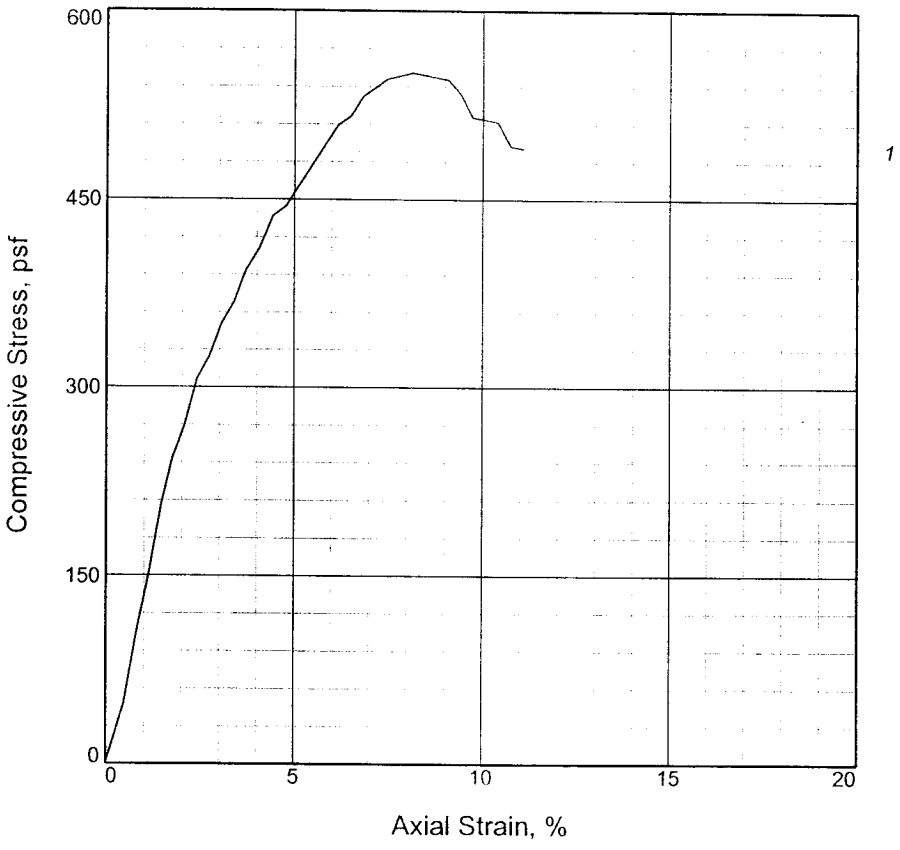
UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	550.7			
Undrained shear strength, psf	275.4			
Failure strain, %	8.1			
Strain rate, in./min.	0.059			
Water content, %	20.8			
Wet density, pcf	106.9			
Dry density, pcf	88.5			
Saturation, %	62.1			
Void ratio	0.9045			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: SO GR & T CL5

LL =	PL =	PI =	**Assumed GS=** 2.70	**Type:** UNDISTURBED

Project No.: 19082
Date: 11-14-05

Remarks:
TORVANE = 0.700 TSF

Client: URS Corporation

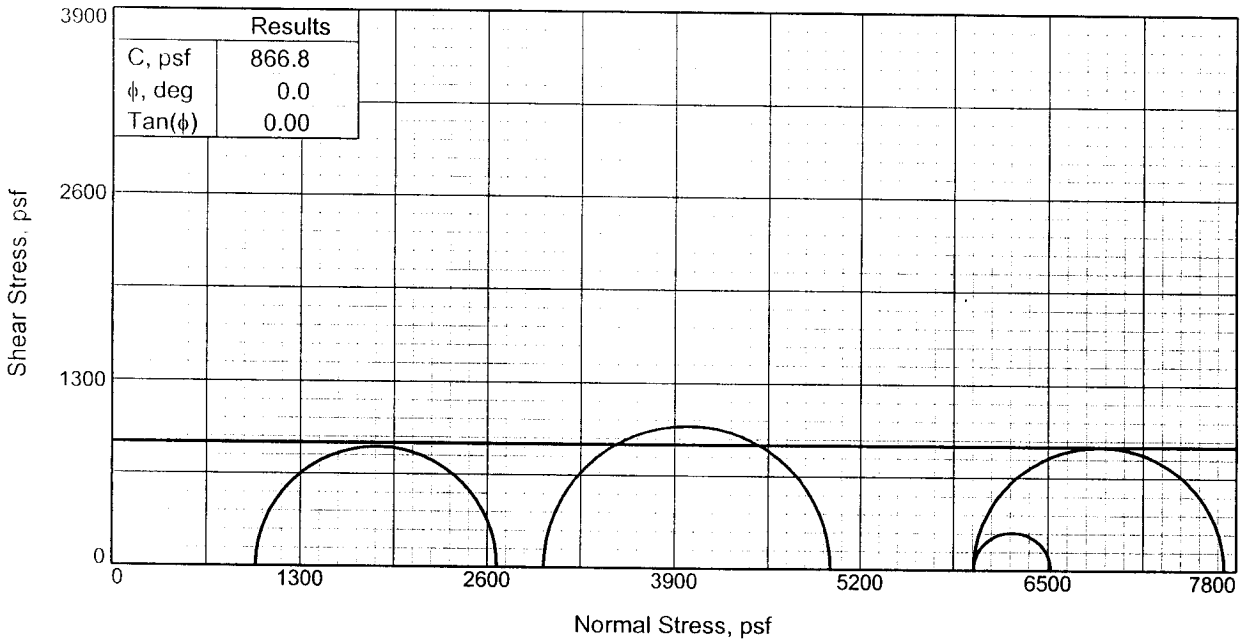
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: IHNC-TFG-1U **Depth:** 0.8
Sample Number: 1B

