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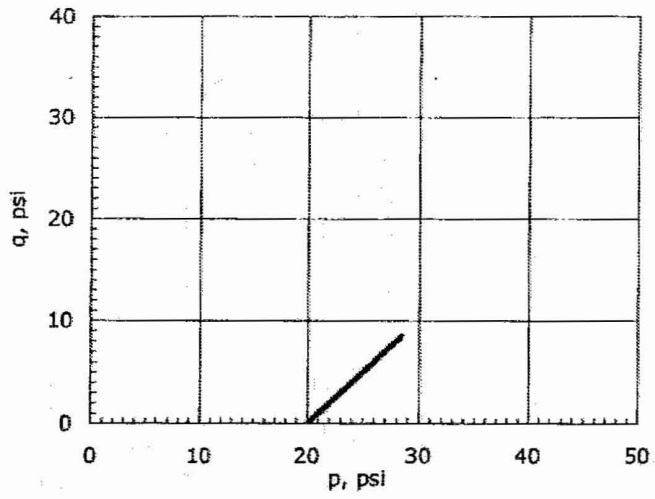
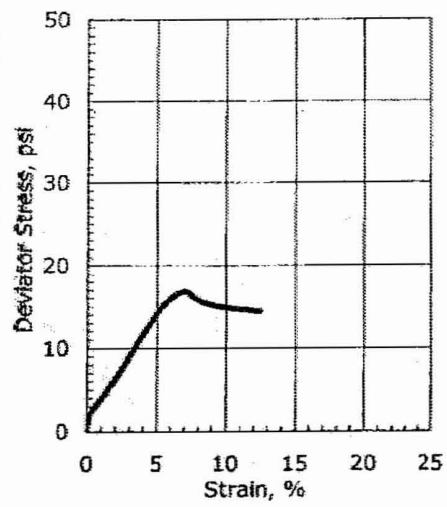
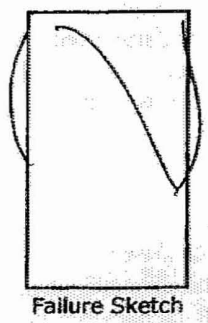
Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	10/18/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-326
Sample ID:	S-10
Depth, ft:	33.5-35.5
Visual Description:	Moist, dark gray sandy clay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

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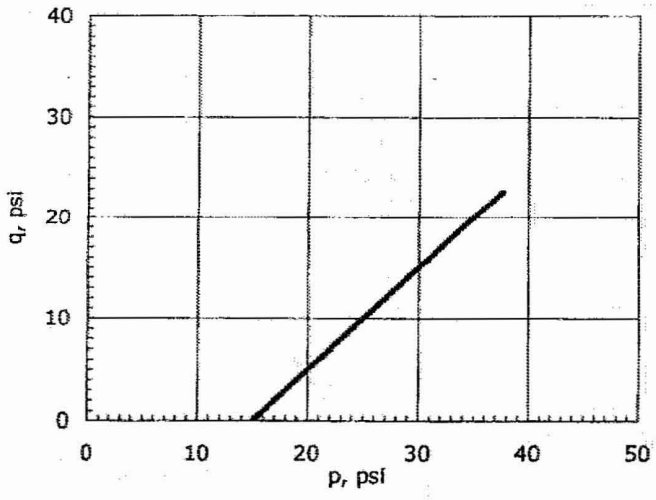
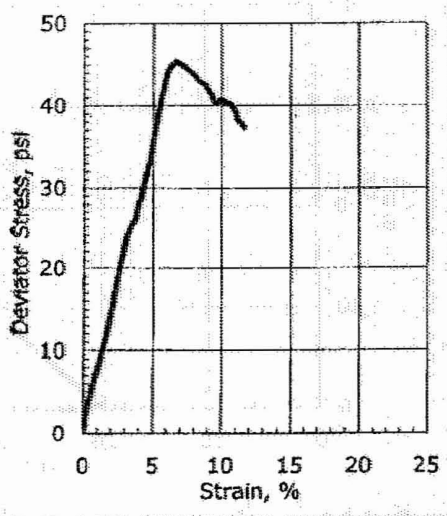
Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	10/18/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-331
Sample ID:	S-7
Depth, ft:	18.5-20.5
Visual Description:	Moist, mottled dark greenish 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

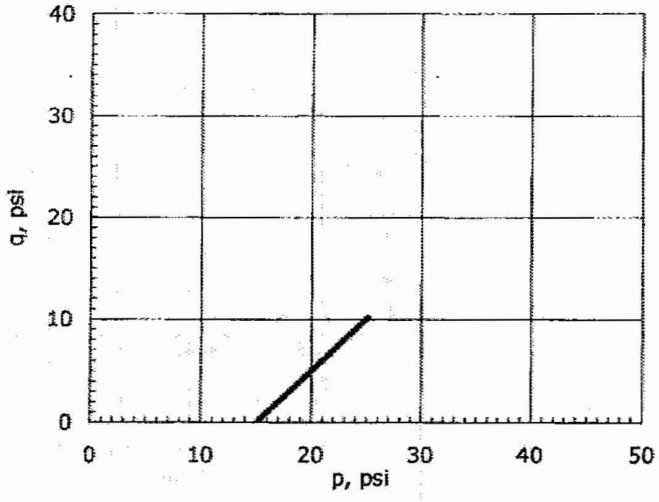
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

