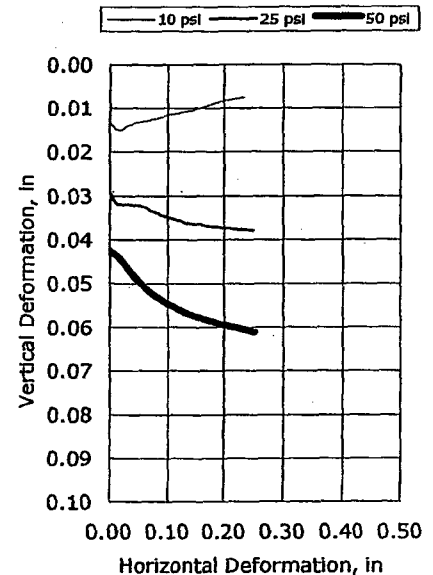
a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/8/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-319
Sample ID:	S-10
Depth, ft:	33.5-35.5
Visual Description:	Molst, dark gray clay with sand

Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D 3080-04



Test No.:	DS7	DS8	DS9
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	154.5	156.0	154.5
Initial Dry Density, pcf:	92.6	93.1	93.5
Initial Moisture Content, %:	29.5	30.0	28.3
Initial Bulk Density, pcf:	120	121	120
Initial Degree of Saturation:	98.4	99.6	93.7
Initial Void Ratio:	0.800	0.078	0.783
Final Dry Density, pcf:	93.3	97.6	99.6
Final Moisture Content, %:	32.3	29.6	30.1
Final Bulk Density, pcf:	123.5	126.4	129.5
Normal Stress, psi:	10.0	25.0	50.0
Maximum Shear Stress, psi	11.0	17.5	29.5
Shear Rate, in/min:	0.0005	0.0005	0.0005
t ₅₀ :	---	---	1.0
Sample Type:	Tube		
Measured Specific Gravity:	2.67		
Liquid Limit:	49		
Plastic Limit:	12		
Plasticity Index:	37		
% Passing #200 sieve:	72		
Soil Classification:	Lean Clay with Sand		
Group Symbol:	CL		



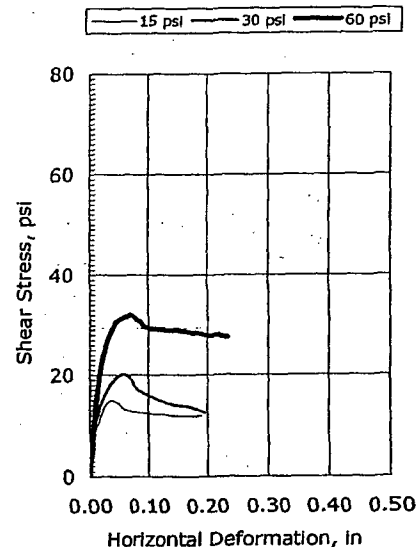
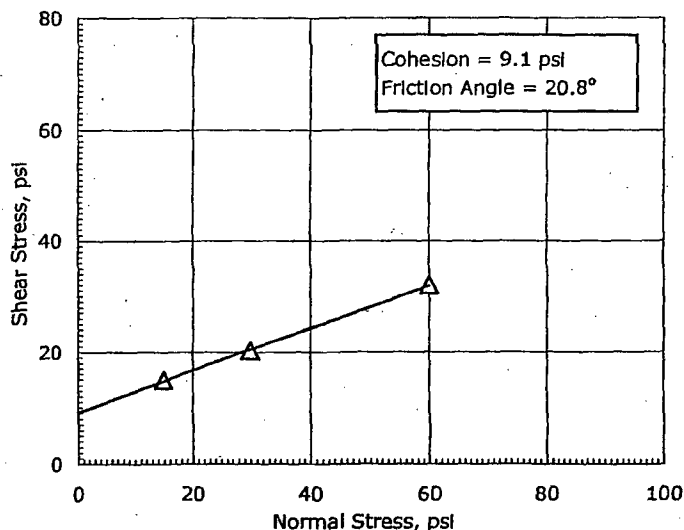
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

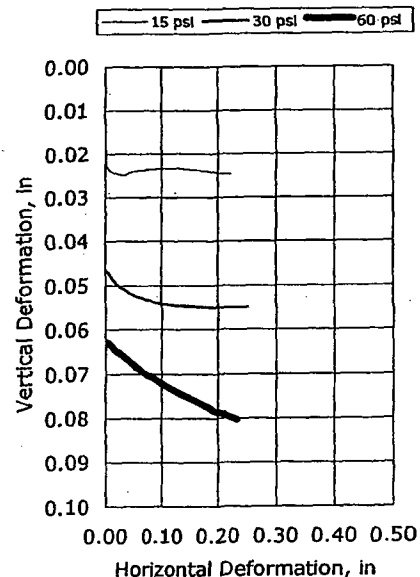
a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/7/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-319
Sample ID:	S-12
Depth, ft:	43.5-45.2
Visual Description:	Moist, dark gray clay

Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D 3080-04



Test No.:	DS4	DS5	DS6a
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	149.8	146.8	149.0
Initial Dry Density, pcf:	86.0	85.3	85.8
Initial Moisture Content, %:	35.1	33.6	34.7
Initial Bulk Density, pcf:	116	114	116
Initial Degree of Saturation:	97.7	91.9	96.1
Initial Void Ratio:	0.981	0.999	0.985
Final Dry Density, pcf:	88.2	90.2	93.3
Final Moisture Content, %:	37.12	37.5	32.2
Final Bulk Density, pcf:	120.9	124.0	123.3
Normal Stress, psi:	15.0	30.0	60.0
Maximum Shear Stress, psi	15.0	20.2	32.0
Shear Rate, in/min:	0.001	0.001	0.001
t ₅₀ :	---	---	1.2
Sample Type:	Tube		
Measured Specific Gravity:	2.73		
Liquid Limit:	58		
Plastic Limit:	13		
Plasticity Index:	45		
% Passing #200 sieve:	87		
Soil Classification:	Fat Clay		
Group Symbol:	CH		



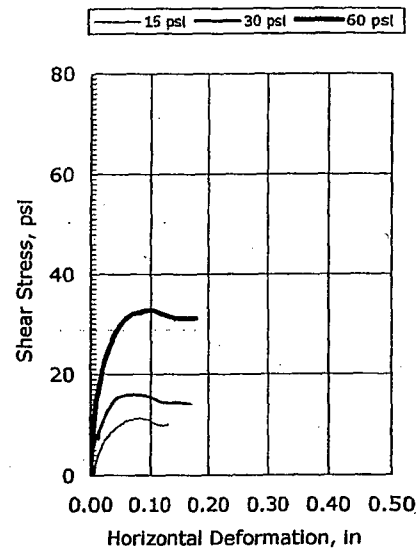
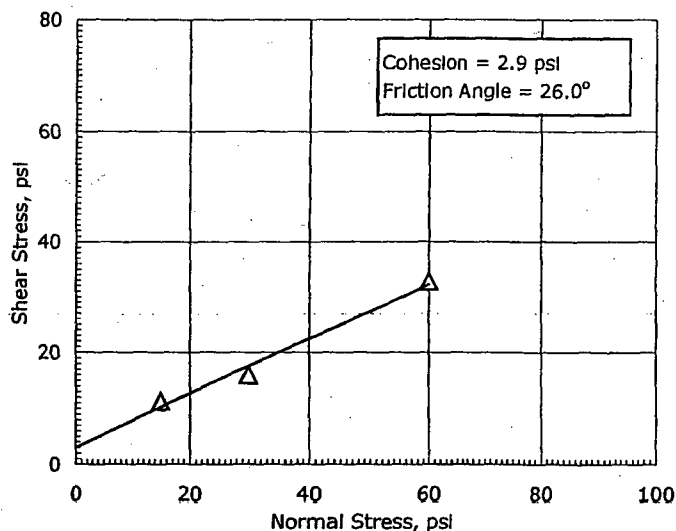
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

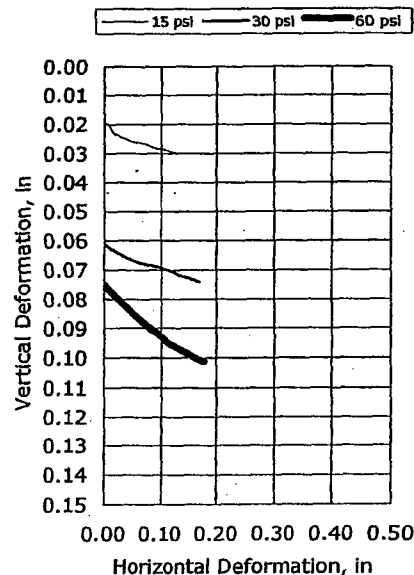
a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	10/17/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-320
Sample ID:	S-11
Depth, ft:	38.5-40.5
Visual Description:	Moist, very dark gray clayey sand

Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D 3080-04



Test No.:	DS136	DS137	DS138
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	148.2	154.6	152.8
Initial Dry Density, pcf:	89.5	94.5	92.9
Initial Moisture Content, %:	28.5	27.0	27.6
Initial Bulk Density, pcf:	115	120	119
Initial Degree of Saturation:	89.8	96.2	94.7
Initial Void Ratio:	0.835	0.738	0.767
Final Dry Density, pcf:	92.7	102.3	103.9
Final Moisture Content, %:	32.65	29.1	27.2
Final Bulk Density, pcf:	122.9	132.0	132.2
Normal Stress, psi:	15.0	30.0	60.0
Maximum Shear Stress, psi	11.3	16.0	32.8
Shear Rate, in/min:	0.0004	0.0004	0.0004
t ₅₀ :	---	---	0.4
Sample Type:	Tube		
Measured Specific Gravity:	2.63		
Liquid Limit:	36		
Plastic Limit:	16		
Plasticity Index:	20		
% Passing #200 sieve:	49		
Soil Classification:	Clayey Sand		
Group Symbol:	SC		



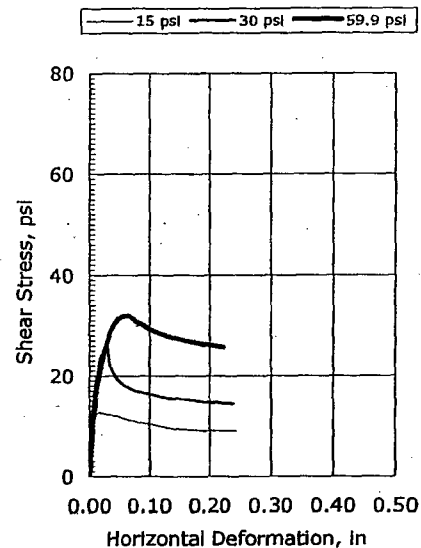
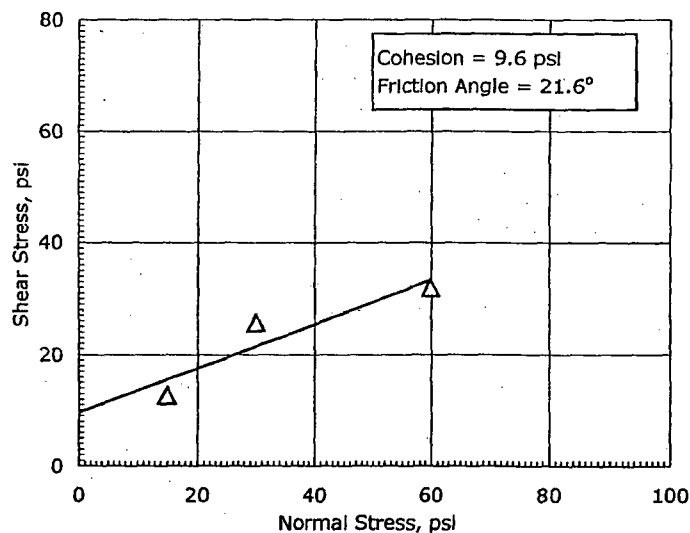
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

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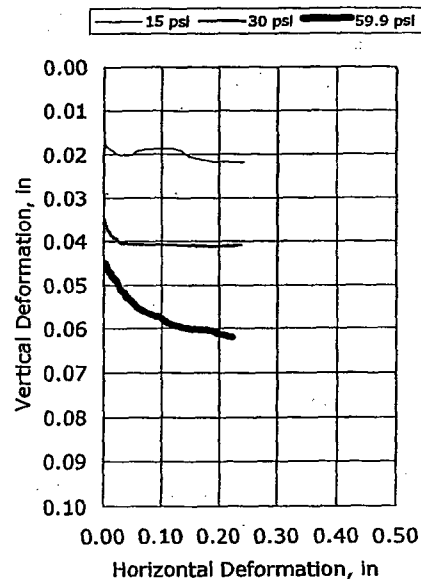
Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/24/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-320
Sample ID:	S-13
Depth, ft:	48.5-50.0
Visual Description:	Moist, dark olive gray clay with sand

Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D 3080-04



Test No.:	DS136	DS137	DS138
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	146.4	146.4	145.8
Initial Dry Density, pcf:	84.0	83.7	84.1
Initial Moisture Content, %:	35.3	35.8	34.6
Initial Bulk Density, pcf:	114	114	113
Initial Degree of Saturation:	93.3	93.9	91.6
Initial Void Ratio:	1.037	1.044	1.034
Final Dry Density, pcf:	85.9	87.2	85.6
Final Moisture Content, %:	39.18	38.0	36.3
Final Bulk Density, pcf:	119.5	120.4	116.7
Normal Stress, psi:	15.0	30.0	59.9
Maximum Shear Stress, psi:	12.7	25.7	31.9
Shear Rate, in/min:	0.0003	0.0003	0.0003
t ₅₀ :	---	---	0.4

Sample Type:	Tube
Measured Specific Gravity:	2.74
Liquid Limit:	59
Plastic Limit:	19
Plasticity Index:	40
% Passing #200 sieve:	82
Soil Classification:	Fat Clay with Sand
Group Symbol:	CH



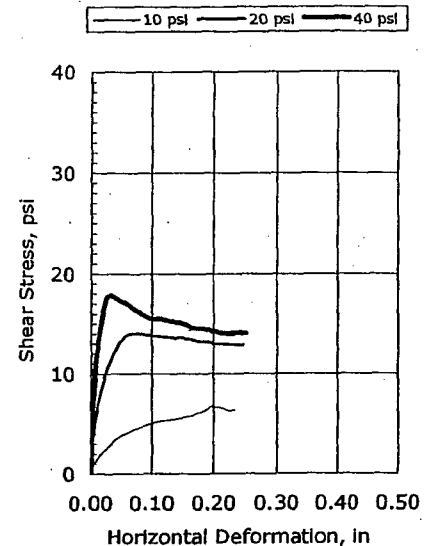
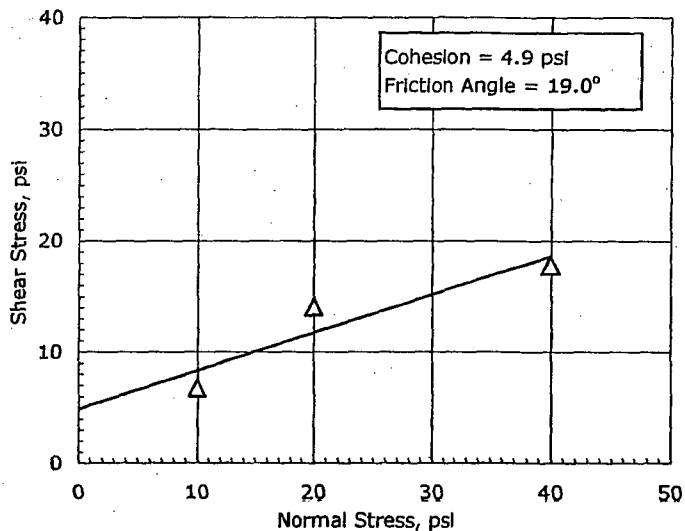
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

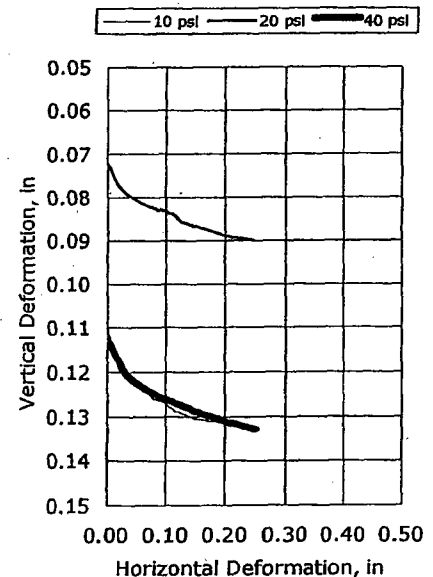
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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	10/13/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-326
Sample ID:	S-12
Depth, ft:	43.5-45.5
Visual Description:	Moist, very dark gray organic clay

Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D 3080-04



Test No.:	DS133	DS134	DS135
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	144.3	145.6	142.0
Initial Dry Density, pcf:	87.3	87.2	81.5
Initial Moisture Content, %:	28.2	29.6	35.2
Initial Bulk Density, pcf:	111.9	113.0	110.2
Initial Degree of Saturation:	81.9	85.6	89.0
Initial Void Ratio:	0.930	0.933	1.068
Final Dry Density, pcf:	100.4	95.8	94.0
Final Moisture Content, %:	39.1	34.0	37.7
Final Bulk Density, pcf:	139.6	128.4	129.5
Normal Stress, psi:	10.0	20.0	40.0
Maximum Shear Stress, psi	6.7	14.1	17.8
Shear Rate, in/min:	0.0004	0.0004	0.0004
t ₅₀ :	---	---	4.7
Sample Type:	Tube		
Measured Specific Gravity:	2.70		
Liquid Limit:	63		
Plastic Limit:	22		
Plasticity Index:	41		
% Passing #200 sieve:	89		
Soil Classification:	Organic Clay		
Group Symbol:	OH		



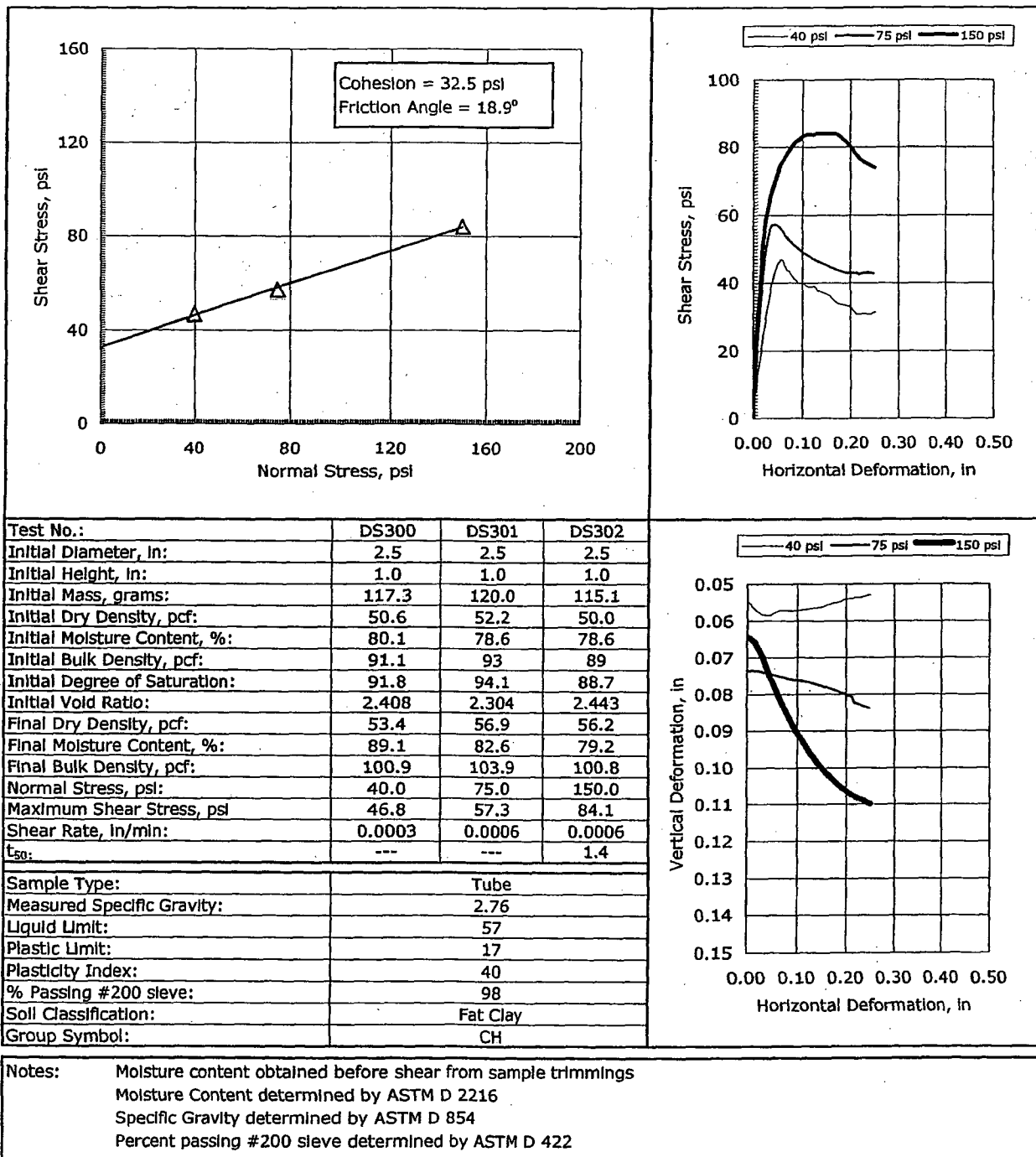
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/19/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-401
Sample ID:	S-37
Depth, ft:	173.5-174.4
Visual Description:	Molst, dark greenish gray clay

Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D 3080-04



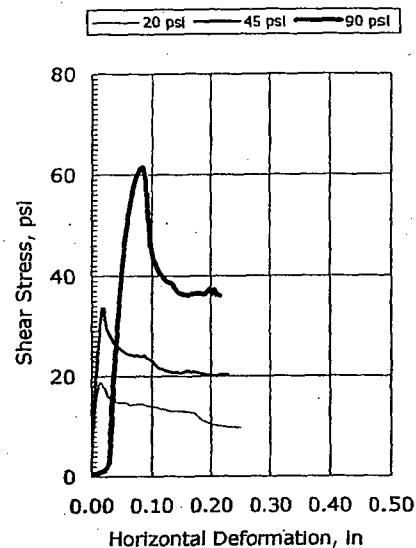
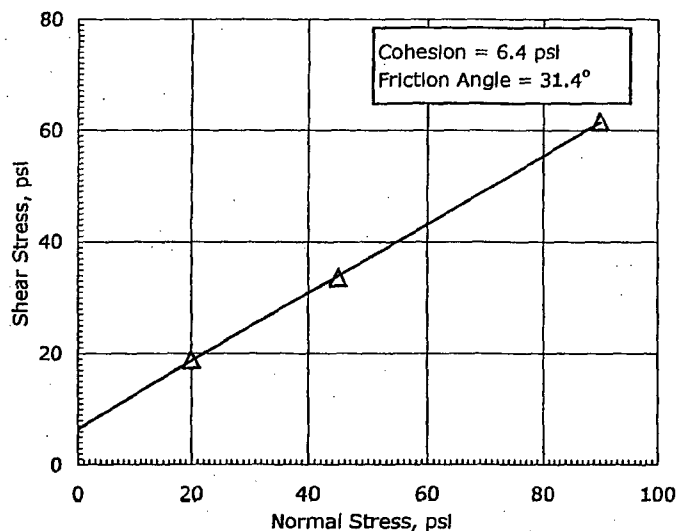
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

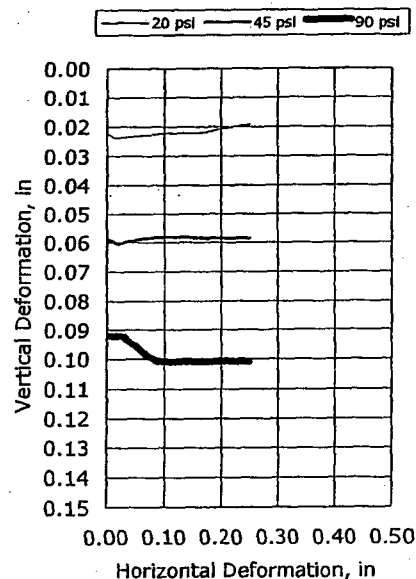
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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/27/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-413
Sample ID:	S-17
Depth, ft:	73-75
Visual Description:	Moist, dark greenish gray clay

Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D 3080-04



Test No.:	DS101	DS102	DS103
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	143.7	144.8	146.4
Initial Dry Density, pcf:	81.8	83.0	85.1
Initial Moisture Content, %:	36.4	35.3	33.5
Initial Bulk Density, pcf:	111.5	112	114
Initial Degree of Saturation:	91.7	91.6	91.2
Initial Void Ratio:	1.084	1.053	1.002
Final Dry Density, pcf:	83.4	88.2	94.7
Final Moisture Content, %:	46.0	39.4	40.3
Final Bulk Density, pcf:	121.7	122.9	132.8
Normal Stress, psi:	20.0	45.0	90.0
Maximum Shear Stress, psi	18.8	33.6	61.5
Shear Rate, in/min:	0.0005	0.0005	0.0005
t ₅₀ :	---	---	0.7

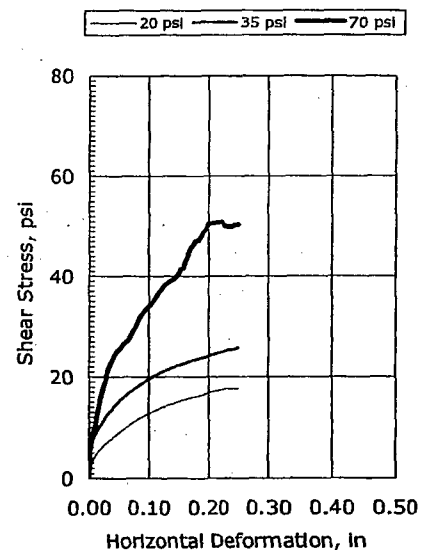
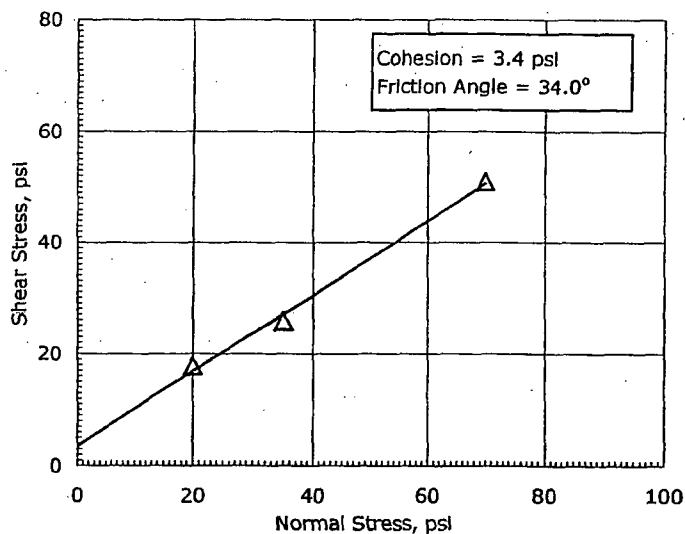


Sample Type:	Tube
Measured Specific Gravity:	2.73
Liquid Limit:	59
Plastic Limit:	16
Plasticity Index:	43
% Passing #200 sieve:	98
Soil Classification:	Fat Clay
Group Symbol:	CH

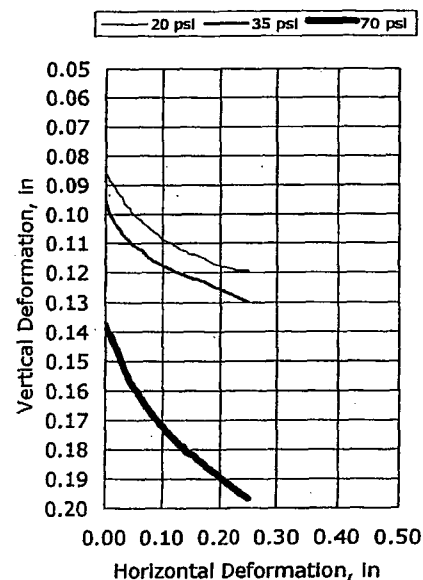
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/11/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-420
Sample ID:	S-16
Depth, ft:	63.5-65.5
Visual Description:	Moist, olive gray clayey sand

Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D 3080-04



Test No.:	DS10	DS11	DS12
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	127.6	132.4	130.8
Initial Dry Density, pcf:	73.8	75.4	74.7
Initial Moisture Content, %:	34.1	36.3	36.0
Initial Bulk Density, pcf:	99.0	103	102
Initial Degree of Saturation:	70.8	78.2	76.1
Initial Void Ratio:	1.325	1.278	1.300
Final Dry Density, pcf:	83.9	86.6	92.9
Final Moisture Content, %:	38.9	39.6	36.9
Final Bulk Density, pcf:	116.5	120.9	127.2
Normal Stress, psi:	20.0	35.0	70.0
Maximum Shear Stress, psi:	17.7	25.8	51.0
Shear Rate, in/min:	0.0003	0.0003	0.0003
t ₅₀ :	---	---	0.8
Sample Type:	Tube		
Measured Specific Gravity:	2.75		
Liquid Limit:	49		
Plastic Limit:	11		
Plasticity Index:	38		
% Passing #200 sieve:	19		
Soil Classification:	Clayey Sand		
Group Symbol:	SC		



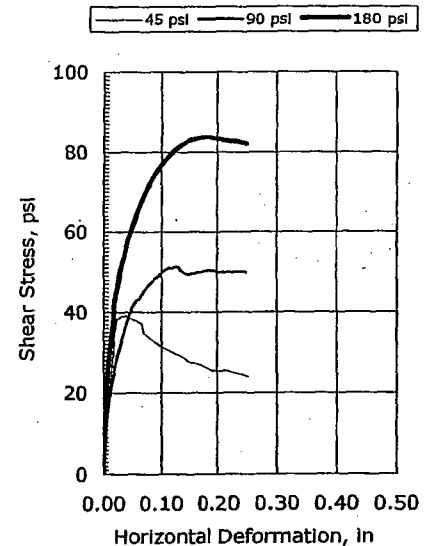
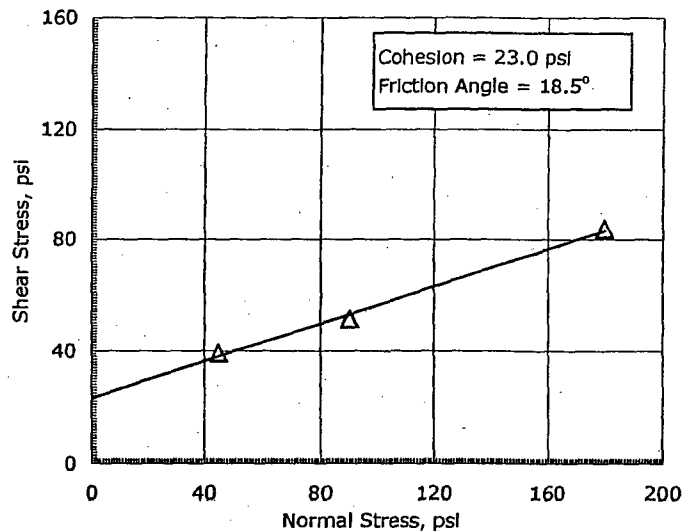
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

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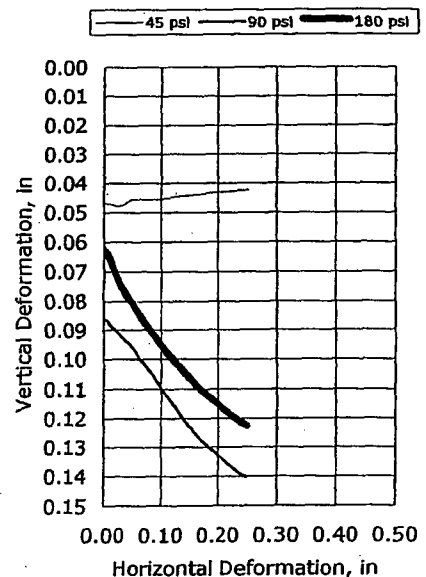
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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	10/11/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-423
Sample ID:	S-41
Depth, ft:	188.5-189.0
Visual Description:	Moist olive gray silt

Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D 3080-04



Test No.:	DS130	DS131	DS132
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	123.4	111.4	107.9
Initial Dry Density, pcf:	55.9	50.5	48.5
Initial Moisture Content, %:	71.4	71.2	72.7
Initial Bulk Density, pcf:	95.8	86.5	83.7
Initial Degree of Saturation:	99.6	85.2	81.8
Initial Void Ratio:	1.793	2.090	2.220
Final Dry Density, pcf:	58.4	58.8	55.3
Final Moisture Content, %:	76.1	90.1	70.2
Final Bulk Density, pcf:	102.7	111.7	94.0
Normal Stress, psi:	45.0	90.0	180
Maximum Shear Stress, psi	39.2	51.4	83.8
Shear Rate, in/min:	0.0006	0.0006	0.0006
t ₅₀ :	---	---	0.9
Sample Type:	Tube		
Measured Specific Gravity:	2.5		
Liquid Limit:	111		
Plastic Limit:	70		
Plasticity Index:	41		
% Passing #200 sieve:	91		
Soil Classification:	Elastic Silt		
Group Symbol:	MH		



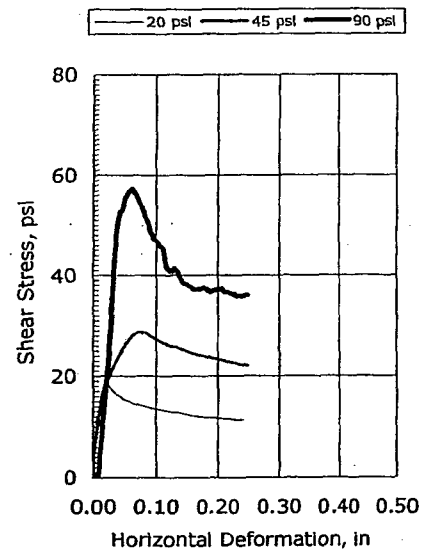
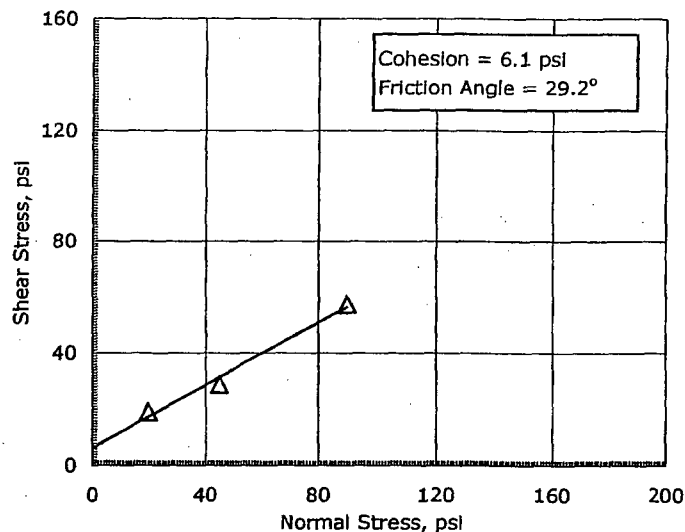
Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

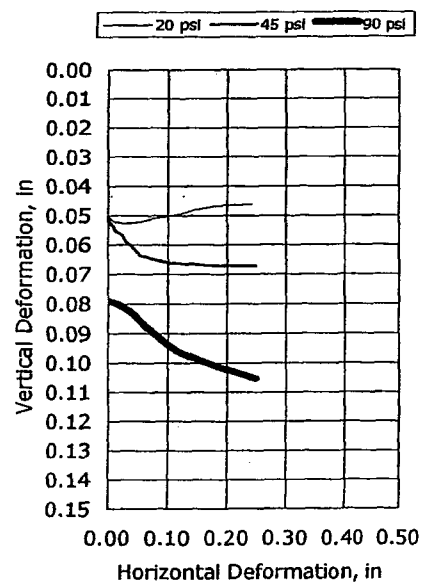
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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/26/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-427
Sample ID:	S-16
Depth, ft:	63.5-65.5
Visual Description:	Moist, black sandy organic clay

Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D 3080-04



Test No.:	DS98	DS99	DS100
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	147.0	144.9	146.5
Initial Dry Density, pcf:	83.0	83.7	84.4
Initial Moisture Content, %:	35.5	36.2	34.7
Initial Bulk Density, pcf:	112.4	114.1	113.7
Initial Degree of Saturation:	91.7	95.2	92.7
Initial Void Ratio:	1.062	1.043	1.026
Final Dry Density, pcf:	87.0	89.8	94.4
Final Moisture Content, %:	37.7	36.6	37.0
Final Bulk Density, pcf:	119.7	122.6	129.2
Normal Stress, psi:	20.0	45.0	90.0
Maximum Shear Stress, psi:	19.0	28.7	57.4
Shear Rate, in/min:	0.0006	0.0006	0.0006
t ₅₀ :	---	---	2.4
Sample Type:	Tube		
Measured Specific Gravity:	2.74		
Liquid Limit:	56		
Plastic Limit:	18		
Plasticity Index:	38		
% Passing #200 sieve:	61		
Soil Classification:	Sandy organic Clay		
Group Symbol:	OH		



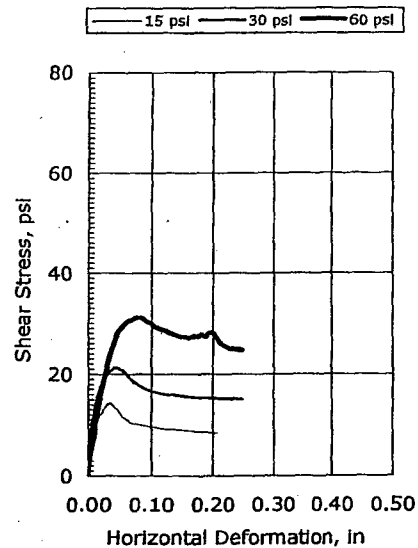
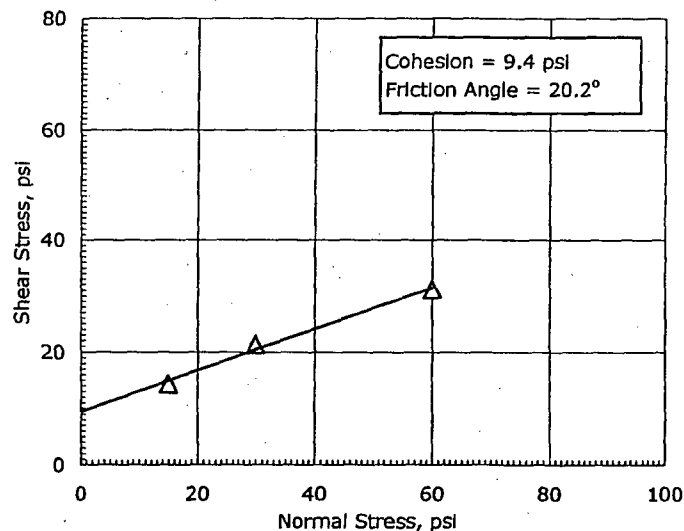
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

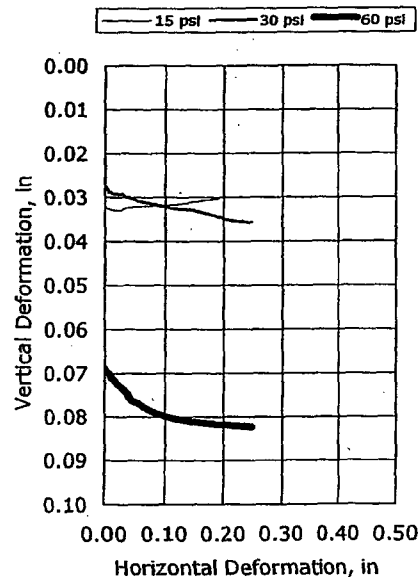
a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/23/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-433
Sample ID:	S-11
Depth, ft:	38.5-40.5
Visual Description:	Moist, very dark gray clay

Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D 3080-04



Test No.:	DS28	DS29	DS30
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	149.6	152.5	152.4
Initial Dry Density, pcf:	86.7	89.5	88.7
Initial Moisture Content, %:	34.0	32.3	33.3
Initial Bulk Density, pcf:	116.1	118.4	118.3
Initial Degree of Saturation:	94.6	95.9	97.2
Initial Void Ratio:	0.995	0.933	0.949
Final Dry Density, pcf:	89.3	92.8	96.7
Final Moisture Content, %:	33.0	35.4	34.7
Final Bulk Density, pcf:	118.8	125.6	130.3
Normal Stress, psi:	15.0	30.0	60.0
Maximum Shear Stress, psi	14.3	21.3	31.1
Shear Rate, in/min:	0.0005	0.0005	0.0005
t ₅₀ :	---	---	3.2
Sample Type:	Tube		
Measured Specific Gravity:	2.77		
Liquid Limit:	61		
Plastic Limit:	14		
Plasticity Index:	47		
% Passing #200 sieve:	91		
Soil Classification:	Fat Clay		
Group Symbol:	CH		



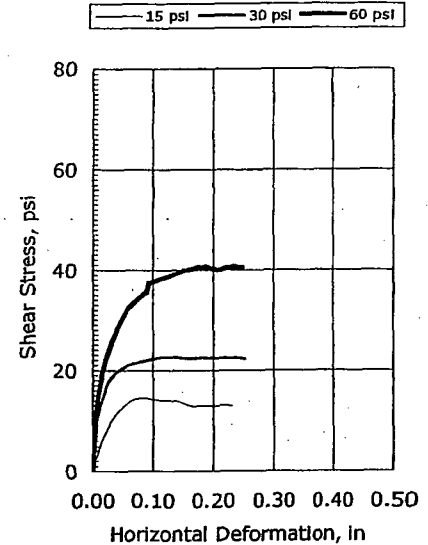
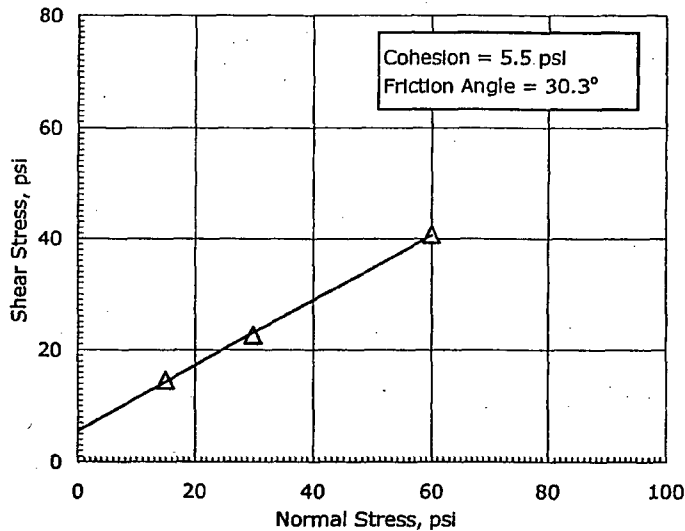
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

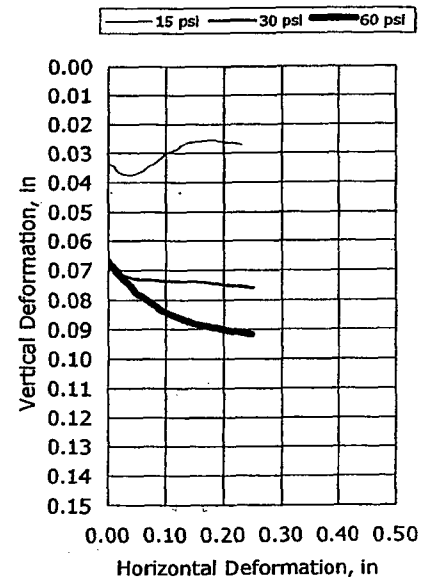
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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	10/22/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-440
Sample ID:	S-14
Depth, ft:	51-53
Visual Description:	Moist, dark greenish gray clayey sand

Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D 3080-04



Test No.:	DS143	DS144	DS145
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	154.3	148.3	150.8
Initial Dry Density, pcf:	93.1	87.2	89.6
Initial Moisture Content, %:	28.6	32.1	30.7
Initial Bulk Density, pcf:	119.7	115.1	117.0
Initial Degree of Saturation:	93.1	91.0	92.0
Initial Void Ratio:	0.794	0.821	0.741
Final Dry Density, pcf:	95.7	94.3	98.6
Final Moisture Content, %:	28.7	31.9	27.9
Final Bulk Density, pcf:	123.2	124.3	126.1
Normal Stress, psi:	15.0	30.0	60.0
Maximum Shear Stress, psi:	14.6	22.6	40.8
Shear Rate, in/min:	0.0007	0.0007	0.0007
t ₅₀ :	---	---	5.8
Sample Type:	Tube		
Measured Specific Gravity:	2.75		
Liquid Limit:	30		
Plastic Limit:	21		
Plasticity Index:	9		
% Passing #200 sieve:	18		
Soil Classification:	Clayey Sand		
Group Symbol:	SC		



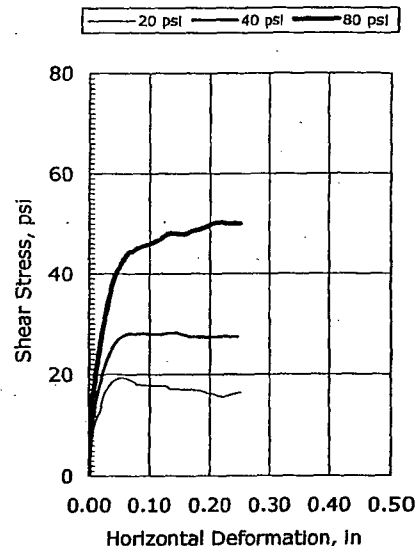
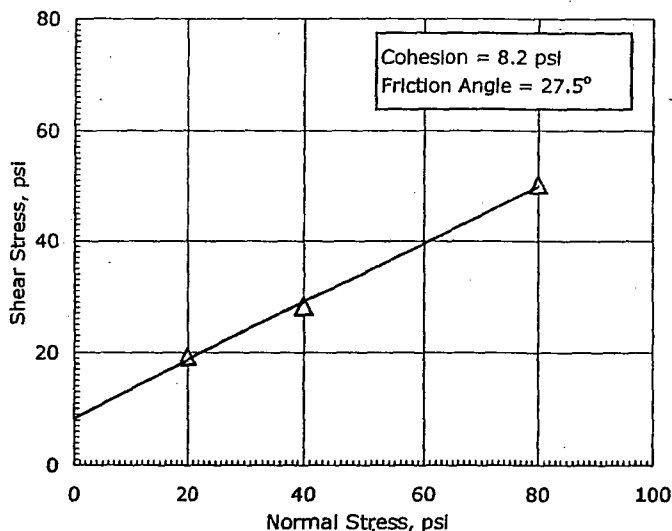
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

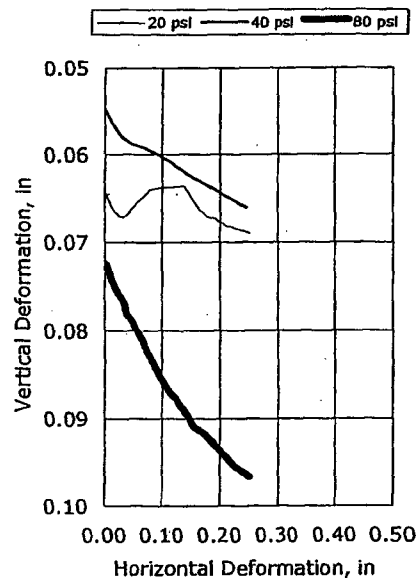
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Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/22/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-724
Sample ID:	UD-1
Depth, ft:	73.5-75.5
Visual Description:	Moist, dark olive gray sandy organic clay

Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D 3080-04



Test No.:	DS25	DS26	DS27
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	149.3	152.0	151.5
Initial Dry Density, pcf:	89.0	90.8	90.1
Initial Moisture Content, %:	30.1	29.9	30.6
Initial Bulk Density, pcf:	115.9	117.9	117.6
Initial Degree of Saturation:	91.1	94.2	94.7
Initial Void Ratio:	0.893	0.856	0.872
Final Dry Density, pcf:	95.6	97.2	99.6
Final Moisture Content, %:	33.0	32.3	31.3
Final Bulk Density, pcf:	127.2	128.7	130.8
Normal Stress, psi:	20.0	40.0	80.0
Maximum Shear Stress, psi:	19.3	28.2	50.3
Shear Rate, in/min:	0.001	0.001	0.001
t ₅₀ :	---	---	0.2
Sample Type:	Tube		
Measured Specific Gravity:	2.70		
Liquid Limit:	45		
Plastic Limit:	24		
Plasticity Index:	21		
% Passing #200 sieve:	60		
Soil Classification:	Sandy Organic Clay		
Group Symbol:	OL		