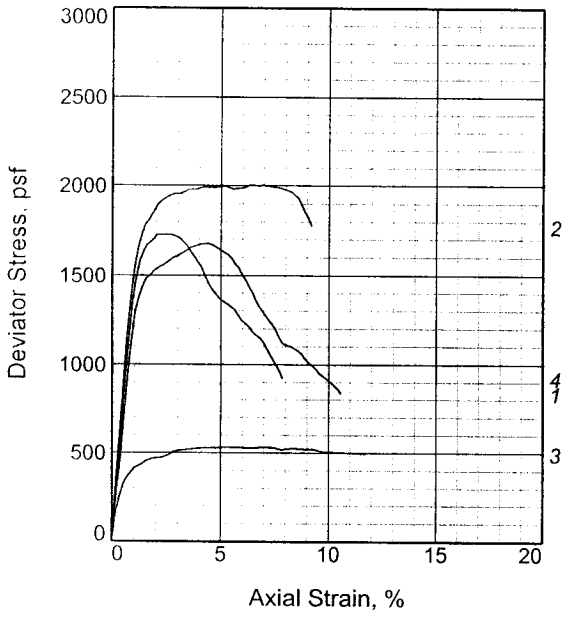
UNCONFINED COMPRESSION TEST

Figure 1

EUSTIS ENGINEERING COMPANY, INC.

Tested By: LWR **Checked By:** JS





Specimen No.		1	2	3	4
Initial	Water Content,	53.4	57.3	52.3	50.6
	Dry Density, pcf	65.8	62.9	64.9	67.0
	Saturation,	91.6	91.2	87.6	89.3
	Void Ratio	1.5981	1.7211	1.6368	1.5547
	Diameter, in.	1.388	1.388	1.388	1.388
	Height, in.	2.930	2.930	2.930	2.930
At Test	Water Content,	58.2	62.7	59.7	56.6
	Dry Density, pcf	65.9	62.9	64.9	67.0
	Saturation,	100.0	100.0	100.0	100.0
	Void Ratio	1.5955	1.7186	1.6368	1.5515
	Diameter, in.	1.388	1.388	1.388	1.387
	Height, in.	2.929	2.929	2.930	2.929
Strain rate, in./min.		0.030	0.030	0.001	0.029
Back Pressure, psf		0.0	0.0	0.0	0.0
Cell Pressure, psf		993.6	2995.2	5990.4	5990.4
Fail. Stress, psf		1675.5	1995.1	528.4	1726.4
Ult. Stress, psf		834.5	1772.2	495.7	921.4
σ_1 Failure, psf		2669.1	4990.3	6518.8	7716.8
σ_3 Failure, psf		993.6	2995.2	5990.4	5990.4

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: M GR CH4 W/ TR-WD

LL= 121 **PL=** 36 **PI=** 85
Assumed Specific Gravity= 2.74
Remarks: TORVANE = 0.750 TSF