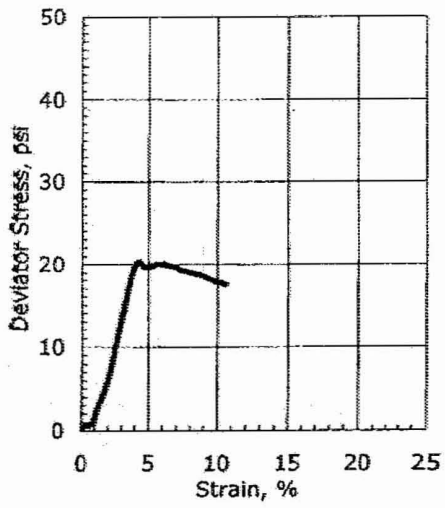
GeoTesting express

a subsidiary of Geocomp Corporation

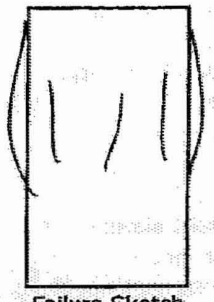
Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/12/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-334
Sample ID:	S-8
Depth, ft:	23-25
Visual Description:	Moist, dark greenish gray clay with 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

GeoTesting express

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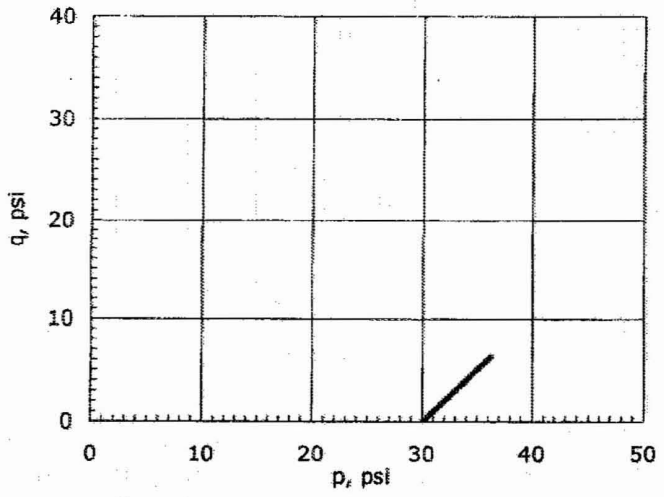
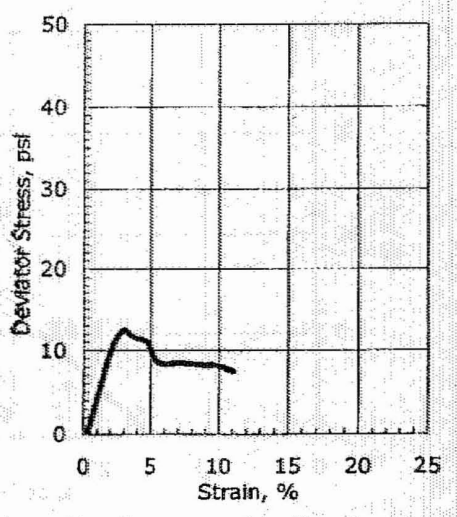
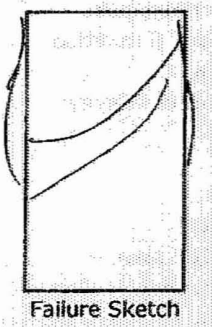
Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/21/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-337
Sample ID:	S-14
Depth, ft:	53.5-55.5
Visual Description:	Moist, olive gray clayey sand
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		



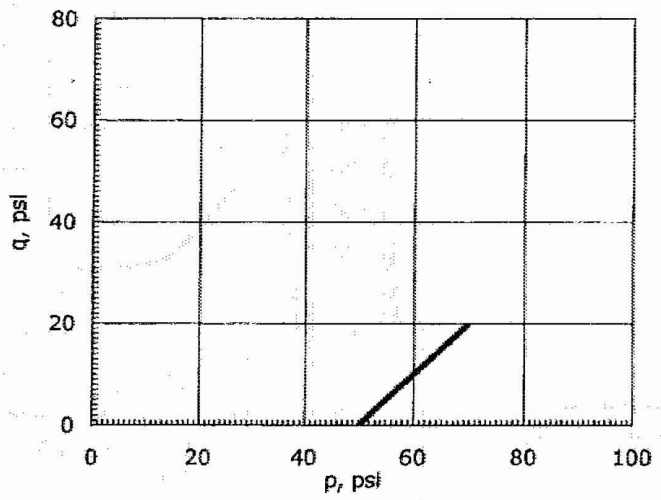
Failure Sketch

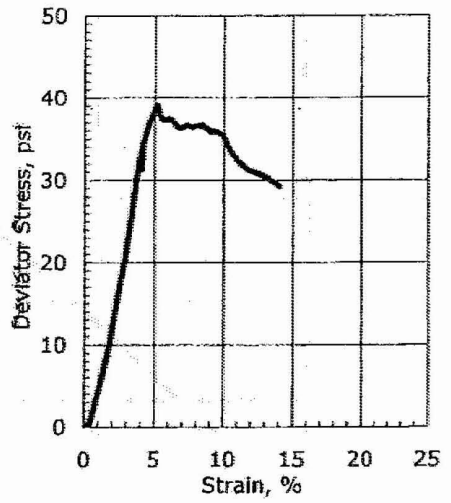
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