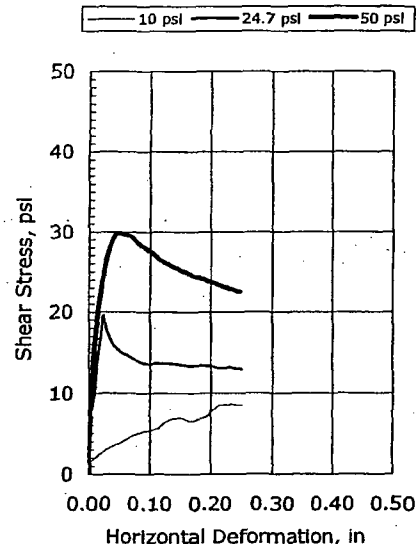
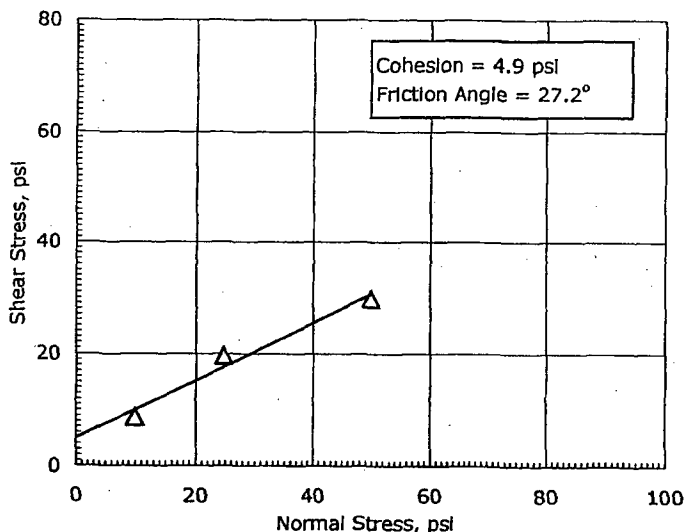
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

GeoTesting express

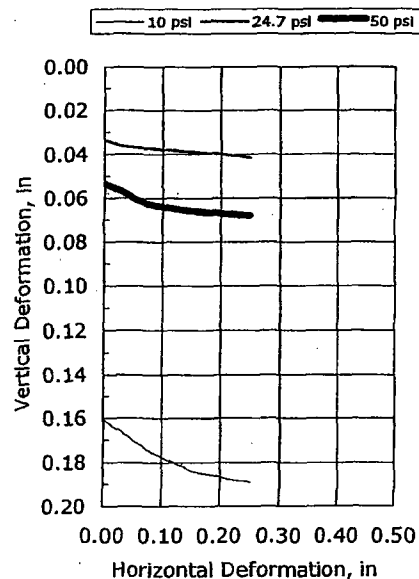
a subsidiary of Geocomp Corporation

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/21/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-735
Sample ID:	S-9
Depth, ft:	28-30
Visual Description:	Molst, dark gray clay

Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D 3080-04



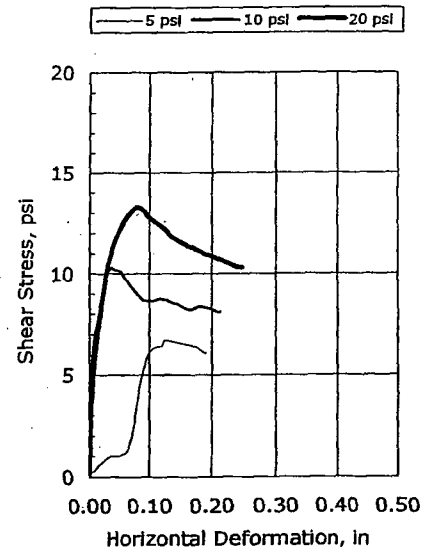
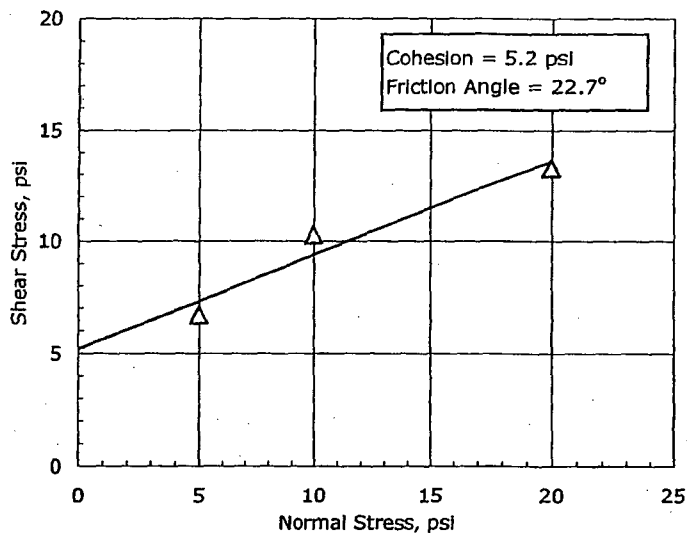
Test No.:	DS16	DS17	DS18
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	142.6	153.3	153.1
Initial Dry Density, pcf:	78.0	90.1	91.3
Initial Moisture Content, %:	42.0	32.0	30.2
Initial Bulk Density, pcf:	110.7	119.0	118.8
Initial Degree of Saturation:	97.8	99.7	96.7
Initial Void Ratio:	1.153	0.863	0.840
Final Dry Density, pcf:	96.2	90.9	97.9
Final Moisture Content, %:	30.3	33.4	33.3
Final Bulk Density, pcf:	125.3	121.2	130.5
Normal Stress, psi:	10.0	24.7	50.0
Maximum Shear Stress, psi:	8.7	19.6	29.8
Shear Rate, in/min:	0.0006	0.0006	0.0006
t ₅₀ :	---	---	1.1
Sample Type:	Tube		
Measured Specific Gravity:	2.69		
Liquid Limit:	51		
Plastic Limit:	16		
Plasticity Index:	35		
% Passing #200 sieve:	87		
Soil Classification:	Fat Clay		
Group Symbol:	CH		



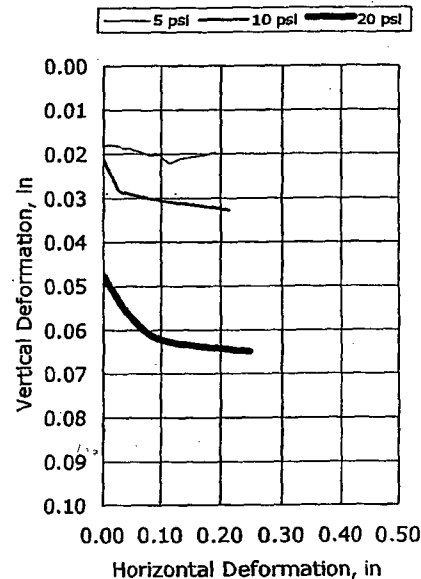
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/20/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-737
Sample ID:	UD-1
Depth, ft:	10.5-12.5
Visual Description:	Moist, very pale brown clay

Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D 3080-04



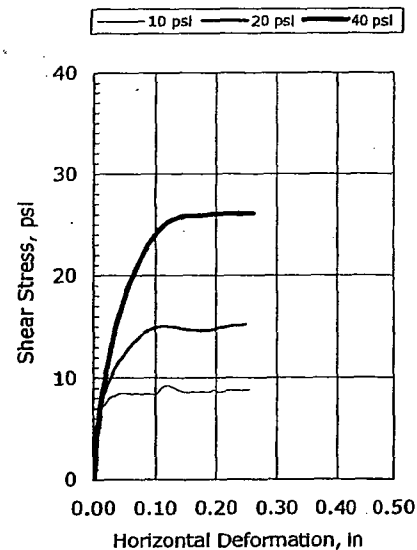
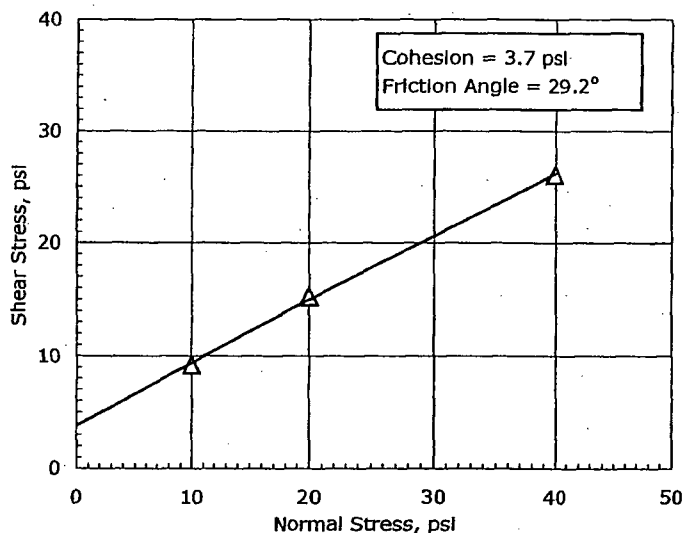
Test No.:	DS13	DS14	DS15
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	147.4	146.9	144.8
Initial Dry Density, pcf:	85.0	86.2	85.3
Initial Moisture Content, %:	34.6	32.3	31.7
Initial Bulk Density, pcf:	114.4	114.0	112.4
Initial Degree of Saturation:	97.7	93.9	90.1
Initial Void Ratio:	0.933	0.906	0.924
Final Dry Density, pcf:	86.3	89.2	91.3
Final Moisture Content, %:	38.0	34.1	33.6
Final Bulk Density, pcf:	119.1	119.6	121.9
Normal Stress, psi:	5.0	10.0	20.0
Maximum Shear Stress, psi:	6.7	10.3	13.3
Shear Rate, in/min:	0.0006	0.0006	0.0006
t ₅₀ :	---	---	1.1
Sample Type:	Tube		
Measured Specific Gravity:	2.63		
Liquid Limit:	75		
Plastic Limit:	23		
Plasticity Index:	52		
% Passing #200 sieve:	93		
Soil Classification:	Fat Clay		
Group Symbol:	CH		



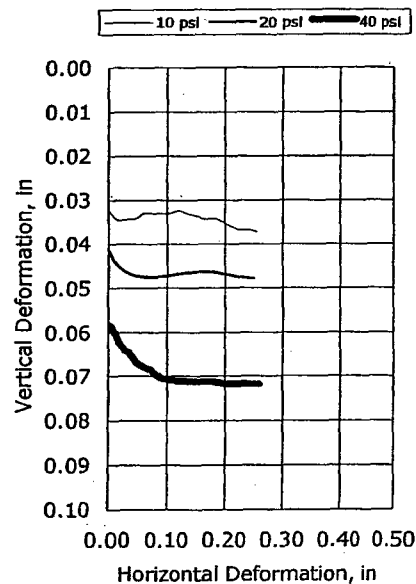
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/20/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-743
Sample ID:	UD-1
Depth, ft:	23.5-25.5
Visual Description:	Moist, mottled pale yellow, weak red, and brownish yellow sandy clay

Direct Shear Test of Soils Under Consolidated Drained Conditions by ASTM D 3080-04



Test No.:	DS13	DS14	DS15
Initial Diameter, in:	2.5	2.5	2.5
Initial Height, in:	1.0	1.0	1.0
Initial Mass, grams:	158.5	156.4	152.3
Initial Dry Density, pcf:	100.6	100.2	96.6
Initial Moisture Content, %:	22.2	21.1	22.4
Initial Bulk Density, pcf:	123.0	121.4	118.2
Initial Degree of Saturation:	89.3	84.1	81.5
Initial Void Ratio:	0.669	0.676	0.739
Final Dry Density, pcf:	86.3	89.2	91.3
Final Moisture Content, %:	21.9	22.5	22.8
Final Bulk Density, pcf:	105.3	109.2	112.0
Normal Stress, psi:	10.0	20.0	40.0
Maximum Shear Stress, psi:	9.2	15.2	26.1
Shear Rate, in/min:	0.0003	0.0003	0.0003
t ₅₀ :	---	---	3.7
Sample Type:	Tube		
Measured Specific Gravity:	2.69		
Liquid Limit:	38		
Plastic Limit:	13		
Plasticity Index:	25		
% Passing #200 sieve:	57		
Soil Classification:	Sandy Lean Clay		
Group Symbol:	CL		



Notes: Moisture content obtained before shear from sample trimmings
 Moisture Content determined by ASTM D 2216
 Specific Gravity determined by ASTM D 854
 Percent passing #200 sieve determined by ASTM D 422