Client: URS Corporation

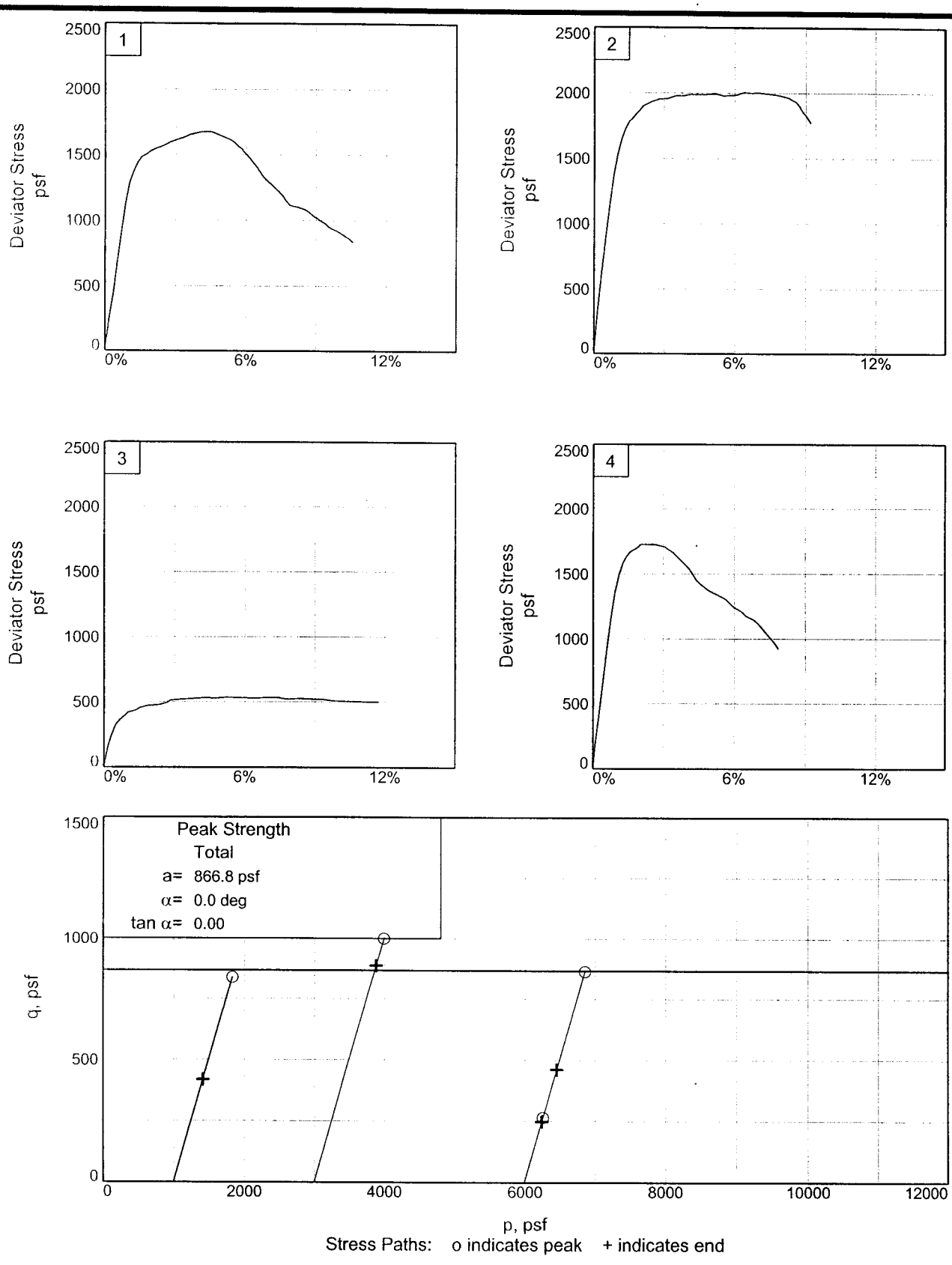
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: IHNC-TFG-1U **Depth:** 5.3
Sample Number: 2B2
Proj. No.: 19082 **Date:** 11-14-05