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-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

GeoTesting express

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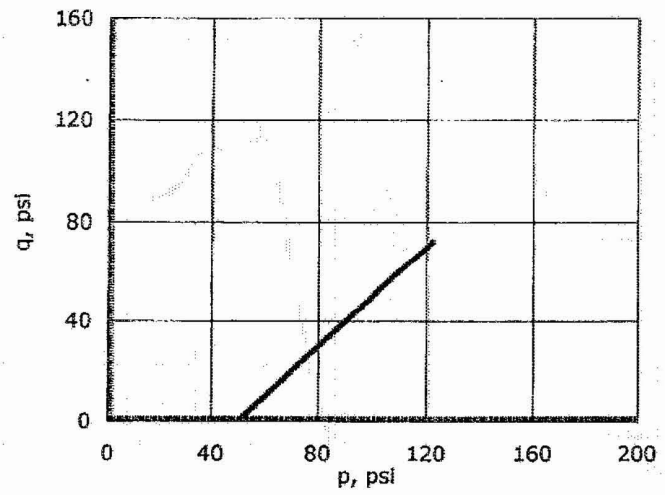
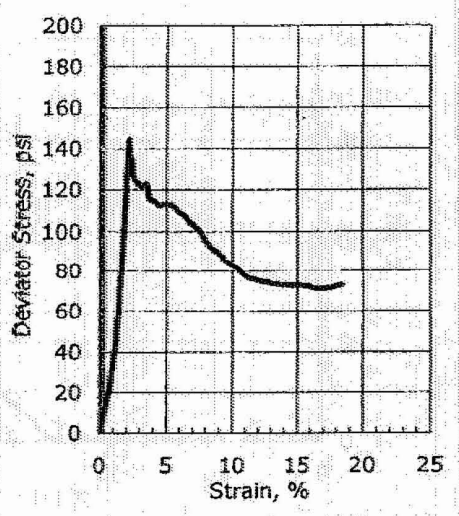
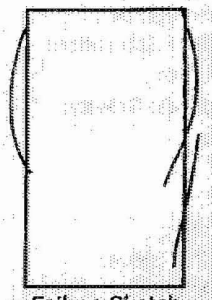
Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/20/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-401
Sample ID:	S-28
Depth, ft:	123.5-124.8
Visual Description:	Moist, dark olive gray silt 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

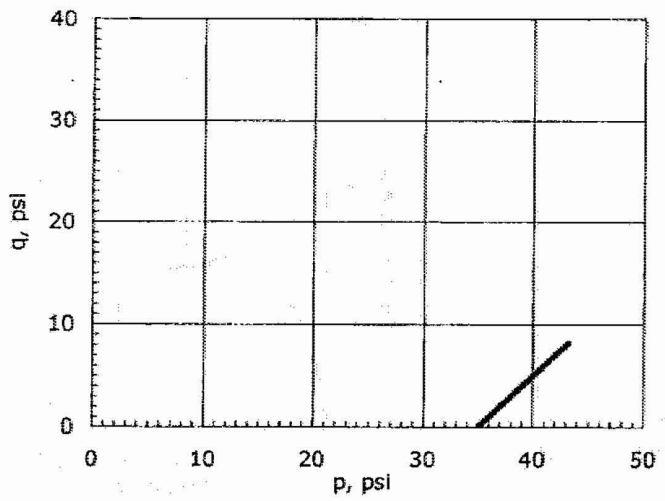
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

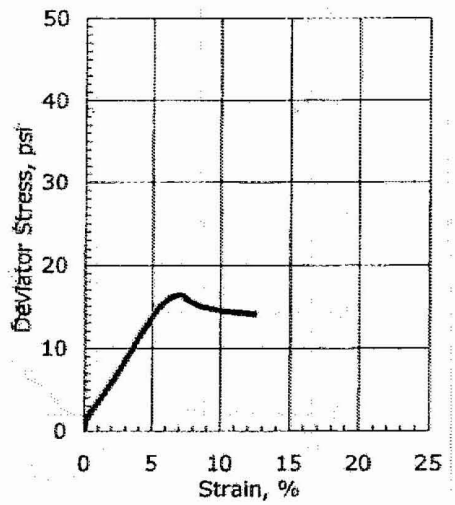
GeoTesting express

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		

Failure Sketch

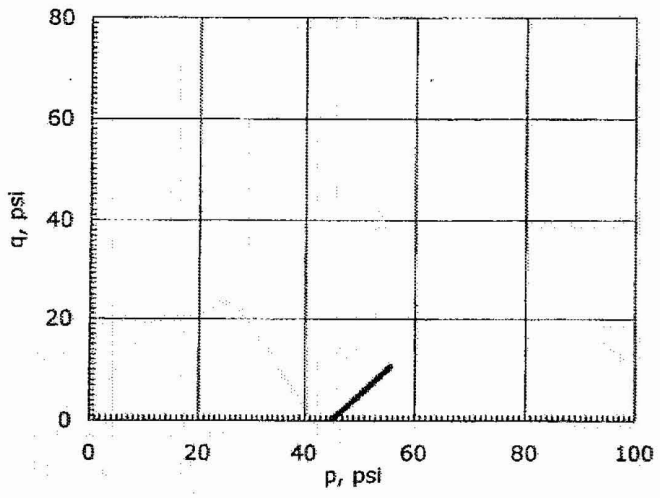
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