CHEMICAL TEST RESULTS – SOIL

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FINAL REPORT OF ANALYSES

Schnabel Engineering
656 Quince Orchard Road
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PROJECT NAME:
REPORT DATE: 24-Jan-07

LAB#- ECL013289-012 SAMPLE ID- C-1b
LOCATION- B-301 43.5-45.2
DATE SAMPLED- TIME SAMPLED- SAMPLER-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 13:28	CHK	26.3	meq/100g 0.3
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	5.9	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	6.0	S.U. 0.10

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Schnabel Engineering
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PROJECT NAME:
REPORT DATE: 24-Jan-07

LAB#- ECL013289-007 SAMPLE ID- C-2b
LOCATION- B-303 73.5-75; 78.5-80
DATE SAMPLED- TIME SAMPLED-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 11:48	CHK	7.8	meq/100g 0.1
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	7.6	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	7.6	S.U. 0.10

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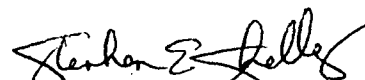
Schnabel Engineering
656 Quince Orchard Road
Suite 700
Gaithersburg, MD 20878

PROJECT NAME:
REPORT DATE: 24-Jan-07

LAB#- ECL013289-020 SAMPLE ID- C-3b
LOCATION- B-318 43.5-45; 48.5-50
DATE SAMPLED- TIME SAMPLED- SAMPLER-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 13:32	CHK	27.9	meq/100g 0.5
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	2.5	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	2.6	S.U. 0.10


LABORATORY DIRECTOR

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PROJECT NAME:
REPORT DATE: 24-Jan-07

LAB#- ECL013289-008 SAMPLE ID- C-4b
LOCATION- B-323 33.5-35; B-324 32.5-34
DATE SAMPLED- TIME SAMPLED-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 12:05	CHK	1.6	meq/100g 0.1
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	4.6	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	5.9	S.U. 0.10

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PROJECT NAME:
REPORT DATE: 24-Jan-07

LAB#- ECL013289-017 SAMPLE ID- C-5b
LOCATION- B-335 63.5-65; 68.5-70
DATE SAMPLED- TIME SAMPLED-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 12:30	CHK	10.1	meq/100g 0.1
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	7.0	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	7.0	S.U. 0.10

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PROJECT NAME:
REPORT DATE: 24-Jan-07

LAB#- ECL013289-018 SAMPLE ID- C-6b
LOCATION- B-401 63.5-65; 73.5-75
DATE SAMPLED- TIME SAMPLED- SAMPLER-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 12:32	CHK	8.0	meq/100g 0.1
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	7.4	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	7.4	S.U. 0.10

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PROJECT NAME:
REPORT DATE: 24-Jan-07

LAB#- ECL013289-019 SAMPLE ID- C-7b
LOCATION- B-402 23.5-25; 28.5-30
DATE SAMPLED- TIME SAMPLED-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

SAMPLER-

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 13:30	CHK	31.9	meq/100g 0.3
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	2.9	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	3.0	S.U. 0.10

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PROJECT NAME:
REPORT DATE: 24-Jan-07

LAB#- ECL013289-005 SAMPLE ID- C-8b
LOCATION- B-422 48.5-50.5
DATE SAMPLED- TIME SAMPLED- SAMPLER-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 13:26	CHK	22.8	meq/100g 0.3
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	4.8	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	4.9	S.U. 0.10

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PROJECT NAME:
REPORT DATE: 24-Jan-07

LAB#- ECL013289-009 SAMPLE ID- C-9b
LOCATION- B-424 33.5-35; 38.5-40
DATE SAMPLED- TIME SAMPLED-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 12:09	CHK	3.1	meq/100g 0.1
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	5.0	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	5.8	S.U. 0.10

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Schnabel Engineering
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PROJECT NAME:
REPORT DATE: 24-Jan-07

LAB#- ECL013289-014 SAMPLE ID- C-10b
LOCATION- B-428 38.5-40; B-429 38.5-40
DATE SAMPLED- TIME SAMPLED- SAMPLER-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 12:25	CHK	2.0	meq/100g 0.1
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	7.1	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	7.8	S.U. 0.10

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Schnabel Engineering
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PROJECT NAME:
REPORT DATE: 30-Jan-07

LAB#- ECL013289-004 SAMPLE ID- C-11b
LOCATION- B-428 63-65
DATE SAMPLED- TIME SAMPLED-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

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Page 4 of 20

ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 13:24	CHK	24.9	meq/100g 0.3
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	3.8	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	3.9	S.U. 0.10

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Schnabel Engineering
656 Quince Orchard Road
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PROJECT NAME:
REPORT DATE: 24-Jan-07

LAB#- ECL013289-011 SAMPLE ID- C-12b
LOCATION- B-705.43.5-45; 48.5-50
DATE SAMPLED- TIME SAMPLED-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

SAMPLER-

Page 11 of 20

ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 12:13	CHK	7.0	meq/100g 0.1
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	7.3	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	7.3	S.U. 0.10

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Schnabel Engineering
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Gaithersburg, MD 20878

PROJECT NAME:
REPORT DATE: 24-Jan-07

LAB#- ECL013289-015 SAMPLE ID- C-13b
LOCATION- B-708 23.5-25; 28.5-30
DATE-SAMPLED- TIME SAMPLED-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

SAMPLER-

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 12:27	CHK	7.2	meq/100g 0.1
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	7.3	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	7.4	S.U. 0.10

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FINAL REPORT OF ANALYSES

Schnabel Engineering
656 Quince Orchard Road
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Gaithersburg, MD 20878

PROJECT NAME:
REPORT DATE: 24-Jan-07

LAB#- ECL013289-013 SAMPLE ID- C-14b
LOCATION- B-711 28.5-30; 33.5-35
DATE SAMPLED- TIME SAMPLED-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

SAMPLER-

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 12:19	CHK	6.6	meq/100g 0.1
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	7.7	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	7.8	S.U. 0.10

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Schnabel Engineering
656 Quince Orchard Road
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Gaithersburg, MD 20878

PROJECT NAME:
REPORT DATE: 30-Jan-07

LAB#- ECL013289-002 SAMPLE ID- C-15b
LOCATION- B-725 48.5-50; 53.5-55
DATE SAMPLED- TIME SAMPLED-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

SAMPLER-

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 11:39	CHK	8.5	meq/100g 0.1
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	7.7	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	7.8	S.U. 0.10

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(410) 785-9739

FINAL REPORT OF ANALYSES

Schnabel Engineering
656 Quince Orchard Road
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Gaithersburg, MD 20878

PROJECT NAME:
REPORT DATE: 24-Jan-07

LAB#- ECL013289-001 SAMPLE ID- C-16b
LOCATION- B-735 63.5-65; 68.5-70
DATE SAMPLED- TIME SAMPLED- SAMPLER-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

Page 1 of 20

ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 11:35	CHK	6.6	meq/100g 0.1
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	7.7	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	7.7	S.U. 0.10

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FINAL REPORT OF ANALYSES

Schnabel Engineering
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PROJECT NAME:
REPORT DATE: 30-Jan-07

LAB#- ECL013289-003 SAMPLE ID- C-17b
LOCATION- B-744 48.5-50; 53.5-55
DATE SAMPLED- TIME SAMPLED-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

SAMPLER-

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 11:41	CHK	16.8	meq/100g 0.1
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	3.0	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	3.4	S.U. 0.10

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FINAL REPORT OF ANALYSES

Schnabel Engineering
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PROJECT NAME:
REPORT DATE: 24-Jan-07

LAB#- ECL013289-016 SAMPLE ID- C-18b
LOCATION- B-756 33.5-35; 38.5-40
DATE SAMPLED- TIME SAMPLED-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

SAMPLER-

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 12:28	CHK	9.6	meq/100g 0.1
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	5.8	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	6.4	S.U. 0.10

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PROJECT NAME:
REPORT DATE: 24-Jan-07

LAB#- ECL013289-006 SAMPLE ID- C-19b
LOCATION- B-768 43.5-45
DATE SAMPLED- TIME SAMPLED-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

SAMPLER-

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 11:46	CHK	6.8	meq/100g 0.1
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	7.1	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	7.2	S.U. 0.10

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Schnabel Engineering
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PROJECT NAME:
REPORT DATE: 24-Jan-07

LAB#- ECL013289-010 SAMPLE ID- C-20b
LOCATION- B-769 43.5-45; 48.5-50
DATE SAMPLED- TIME SAMPLED- SAMPLER-
DATE RECEIVED- 1/8/2007 TIME RECEIVED- 16:15
DELIVERED BY- M. Dunscomb RECEIVED BY- VPS

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Cation Exch. Capacity	EPA 9081	1/17/2007 12:11	CHK	7.2	meq/100g 0.1
pH in calcium chloride	ASTM D4972	1/15/2007 13:20	SES	4.8	S.U. 0.10
pH in deionized water	ASTM D4972	1/15/2007 13:20	SES	4.9	S.U. 0.10

CHEMICAL TEST RESULTS – WATER

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FINAL REPORT OF ANALYSES

Schnabel Engineering
656 Quince Orchard Road
Suite 700
Gaithersburg, MD 20878

PROJECT NAME
REPORT DATE: 30-Jan-07

LAB#- ECL013223-002 SAMPLE ID- OW-301-1
LOCATION- OW-301
DATE SAMPLED- 12/20/2006 TIME SAMPLED- 10:20 SAMPLER- K. Powell
DATE RECEIVED- 12/20/2006 TIME RECEIVED- 14:42
DELIVERED BY- B. Banks RECEIVED BY- SES

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Alkalinity, Total	EPA 310.1	12/22/2006 12:20	SES	166	mg/L 5.0
Ammonia Nitrogen	EPA 350.1	1/10/2007 11:12	SES	< 0.04	mg/L 0.04
Bromide	EPA 300.0	12/21/2006 22:48	SES	< 1.00	mg/L 1.00
Chloride	EPA 300.0	12/21/2006 22:48	SES	10.7	mg/L 1.0
Dissolved Solids	EPA 160.1	12/22/2006 16:10	SES	182	mg/L 5
Fluoride	EPA 300.0	1/6/2007 21:53	SES	< 0.20	mg/L 0.20
Nitrate (as N)	EPA 300.0	12/21/2006 22:48	SES	< 0.2	mg/L 0.2
Nitrite (as N)	EPA 300.0	12/21/2006 22:48	SES	< 0.2	mg/L 0.2
Sulfate	EPA 300.0	12/21/2006 22:48	SES	8.8	mg/L 1.0
Sulfide	EPA 376.1	12/23/2006 08:15	SES	< 1.0	mg/L 1.0

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Schnabel Engineering
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PROJECT NAME
REPORT DATE: 30-Jan-07

LAB#- ECL013223-003 SAMPLE ID- OW-301-2
LOCATION- OW-301
DATE SAMPLED- 12/20/2006 TIME SAMPLED- 10:24 SAMPLER- K. Powell
DATE RECEIVED- 12/20/2006 TIME RECEIVED- 14:42
DELIVERED BY- B. Banks RECEIVED BY- SES

Page 6 of 16

ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Alkalinity, Total	EPA 310.1	12/22/2006 12:20	SES	170	mg/L 5.0
Ammonia Nitrogen	EPA 350.1	1/10/2007 11:14	SES	< 0.04	mg/L 0.04
Bromide	EPA 300.0	12/21/2006 23:11	SES	< 1.00	mg/L 1.00
Chloride	EPA 300.0	12/21/2006 23:11	SES	10.7	mg/L 1.0
Dissolved Solids	EPA 160.1	12/22/2006 16:10	SES	151	mg/L 5
Fluoride	EPA 300.0	1/6/2007 22:16	SES	< 0.20	mg/L 0.20
Nitrate (as N)	EPA 300.0	12/21/2006 23:11	SES	< 0.2	mg/L 0.2
Nitrite (as N)	EPA 300.0	12/21/2006 23:11	SES	< 0.2	mg/L 0.2
Sulfate	EPA 300.0	12/21/2006 23:11	SES	8.8	mg/L 1.0
Sulfide	EPA 376.1	12/23/2006 08:15	SES	< 1.0	mg/L 1.0

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Schnabel Engineering
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PROJECT NAME
REPORT DATE: 30-Jan-07

LAB#- ECL013237-005 SAMPLE ID- OW-323
LOCATION- OW-323
DATE SAMPLED- 12/21/2006 TIME SAMPLED- 8:18 SAMPLER- K. Powell
DATE RECEIVED- 12/21/2006 TIME RECEIVED- 18:53
DELIVERED BY- K. Powell RECEIVED BY- SES