TRIAXIAL SHEAR TEST REPORT

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

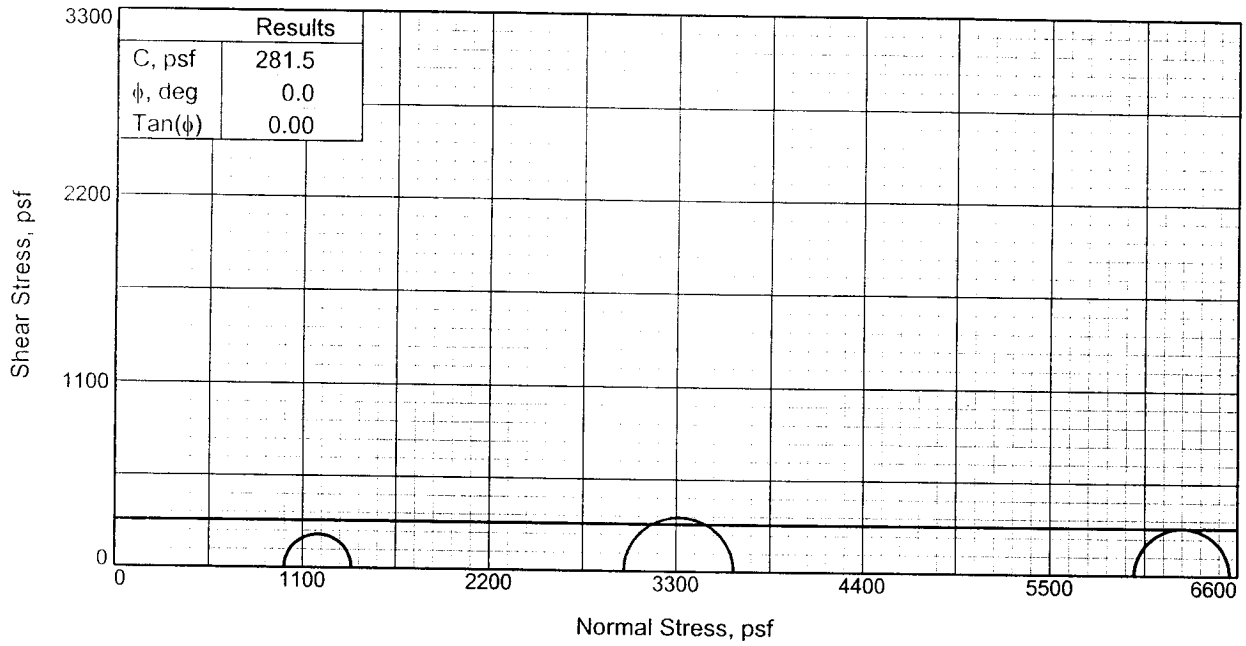
Tested By: LWR **Checked By:** JS

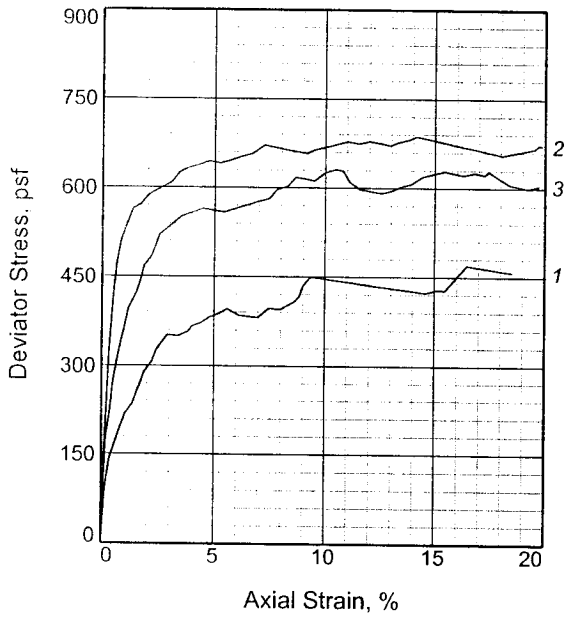


Client: URS Corporation
Project: U.S. Army Corps of Engineers
Source of Sample: IHNC-TFG-1U **Depth:** 5.3 **Sample Number:** 2B2
Project No.: 19082 **Figure** 2

EUSTIS ENGINEERING COMPANY, INC.

Tested By: LWR **Checked By:** JS





Specimen No.		1	2	3
Initial	Water Content,	50.2	43.0	58.8
	Dry Density, pcf	69.8	74.4	61.3
	Saturation,	95.4	91.1	90.4
	Void Ratio	1.4316	1.2830	1.7693
	Diameter, in.	1.388	1.388	1.388
	Height, in.	2.930	2.930	2.930
At Test	Water Content,	52.6	47.1	65.0
	Dry Density, pcf	69.9	74.4	61.4
	Saturation,	100.0	100.0	100.0
	Void Ratio	1.4299	1.2816	1.7673
	Diameter, in.	1.388	1.388	1.388
	Height, in.	2.929	2.929	2.929
Strain rate, in./min.		0.029	0.030	0.029
Back Pressure, psf		0.0	0.0	0.0
Cell Pressure, psf		993.6	2995.2	5990.4
Fail. Stress, psf		395.5	643.8	563.9
Ult. Stress, psf		457.6	671.3	603.8
σ_1 Failure, psf		1389.1	3639.0	6554.3
σ_3 Failure, psf		993.6	2995.2	5990.4

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CH3 W/ WD, ARS ML

LL= 65 **PL=** 21 **PI=** 44
Assumed Specific Gravity= 2.72
Remarks: TORVANE = 0.160 TSF

Client: URS Corporation

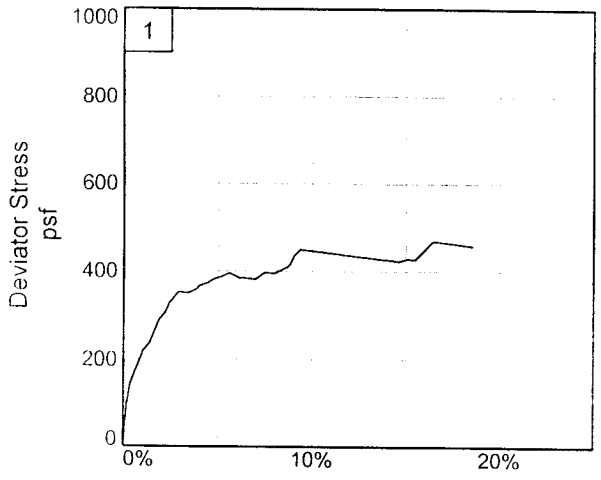
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: IHNC-TFG-1U **Depth:** 8.8
Sample Number: 3B
Proj. No.: 19082 **Date:** 11-14-05