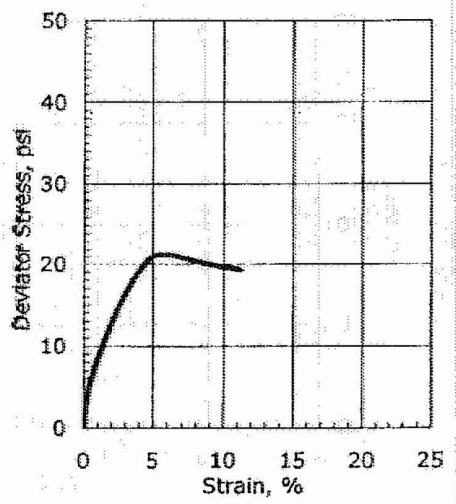
GeoTesting express

a subsidiary of Geocomp Corporation

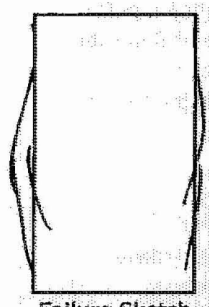
Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/20/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-413
Sample ID:	S-17
Depth, ft:	73-75
Visual Description:	Moist, dark greenish gray clay
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

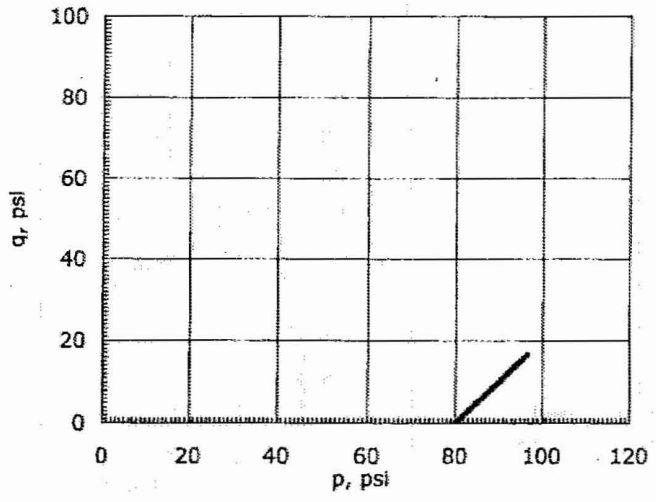
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

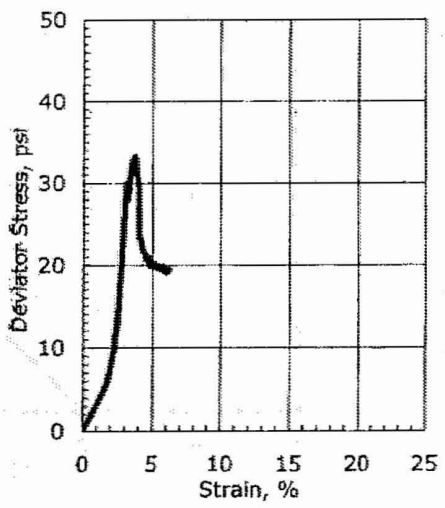
GeoTesting express

a subsidiary of Geocomp Corporation

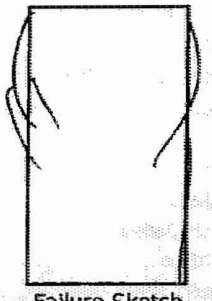
Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/12/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-423
Sample ID:	S-35
Depth, ft:	158.5-160.1
Visual Description:	Moist, olive gray organic 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

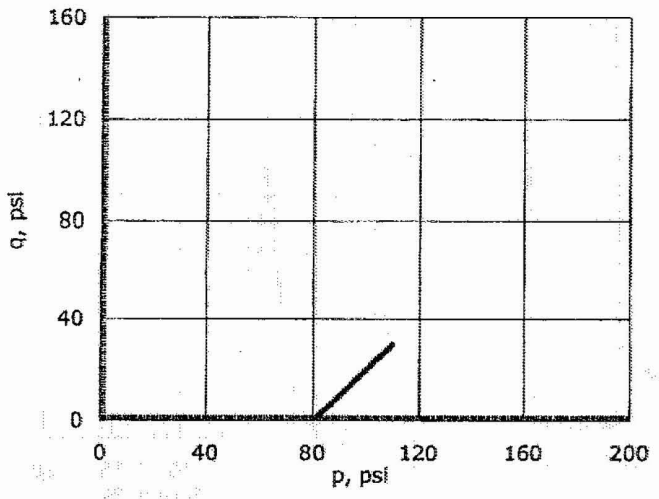
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