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT		DETECTION LIMIT
Alkalinity, Total	EPA 310.1	12/22/2006 12:20	SES	8.0	mg/L	5.0
Ammonia Nitrogen	EPA 350.1	1/10/2007 11:36	SES	< 0.04	mg/L	0.04
Bromide	EPA 300.0	12/22/2006 03:01	SES	< 1.00	mg/L	1.00
Chloride	EPA 300.0	12/22/2006 03:01	SES	9.6	mg/L	1.0
Dissolved Solids	EPA 160.1	12/26/2006 10:45	SES	27	mg/L	5
Fluoride	EPA 300.0	1/7/2007 02:07	SES	< 0.20	mg/L	0.20
Nitrate (as N)	EPA 300.0	12/22/2006 03:01	SES	< 0.2	mg/L	0.2
Nitrite (as N)	EPA 300.0	12/22/2006 03:01	SES	< 0.2	mg/L	0.2
Sulfate	EPA 300.0	12/22/2006 03:01	SES	2.6	mg/L	1.0
Sulfide	EPA 376.1	12/23/2006 08:15	SES	< 1.0	mg/L	1.0

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Schnabel Engineering
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PROJECT NAME
REPORT DATE: 30-Jan-07

LAB#- ECL013237-004 SAMPLE ID- OW-336
LOCATION- OW-336
DATE SAMPLED- 12/20/2006 TIME SAMPLED- 17:50 SAMPLER- K. Powell
DATE RECEIVED- 12/21/2006 TIME RECEIVED- 18:53
DELIVERED BY- K. Powell RECEIVED BY- SES

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Alkalinity, Total	EPA 310.1	12/22/2006 12:20	SES	163	mg/L 5.0
Ammonia Nitrogen	EPA 350.1	1/10/2007 11:33	SES	< 0.04	mg/L 0.04
Bromide	EPA 300.0	12/22/2006 01:52	SES	< 1.00	mg/L 1.00
Chloride	EPA 300.0	12/22/2006 01:52	SES	8.6	mg/L 1.0
Dissolved Solids	EPA 160.1	12/26/2006 10:45	SES	251	mg/L 5
Fluoride	EPA 300.0	1/7/2007 00:58	SES	0.28	mg/L 0.20
Nitrate (as N)	EPA 300.0	12/22/2006 01:52	SES	< 0.2	mg/L 0.2
Nitrite (as N)	EPA 300.0	12/22/2006 01:52	SES	< 0.2	mg/L 0.2
Sulfate	EPA 300.0	12/22/2006 01:52	SES	29.5	mg/L 1.0
Sulfide	EPA 376.1	12/23/2006 08:15	SES	< 1.0	mg/L 1.0

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Schnabel Engineering
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PROJECT NAME
REPORT DATE: 30-Jan-07

LAB#- ECL013237-002 SAMPLE ID- OW-401
LOCATION- OW-401
DATE SAMPLED- 12/20/2006 TIME SAMPLED- 14:55 SAMPLER- K. Powell
DATE RECEIVED- 12/21/2006 TIME RECEIVED- 18:53
DELIVERED BY- K. Powell RECEIVED BY- SES

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Alkalinity, Total	EPA 310.1	12/22/2006 12:20	SES	196	mg/L 5.0
Ammonia Nitrogen	EPA 350.1	1/10/2007 11:29	SES	< 0.04	mg/L 0.04
Bromide	EPA 300.0	12/22/2006 01:06	SES	< 1.00	mg/L 1.00
Chloride	EPA 300.0	12/22/2006 01:06	SES	6.5	mg/L 1.0
Dissolved Solids	EPA 160.1	12/26/2006 10:45	SES	268	mg/L 5
Fluoride	EPA 300.0	1/7/2007 00:12	SES	0.28	mg/L 0.20
Nitrate (as N)	EPA 300.0	12/22/2006 01:06	SES	< 0.2	mg/L 0.2
Nitrite (as N)	EPA 300.0	12/22/2006 01:06	SES	< 0.2	mg/L 0.2
Sulfate	EPA 300.0	12/22/2006 01:06	SES	28.2	mg/L 1.0
Sulfide	EPA 376.1	12/23/2006 08:15	SES	< 1.0	mg/L 1.0

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PROJECT NAME
REPORT DATE: 30-Jan-07

LAB#- ECL013237-001 SAMPLE ID- OW-423
LOCATION- OW-423
DATE SAMPLED- 12/20/2006 TIME SAMPLED- 13:17 SAMPLER- K. Powell
DATE RECEIVED- 12/21/2006 TIME RECEIVED- 18:53
DELIVERED BY- K. Powell RECEIVED BY- SES

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Alkalinity, Total	EPA 310.1	12/22/2006 12:20	SES	10.5	mg/L 5.0
Ammonia Nitrogen	EPA 350.1	1/10/2007 11:23	SES	< 0.04	mg/L 0.04
Bromide	EPA 300.0	12/21/2006 23:57	SES	< 1.00	mg/L 1.00
Chloride	EPA 300.0	12/21/2006 23:57	SES	22.1	mg/L 1.0
Dissolved Solids	EPA 160.1	12/26/2006 10:45	SES	71	mg/L 5
Fluoride	EPA 300.0	1/6/2007 23:03	SES	< 0.20	mg/L 0.20
Nitrate (as N)	EPA 300.0	12/21/2006 23:57	SES	1.4	mg/L 0.2
Nitrite (as N)	EPA 300.0	12/21/2006 23:57	SES	< 0.2	mg/L 0.2
Sulfate	EPA 300.0	12/21/2006 23:57	SES	12.8	mg/L 1.0
Sulfide	EPA 376.1	12/23/2006 08:15	SES	< 1.0	mg/L 1.0

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Schnabel Engineering
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PROJECT NAME
REPORT DATE: 30-Jan-07

LAB#- ECL013223-004 SAMPLE ID- OW-428
LOCATION- OW-428
DATE SAMPLED- 12/20/2006 TIME SAMPLED- 11:55 SAMPLER- K. Powell
DATE RECEIVED- 12/20/2006 TIME RECEIVED- 14:42
DELIVERED BY- B. Banks RECEIVED BY- SES

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT		DETECTION LIMIT
Alkalinity, Total	EPA 310.1	12/22/2006 12:20	SES	7.0	mg/L	5.0
Ammonia Nitrogen	EPA 350.1	1/10/2007 11:21	SES	< 0.04	mg/L	0.04
Bromide	EPA 300.0	12/21/2006 23:34	SES	< 1.00	mg/L	1.00
Chloride	EPA 300.0	12/21/2006 23:34	SES	17.3	mg/L	1.0
Dissolved Solids	EPA 160.1	12/22/2006 16:10	SES	72	mg/L	5
Fluoride	EPA 300.0	1/6/2007 22:40	SES	< 0.20	mg/L	0.20
Nitrate (as N)	EPA 300.0	12/21/2006 23:34	SES	0.6	mg/L	0.2
Nitrite (as N)	EPA 300.0	12/21/2006 23:34	SES	< 0.2	mg/L	0.2
Sulfate	EPA 300.0	12/21/2006 23:34	SES	6.8	mg/L	1.0
Sulfide	EPA 376.1	12/23/2006 08:15	SES	< 1.0	mg/L	1.0

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FINAL REPORT OF ANALYSES

Schnabel Engineering
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PROJECT NAME
REPORT DATE: 30-Jan-07

LAB#- ECL013237-003 SAMPLE ID- OW-705
LOCATION- OW-705
DATE SAMPLED- 12/20/2006 TIME SAMPLED- 16:35 SAMPLER- K. Powell
DATE RECEIVED- 12/21/2006 TIME RECEIVED- 18:53
DELIVERED BY- K. Powell RECEIVED BY- SES

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Alkalinity, Total	EPA 310.1	12/22/2006 12:20	SES	191	mg/L 5.0
Ammonia Nitrogen	EPA 350.1	1/10/2007 11:31	SES	< 0.04	mg/L 0.04
Bromide	EPA 300.0	12/22/2006 01:29	SES	< 1.00	mg/L 1.00
Chloride	EPA 300.0	12/22/2006 01:29	SES	20.1	mg/L 1.0
Dissolved Solids	EPA 160.1	12/26/2006 10:45	SES	295	mg/L 5
Fluoride	EPA 300.0	1/7/2007 00:35	SES	0.40	mg/L 0.20
Nitrate (as N)	EPA 300.0	12/22/2006 01:29	SES	< 0.2	mg/L 0.2
Nitrite (as N)	EPA 300.0	12/22/2006 01:29	SES	< 0.2	mg/L 0.2
Sulfate	EPA 300.0	12/22/2006 01:29	SES	37.4	mg/L 1.0
Sulfide	EPA 376.1	12/23/2006 08:15	SES	< 1.0	mg/L 1.0

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Schnabel Engineering
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PROJECT NAME
REPORT DATE: 30-Jan-07

LAB#- ECL013217-001 SAMPLE ID- OW-708A
LOCATION- OW-708A
DATE SAMPLED- 12/19/2006 TIME SAMPLED- 12:05 SAMPLER- K. Powell
DATE RECEIVED- 12/19/2006 TIME RECEIVED- 20:43
DELIVERED BY- M. Dunscomb RECEIVED BY- SES

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Alkalinity, Total	EPA 310.1	12/22/2006 12:20	SES	350	mg/L 5.0
Ammonia Nitrogen	EPA 350.1	1/10/2007 11:00	SES	0.06	mg/L 0.04
Bromide	EPA 300.0	12/21/2006 20:29	SES	< 1.0	mg/L 1.0
Chloride	EPA 300.0	1/8/2007 02:11	SES	40.8	mg/L 5.0
Dissolved Solids	EPA 160.1	12/22/2006 16:10	SES	453	mg/L 5
Fluoride	EPA 300.0	1/6/2007 19:35	SES	< 0.20	mg/L 0.20
Nitrate (as N)	EPA 300.0	12/20/2006 12:29	SES	< 0.2	mg/L 0.2
Nitrite (as N)	EPA 300.0	12/20/2006 12:29	SES	< 0.2	mg/L 0.2
Sulfate	EPA 300.0	12/21/2006 20:29	SES	40.7	mg/L 1.0
Sulfide	EPA 376.1	12/23/2006 08:15	SES	< 1.0	mg/L 1.0

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Schnabel Engineering
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PROJECT NAME
REPORT DATE: 30-Jan-07

LAB#- ECL013223-001 SAMPLE ID- OW-711
LOCATION- OW-711
DATE SAMPLED- 12/20/2006 TIME SAMPLED- 8:50 SAMPLER- K. Powell
DATE RECEIVED- 12/20/2006 TIME RECEIVED- 14:42
DELIVERED BY- B. Banks RECEIVED BY- SES

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Alkalinity, Total	EPA 310.1	12/22/2006 12:20	SES	207	mg/L 5.0
Ammonia Nitrogen	EPA 350.1	1/10/2007 11:10	SES	< 0.04	mg/L 0.04
Bromide	EPA 300.0	12/21/2006 22:25	SES	< 1.00	mg/L 1.00
Chloride	EPA 300.0	12/21/2006 22:25	SES	9.2	mg/L 1.0
Dissolved Solids	EPA 160.1	12/22/2006 16:10	SES	242	mg/L 5
Fluoride	EPA 300.0	1/6/2007 21:30	SES	< 0.20	mg/L 0.20
Nitrate (as N)	EPA 300.0	12/21/2006 22:25	SES	< 0.2	mg/L 0.2
Nitrite (as N)	EPA 300.0	12/21/2006 22:25	SES	< 0.2	mg/L 0.2
Sulfate	EPA 300.0	12/21/2006 22:25	SES	14.9	mg/L 1.0
Sulfide	EPA 376.1	12/23/2006 08:15	SES	< 1.0	mg/L 1.0

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FINAL REPORT OF ANALYSES

Schnabel Engineering
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PROJECT NAME
REPORT DATE: 30-Jan-07

LAB#- ECL013237-009

SAMPLE ID- OW-725

LOCATION-

DATE SAMPLED- 12/21/2006

TIME SAMPLED- 14:35

SAMPLER- K. Powell

DATE RECEIVED- 12/21/2006

TIME RECEIVED- 18:53

DELIVERED BY- K. Powell

RECEIVED BY- SES

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Alkalinity, Total	EPA 310.1	12/22/2006 12:20	SES	60.0	mg/L 5.0
Ammonia Nitrogen	EPA 350.1	1/10/2007 11:46	SES	< 0.04	mg/L 0.04
Bromide	EPA 300.0	12/22/2006 04:34	SES	< 1.00	mg/L 1.00
Chloride	EPA 300.0	12/22/2006 04:34	SES	6.7	mg/L 1.0
Dissolved Solids	EPA 160.1	12/26/2006 10:45	SES	236	mg/L 5
Fluoride	EPA 300.0	1/7/2007 03:40	SES	0.20	mg/L 0.20
Nitrate (as N)	EPA 300.0	12/22/2006 04:34	SES	< 0.2	mg/L 0.2
Nitrite (as N)	EPA 300.0	12/22/2006 04:34	SES	< 0.2	mg/L 0.2
Sulfate	EPA 300.0	12/22/2006 04:34	SES	16.6	mg/L 1.0
Sulfide	EPA 376.1	12/23/2006 08:15	SES	< 1.0	mg/L 1.0


LABORATORY DIRECTOR

ENVIRO-CHEM LABORATORIES, INC.