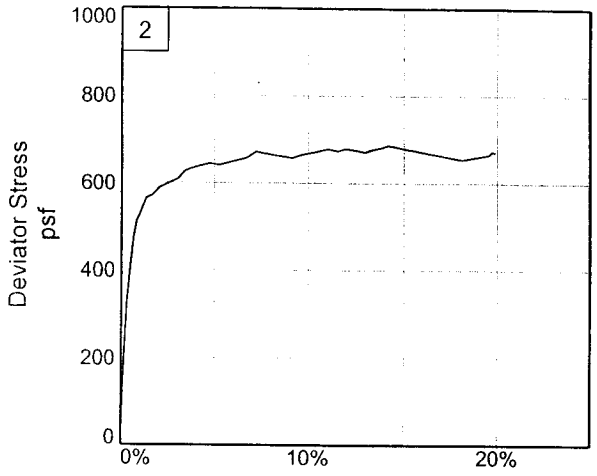
TRIAXIAL SHEAR TEST REPORT

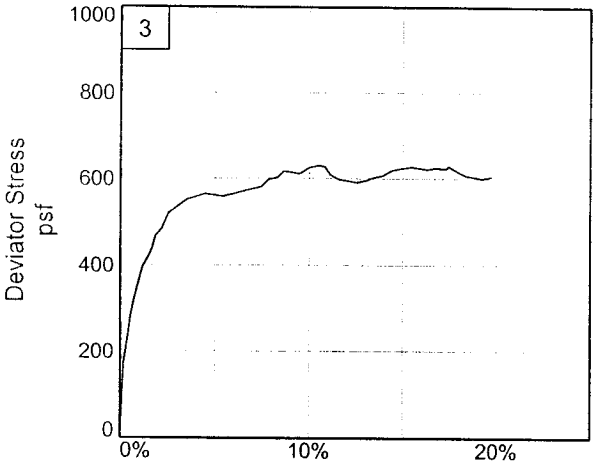
EUSTIS ENGINEERING COMPANY, INC.