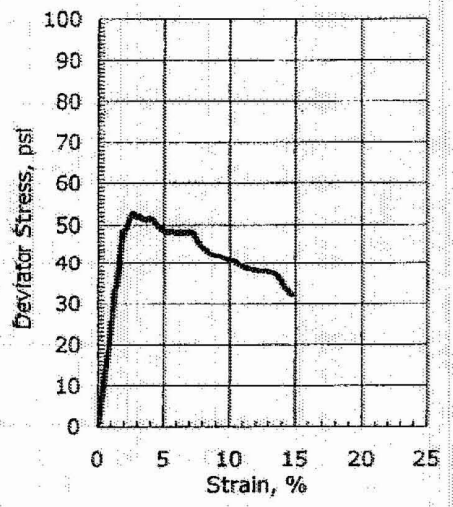
GeoTesting express

a subsidiary of Geocomp Corporation

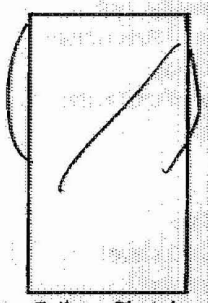
Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/21/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-423
Sample ID:	S-39
Depth, ft:	178.5-179.8
Visual Description:	Moist, olive silty sand
Test 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

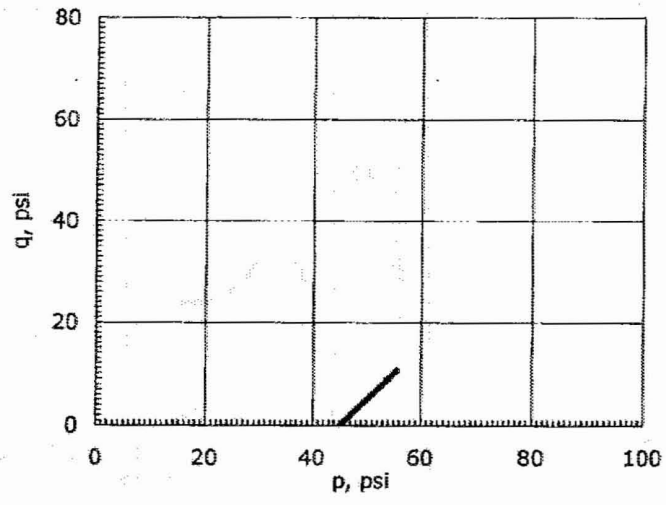
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

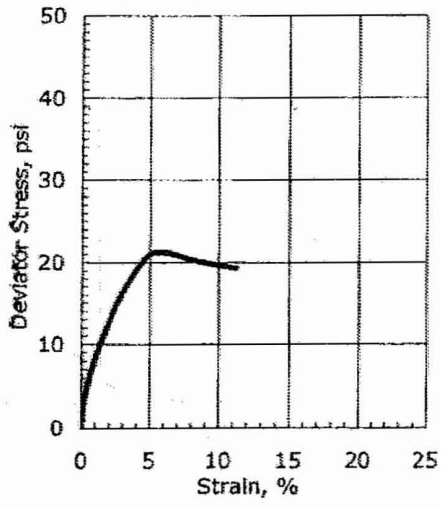
GeoTesting express

a subsidiary of Geocomp Corporation

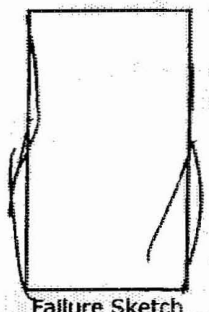
Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/29/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-427
Sample ID:	S-16
Depth, ft:	63.5-65.5
Visual Description:	Moist, black sandy organic 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		



Failure Sketch

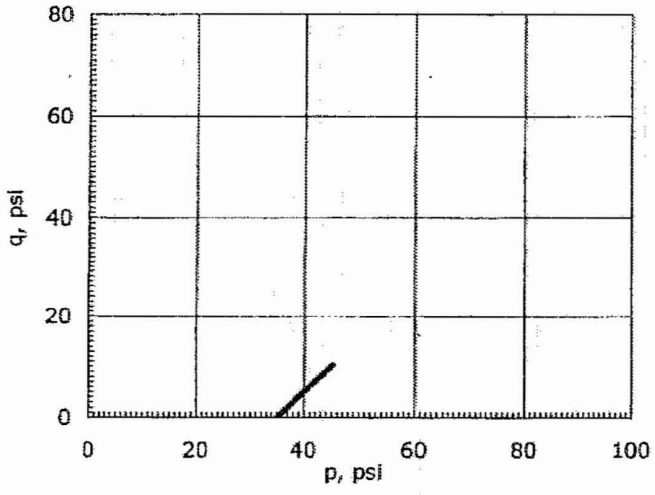
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

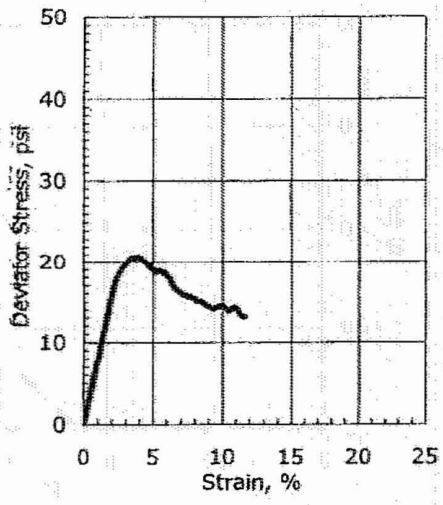
GeoTesting express

a subsidiary of Geocomp Corporation

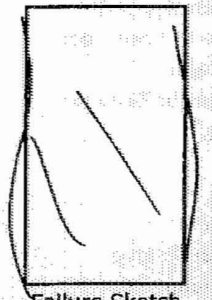
Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	11/1/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-428
Sample ID:	---
Depth, ft:	60-62
Visual Description:	Moist, dark greenish gray ~~organic~~ fat clay BB/4/6/07
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:	Fat ~~Organic~~ Clay		
Group Symbol:	CH ~~OH~~ BB/4/6/07		