100 Lakefront Drive, Hunt Valley, Maryland 21030

(410) 785-9739

FINAL REPORT OF ANALYSES

Schnabel Engineering
656 Quince Orchard Road
Suite 700
Gaithersburg, MD 20878

PROJECT NAME
REPORT DATE: 30-Jan-07

LAB#- ECL013237-007 SAMPLE ID- OW-735
LOCATION- OW-735
DATE SAMPLED- 12/21/2006 TIME SAMPLED- 11:23 SAMPLER- K. Powell
DATE RECEIVED- 12/21/2006 TIME RECEIVED- 18:53
DELIVERED BY- K. Powell RECEIVED BY- SES

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Alkalinity, Total	EPA 310.1	12/22/2006 12:20	SES	75.0	mg/L 5.0
Ammonia Nitrogen	EPA 350.1	1/10/2007 11:39	SES	< 0.04	mg/L 0.04
Bromide	EPA 300.0	12/22/2006 03:47	SES	< 1.00	mg/L 1.00
Chloride	EPA 300.0	12/22/2006 03:47	SES	6.5	mg/L 1.0
Dissolved Solids	EPA 160.1	12/26/2006 10:45	SES	108	mg/L 5
Fluoride	EPA 300.0	1/7/2007 02:53	SES	< 0.20	mg/L 0.20
Nitrate (as N)	EPA 300.0	12/22/2006 03:47	SES	< 0.2	mg/L 0.2
Nitrite (as N)	EPA 300.0	12/22/2006 03:47	SES	< 0.2	mg/L 0.2
Sulfate	EPA 300.0	12/22/2006 03:47	SES	12.9	mg/L 1.0
Sulfide	EPA 376.1	12/23/2006 08:15	SES	< 1.0	mg/L 1.0

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Schnabel Engineering
656 Quince Orchard Road
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Gaithersburg, MD 20878

PROJECT NAME
REPORT DATE: 30-Jan-07

LAB#- ECL013237-006 SAMPLE ID- OW-744
LOCATION- OW-744
DATE SAMPLED- 12/21/2006 TIME SAMPLED- 9:45 SAMPLER- K. Powell
DATE RECEIVED- 12/21/2006 TIME RECEIVED- 18:53
DELIVERED BY- K. Powell RECEIVED BY- SES

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Alkalinity, Total	EPA 310.1	12/22/2006 12:20	SES	22.0	mg/L 5.0
Ammonia Nitrogen	EPA 350.1	1/10/2007 11:38	SES	< 0.04	mg/L 0.04
Bromide	EPA 300.0	12/22/2006 03:24	SES	< 1.00	mg/L 1.00
Chloride	EPA 300.0	12/22/2006 03:24	SES	5.3	mg/L 1.0
Dissolved Solids	EPA 160.1	12/26/2006 10:45	SES	231	mg/L 5
Fluoride	EPA 300.0	1/7/2007 02:30	SES	< 0.20	mg/L 0.20
Nitrate (as N)	EPA 300.0	12/22/2006 03:24	SES	< 0.2	mg/L 0.2
Nitrite (as N)	EPA 300.0	12/22/2006 03:24	SES	< 0.2	mg/L 0.2
Sulfate	EPA 300.0	12/22/2006 03:24	SES	18.1	mg/L 1.0
Sulfide	EPA 376.1	12/23/2006 08:15	SES	< 1.0	mg/L 1.0

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Schnabel Engineering
656 Quince Orchard Road
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Gaithersburg, MD 20878

PROJECT NAME
REPORT DATE: 30-Jan-07

LAB#- ECL013237-008 SAMPLE ID- OW-752A
LOCATION-
DATE SAMPLED- 12/21/2006 TIME SAMPLED- 12:25 SAMPLER- K. Powell
DATE RECEIVED- 12/21/2006 TIME RECEIVED- 18:53
DELIVERED BY- K. Powell RECEIVED BY- SES

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Alkalinity, Total	EPA 310.1	12/22/2006 12:20	SES	< 5.0	mg/L 5.0
Ammonia Nitrogen	EPA 350.1	1/10/2007 11:44	SES	< 0.04	mg/L 0.04
Bromide	EPA 300.0	12/22/2006 04:11	SES	< 1.00	mg/L 1.00
Chloride	EPA 300.0	12/22/2006 04:11	SES	6.4	mg/L 1.0
Dissolved Solids	EPA 160.1	12/26/2006 10:45	SES	125	mg/L 5
Fluoride	EPA 300.0	1/7/2007 03:17	SES	< 0.20	mg/L 0.20
Nitrate (as N)	EPA 300.0	12/22/2006 04:11	SES	< 0.2	mg/L 0.2
Nitrite (as N)	EPA 300.0	12/22/2006 04:11	SES	< 0.2	mg/L 0.2
Sulfate	EPA 300.0	12/22/2006 04:11	SES	68.6	mg/L 1.0
Sulfide	EPA 376.1	12/23/2006 08:15	SES	< 1.0	mg/L 1.0

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Schnabel Engineering
656 Quince Orchard Road
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PROJECT NAME
REPORT DATE: 30-Jan-07

LAB#- ECL013217-002 SAMPLE ID- OW-768A
LOCATION- OW-768A
DATE SAMPLED- 12/19/2006 TIME SAMPLED- 14:35 SAMPLER- K. Powell
DATE RECEIVED- 12/19/2006 TIME RECEIVED- 20:43
DELIVERED BY- M. Dunscomb RECEIVED BY- SES

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Alkalinity, Total	EPA 310.1	12/22/2006 12:20	SES	301	mg/L 5.0
Ammonia Nitrogen	EPA 350.1	1/10/2007 11:06	SES	< 0.04	mg/L 0.04
Bromide	EPA 300.0	12/21/2006 21:38	SES	< 1.00	mg/L 1.00
Chloride	EPA 300.0	12/21/2006 21:38	SES	12.4	mg/L 1.0
Dissolved Solids	EPA 160.1	12/22/2006 16:10	SES	400	mg/L 5
Fluoride	EPA 300.0	1/6/2007 19:58	SES	0.21	mg/L 0.20
Nitrate (as N)	EPA 300.0	12/20/2006 13:38	SES	< 0.2	mg/L 0.2
Nitrite (as N)	EPA 300.0	12/20/2006 13:38	SES	< 0.2	mg/L 0.2
Sulfate	EPA 300.0	12/21/2006 21:38	SES	70.6	mg/L 1.0
Sulfide	EPA 376.1	12/23/2006 08:15	SES	< 1.0	mg/L 1.0

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Gaithersburg, MD 20878

PROJECT NAME
REPORT DATE: 30-Jan-07

LAB#- ECL013217-003 SAMPLE ID- OW-769
LOCATION- OW-769
DATE SAMPLED- 12/19/2006 TIME SAMPLED- 16:34 SAMPLER- K. Powell
DATE RECEIVED- 12/19/2006 TIME RECEIVED- 20:43
DELIVERED BY- M. Dunscomb RECEIVED BY- SES

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ANALYSIS	METHOD	ANALYSIS DATE/TIME	BY	RESULT	DETECTION LIMIT
Alkalinity, Total	EPA 310.1	12/22/2006 12:20	SES	241	mg/L 5.0
Ammonia Nitrogen	EPA 350.1	1/10/2007 11:08	SES	< 0.04	mg/L 0.04
Bromide	EPA 300.0	12/21/2006 22:01	SES	< 1.00	mg/L 1.00
Chloride	EPA 300.0	12/21/2006 22:01	SES	7.6	mg/L 1.0
Dissolved Solids	EPA 160.1	12/22/2006 16:10	SES	264	mg/L 5
Fluoride	EPA 300.0	1/6/2007 21:07	SES	< 0.20	mg/L 0.20
Nitrate (as N)	EPA 300.0	12/20/2006 14:01	SES	< 0.2	mg/L 0.2
Nitrite (as N)	EPA 300.0	12/20/2006 14:01	SES	< 0.2	mg/L 0.2
Sulfate	EPA 300.0	12/21/2006 22:01	SES	22.8	mg/L 1.0
Sulfide	EPA 376.1	12/23/2006 08:15	SES	< 1.0	mg/L 1.0

ORGANIC CONTENT

Client:	Schnabel Engineering, Inc.		
Project:	Subsurface Investigation Calvert Cliffs Nuclear PP		
Location:	Calvert County, MD	Project No:	GTX-6880
Boring ID:	B-326	Sample Type:	tube
Sample ID:	S-12	Test Date:	03/28/07
Depth :	43.5-45.5 ft	Test Id:	109539
Test Comment:	---		
Sample Description:	Moist, very dark gray organic clay		
Sample Comment:	---		

Moisture, Ash, and Organic Matter - ASTM D 2974

Boring ID	Sample ID	Depth	Description	Moisture Content, %	Ash Content, %	Organic Matter, %
B-326	S-12	43.5-45.5 ft	Moist, very dark gray organic clay	36	99.6	.4

Notes: Moisture content determined by Method A and reported as a percentage of oven-dried mass;
dried to a constant mass at temperature of 110° C
Ash content and organic matter determined by Method C; dried to constant mass at temperature 440° C

Client:	Schnabel Engineering, Inc.		Project No:	GTX-6880
Project:	Subsurface Investigation Calvert Cliffs Nuclear PP		Tested By:	mll
Location:	Calvert County, MD		Checked By:	jdt
Boring ID: ---	Sample Type: ---			
Sample ID: ---	Test Date: 04/02/07			
Depth : ---	Test Id: 109543			

Moisture, Ash, and Organic Matter - ASTM D 2974

Boring ID	Sample ID	Depth	Description	Moisture Content, %	Ash Content, %	Organic Matter, %
B-406	S-16	63.5-65.5 ft	Moist, very dark gray organic clay with sand	42	98.4	1.6
B-411	S-8	23.5-25.5 ft	Moist, dark gray organic clay with sand	34	99.	1.
B-423	S-35	158.5-160.1 ft	Moist, olive gray organic clay	45	98.7	1.3
B-428	UD-3	63-65 ft	Moist, dark greenish gray organic clay <i>fat</i>	36	99.9	.1

BB/4/6/07

Notes: Moisture content determined by Method A and reported as a percentage of oven-dried mass;
dried to a constant mass at temperature of 110° C
Ash content and organic matter determined by Method C; dried to constant mass at temperature 440° C

Client:	Schnabel Engineering, Inc.	Project No:	GTX-6880
Project:	Subsurface Investigation Calvert Cliffs Nuclear PP	Tested By:	mll
Location:	Calvert County, MD	Checked By:	jdt
Boring ID: ---	Sample Type: ---	Test Date:	04/02/07
Sample ID: ---	Test Id:	109538	
Depth : ---			

Moisture, Ash, and Organic Matter - ASTM D 2974

Boring ID	Sample ID	Depth	Description	Moisture Content, %	Ash Content, %	Organic Matter, %
B-703	S-7	18.5-20.5 ft	Moist, mottled light yellowish brown, dark gray, and brownish yellow organic clay with sand	48	99.1	.9
B-724	UD-1	73.5-75.5 ft	Moist, dark olive gray sandy organic clay	32	96.8	3.2
B-729	UD-1	68.5-70.0 ft	Moist, dark greenish gray organic clay	35	98.6	1.4
B-752	S-15	58-60 ft	Moist, dark greenish gray organic clay	32	99.4	.6

Notes: Moisture content determined by Method A and reported as a percentage of oven-dried mass;
dried to a constant mass at temperature of 110° C
Ash content and organic matter determined by Method C; dried to constant mass at temperature 440° C