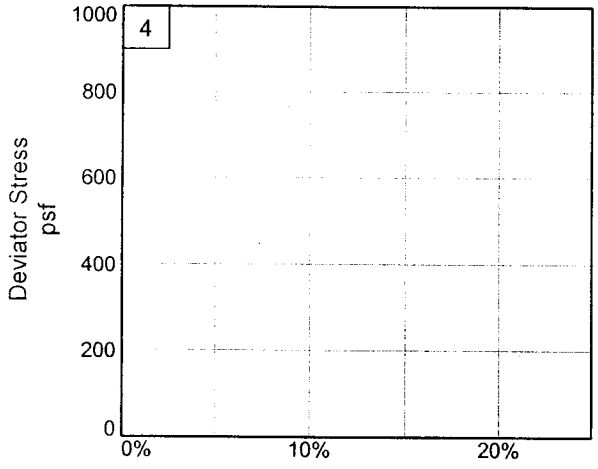
Figure 1

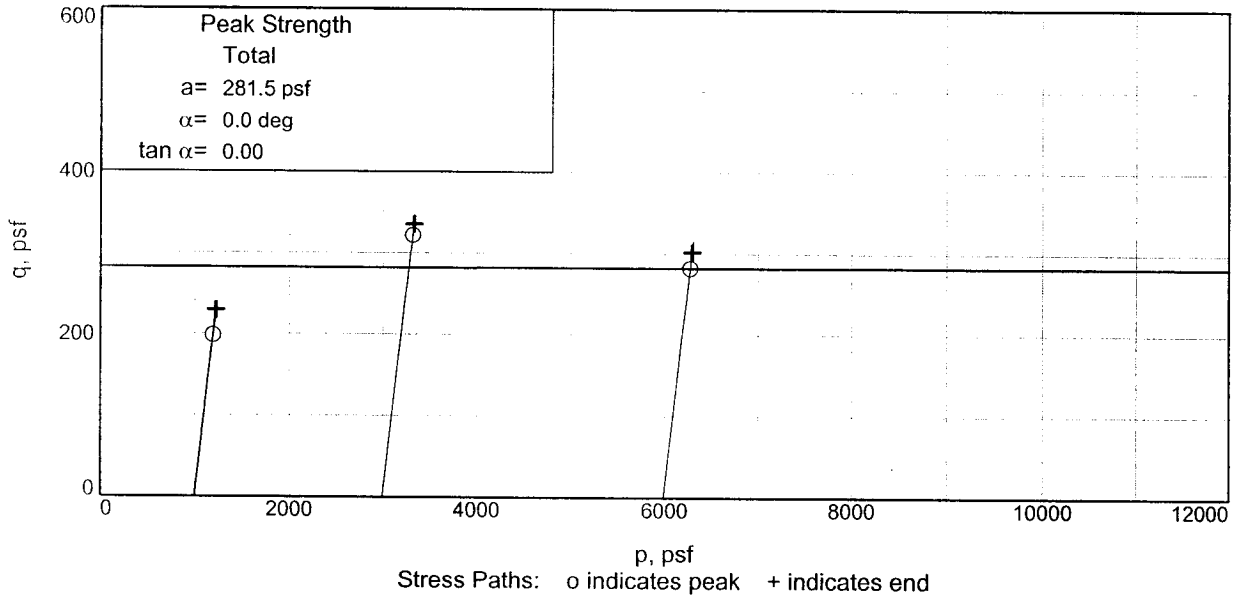
Tested By: LWR **Checked By:** JS











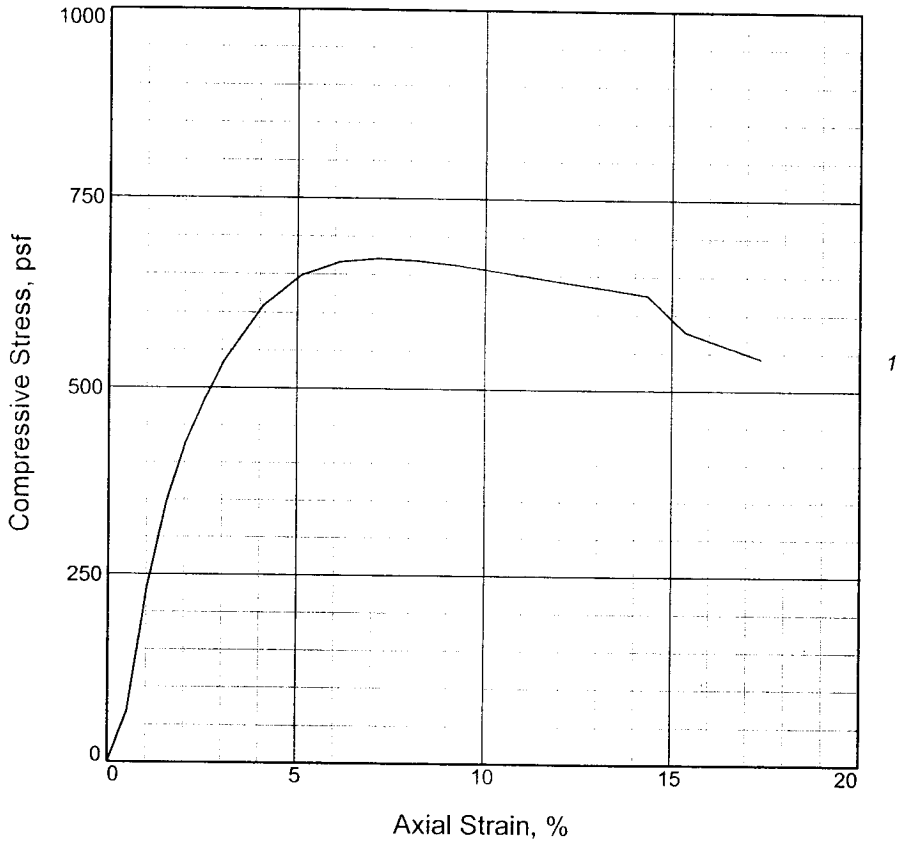
Stress Paths: o indicates peak + indicates end

Client: URS Corporation
Project: U.S. Army Corps of Engineers
Source of Sample: IHNC-TFG-1U **Depth:** 8.8 **Sample Number:** 3B
Project No.: 19082 **Figure** 2

EUSTIS ENGINEERING COMPANY, INC.