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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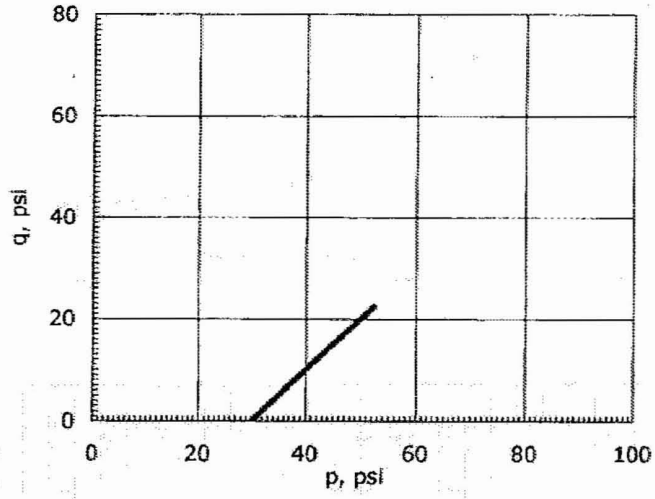
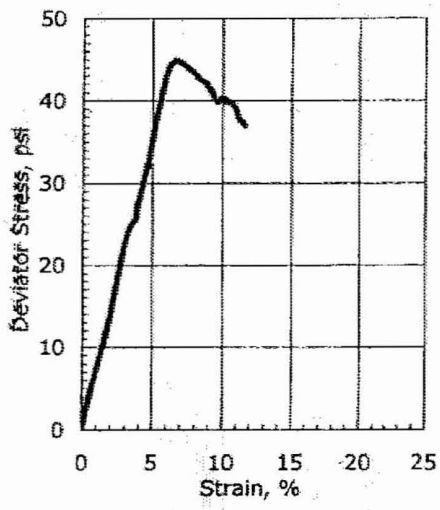
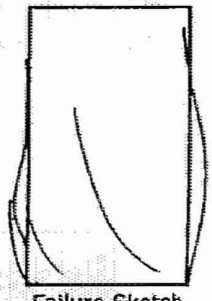
Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	10/19/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-433
Sample ID:	S-11
Depth, ft:	38.5-40.5
Visual Description:	Moist, very dark gray clay
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		



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

Schnabel
Schnabel Engineering

Unconsolidated Undrained Triaxial Compression Test

ASTM D2850

Project: *Calvert Cliffs Nuclear Power Plant*

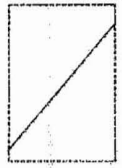
Location: *Calvert County, MD*

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*

Soil Description: *FAT CLAY (CH) trace sand - gray*

Failure Sketch



Specimen Conditions	
Diameter (in)	2.890
Height (in)	5.829
Area (in^2)	6.56
Moisture (%):	35.5
Weight (lbs)	2.57
ρ_{wet} (pcf)	118.3
ρ_{dry} (pcf)	85.8
Void Ratio	1.08
Saturation, %	95

Shear Testing Conditions	
Cell Pressure (psi):	35.0
Rate of Strain (%/min):	1.0

Specimen Type: *Tube Sample*

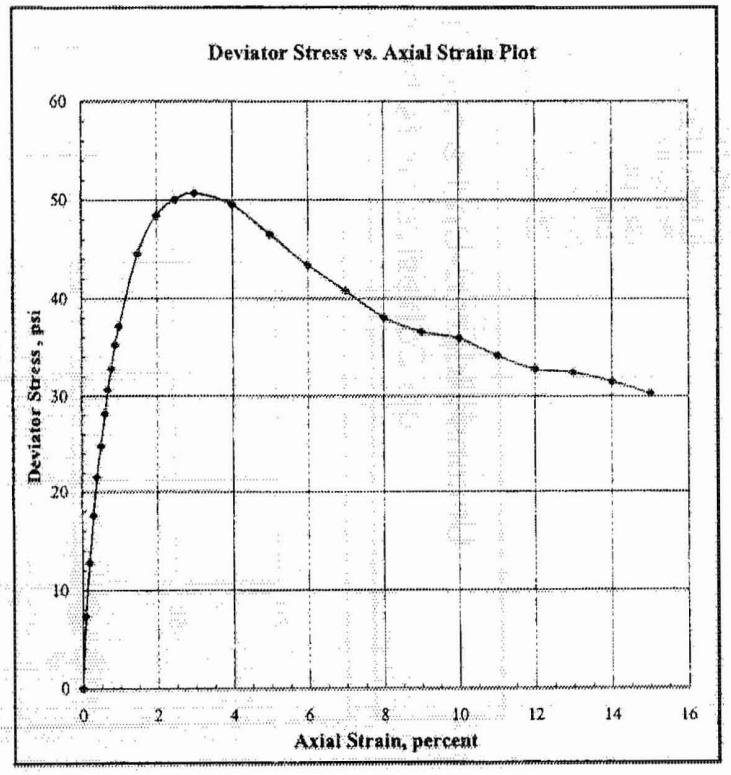
Axial Strain at Failure (%): *3.00*
Compressive Strength (psi): *50.7*
Major Principal Stress (psi): *85.7*
Minor Principal Stress (psi): *35.0*