Tested By: LWR **Checked By:** JS

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	670.5			
Undrained shear strength, psf	335.3			
Failure strain, %	7.2			
Strain rate, in./min.	0.059			
Water content, %	42.4			
Wet density, pcf	106.6			
Dry density, pcf	74.9			
Saturation, %	90.4			
Void ratio	1.2835			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: SO GR & BR CH3 W/ LNS & LYS SP, WD

LL =	PL =	PI =	**Assumed GS=** 2.74	**Type:** UNDISTURBED

Project No.: 19082
Date: 11-14-05

Remarks:
TORVANE = 0.200 TSF

Client: URS Corporation

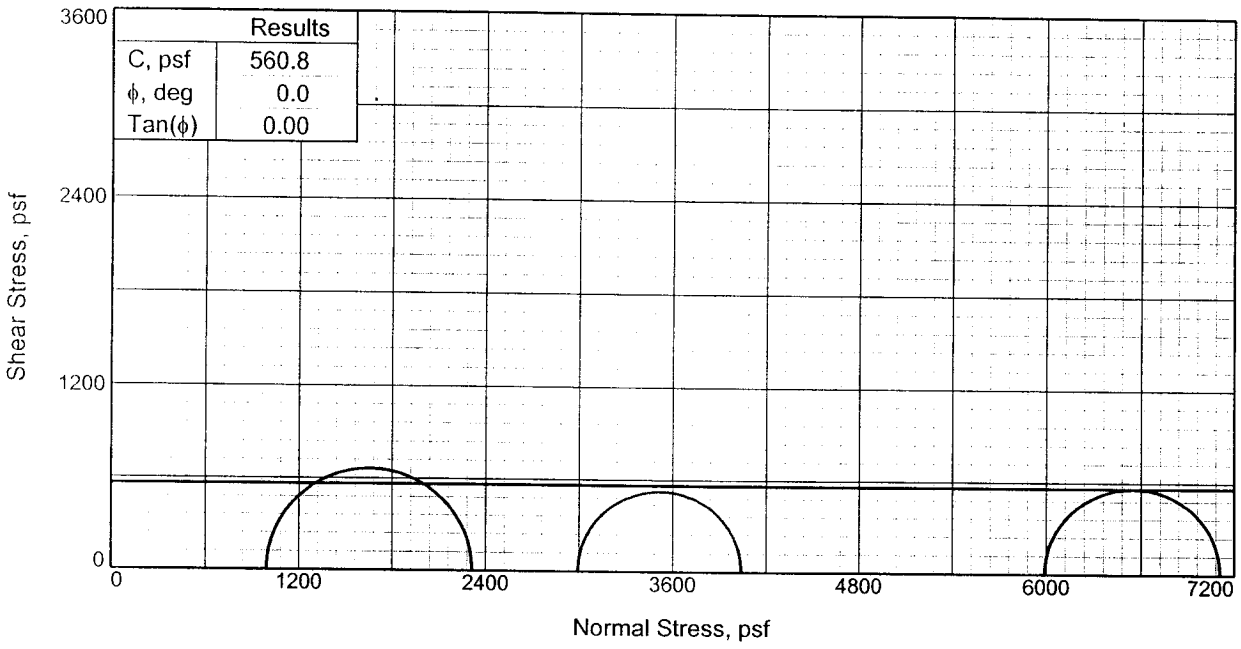
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: IHNC-TFG-1U **Depth:** 12.0
Sample Number: 4A

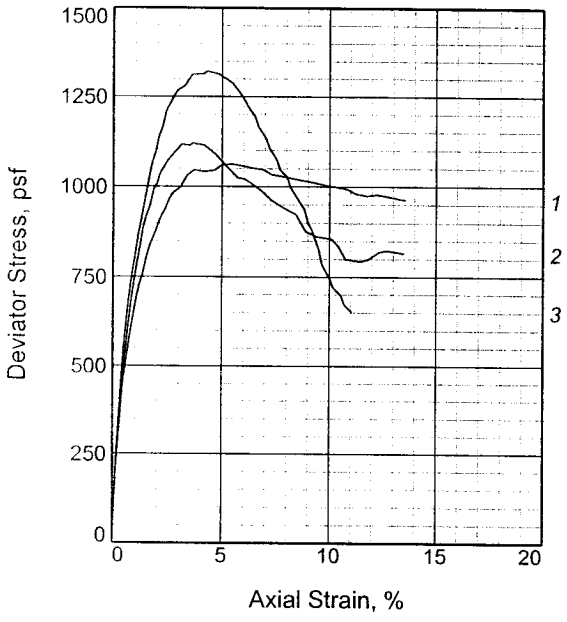
UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: LWR **Checked By:** JS





Specimen No.		1	2	3
Initial	Water Content,	51.9	56.5	50.0
	Dry Density, pcf	65.9	64.5	69.2
	Saturation,	89.3	93.6	93.0
	Void Ratio	1.5939	1.6540	1.4732
	Diameter, in.	1.388	1.388	1.388
	Height, in.	2.930	2.930	2.930
At Test	Water Content,	58.1	60.2	53.7
	Dry Density, pcf	66.0	64.5	69.2
	Saturation,	100.0	100.0	100.0
	Void Ratio	1.5918	1.6507	1.4717
	Diameter, in.	1.388	1.387	1.388
	Height, in.	2.929	2.929	2.929
Strain rate, in./min.		0.029	0.030	0.029
Back Pressure, psf		0.0	0.0	0.0
Cell Pressure, psf		2995.2	5990.4	993.6
Fail. Stress, psf		1045.2	1119.5	1321.0
Ult. Stress, psf		962.7	815.6	652.0
σ_1 Failure, psf		4040.4	7109.9	2314.6
σ_3 Failure, psf		2995.2	5990.4	993.6