Liquid Limit: *56*
Plasticity Index: *32*
% finer that No. 200: *94.9*
Specific Gravity: *2.84*

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	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.
ight Cylinder Correction Method

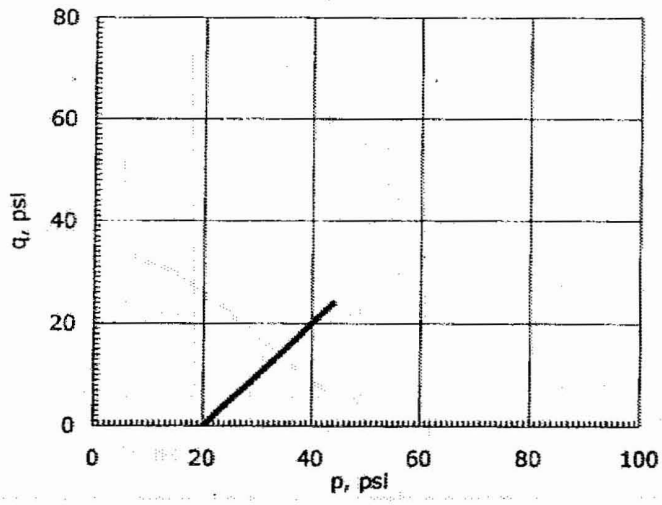


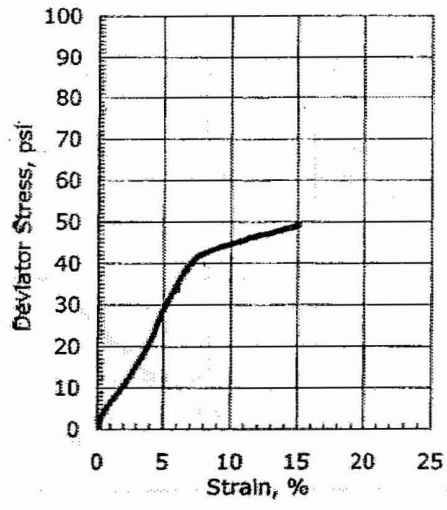
GeoTesting express

a subsidiary of Geocomp Corporation

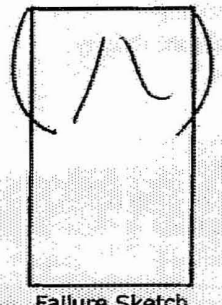
Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/20/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-701
Sample ID:	S-12
Depth, ft:	43.5-45.2
Visual Description:	Moist, mottled olive gray and 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		



Failure Sketch

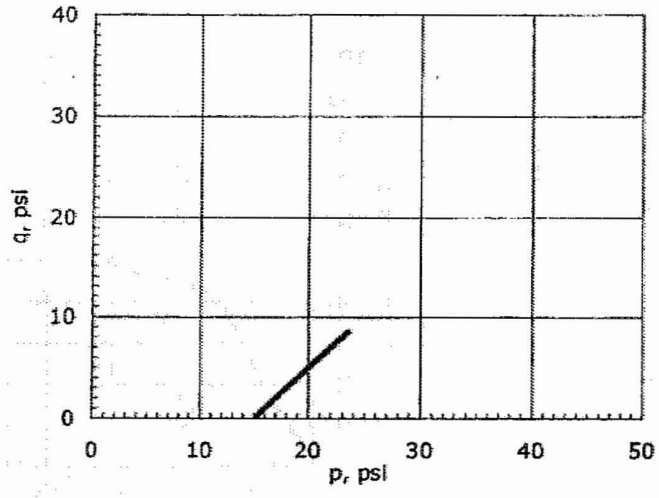
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

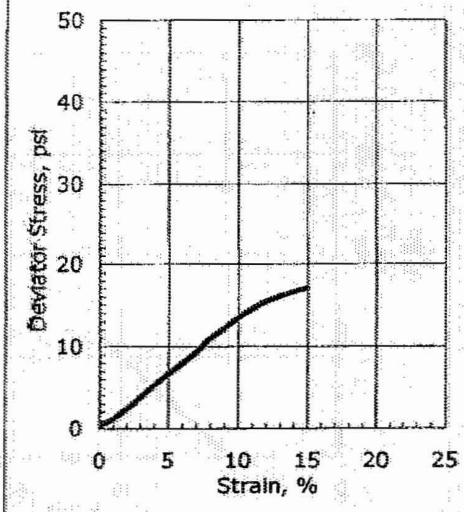
GeoTesting express

a subsidiary of Geocomp Corporation

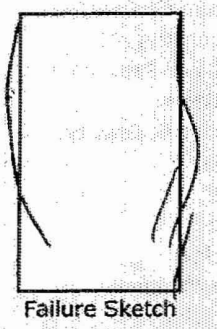
Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/20/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-722
Sample ID:	UD-1
Depth, ft:	33.5-35.5
Visual Description:	Moist, brownish yellow silty 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		



Failure Sketch

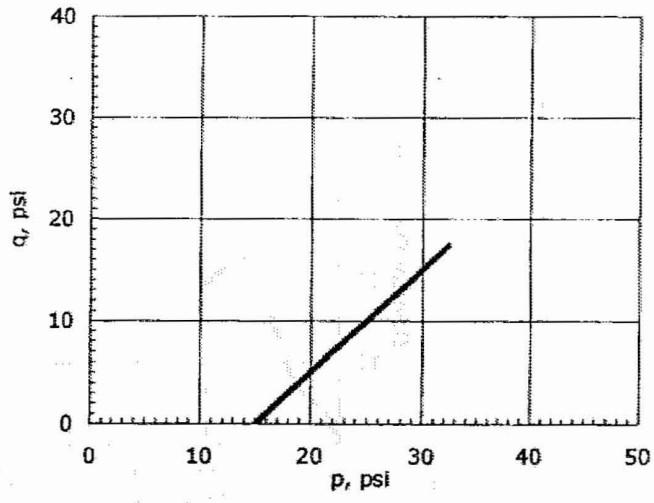
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

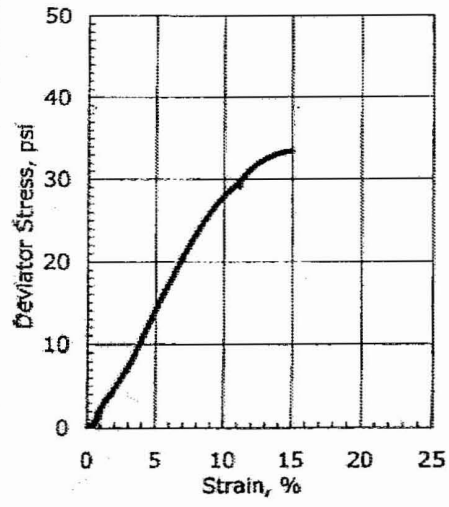
GeoTesting express

a subsidiary of Geocomp Corporation

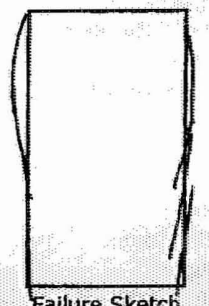
Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/21/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-723
Sample ID:	UD-2
Depth, ft:	28.5-30.5
Visual Description:	Moist, dark olive gray clay
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		



Failure Sketch

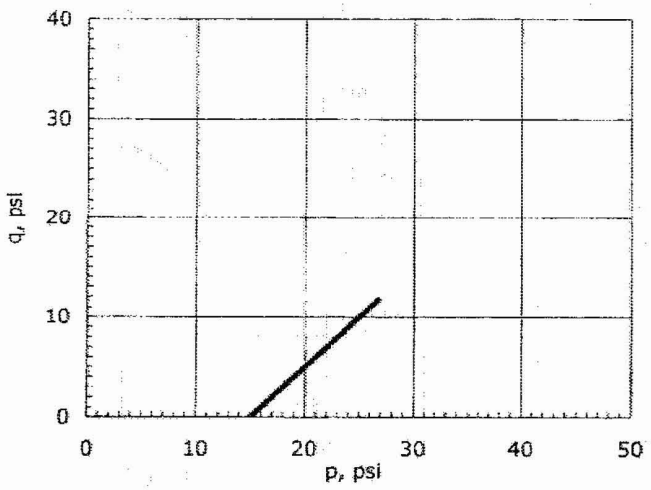
Notes: Moisture content obtained before shear from sample trimmings
Moisture Content determined by ASTM D 2216
Specific Gravity determined by ASTM D 854
Percent passing #200 sieve determined by ASTM D 422

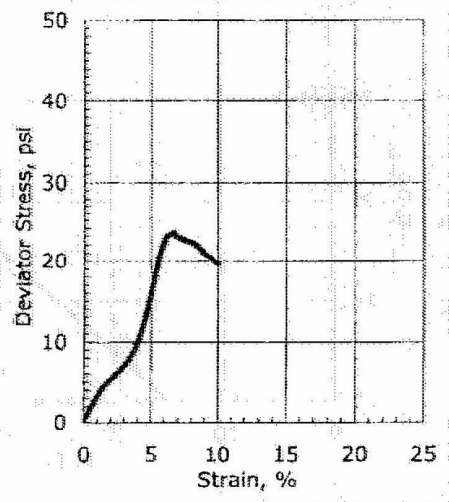
GeoTesting express

a subsidiary of Geocomp Corporation

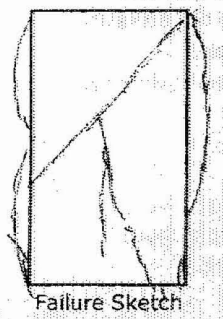
Client:	Schnabel Engineering, Inc.
Project Name:	Subsurface Investigation Calvert Cliffs Nuclear PP
Project Location:	Calvert County, MD
GTX #:	6880
Test Date:	9/19/2006
Tested By:	md
Checked By:	jdt
Boring ID:	B-723
Sample ID:	UD-3
Depth, ft:	38.5-40.5
Visual Description:	Moist, greenish gray clay
Test 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		



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