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: M GR CH4 W/ LNS ML, TR-WD

LL= 84 **PL=** 26 **PI=** 58
Assumed Specific Gravity= 2.74
Remarks: TORVANE = 0.330 TSF

Client: URS Corporation

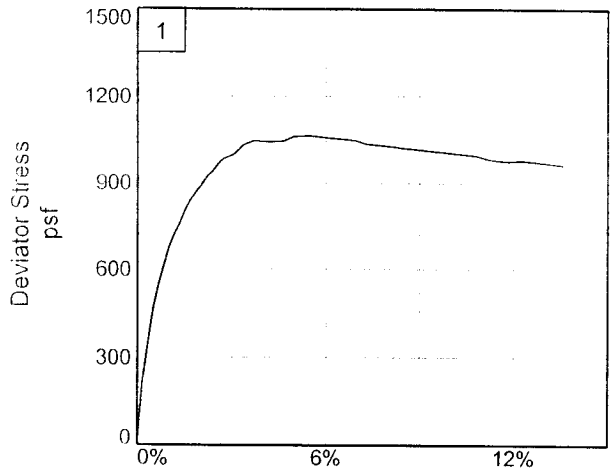
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: IHNC-TFG-1U **Depth:** 16.8
Sample Number: 5B
Proj. No.: 19082 **Date:** 11-14-05

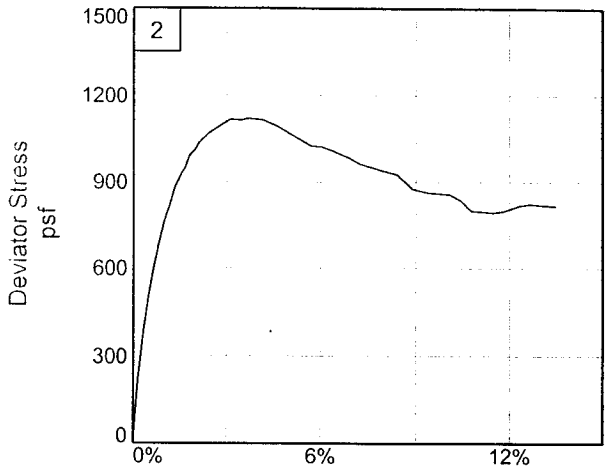
TRIAXIAL SHEAR TEST REPORT

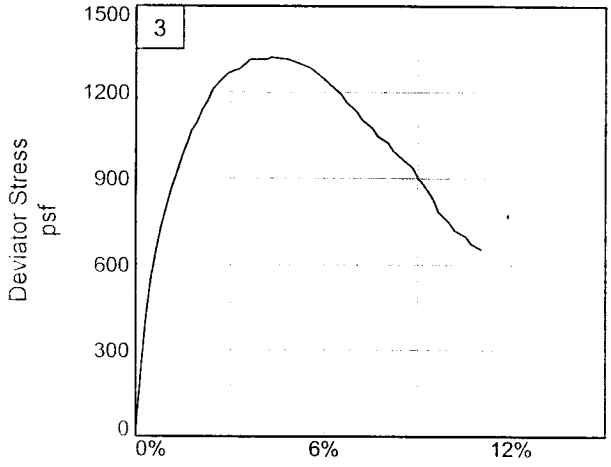
EUSTIS ENGINEERING COMPANY, INC.

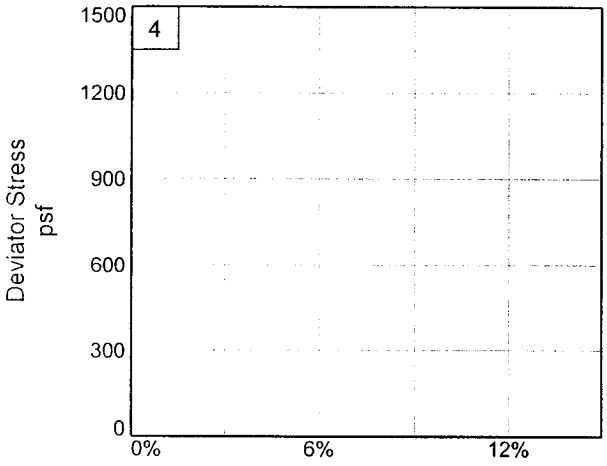
Figure 1

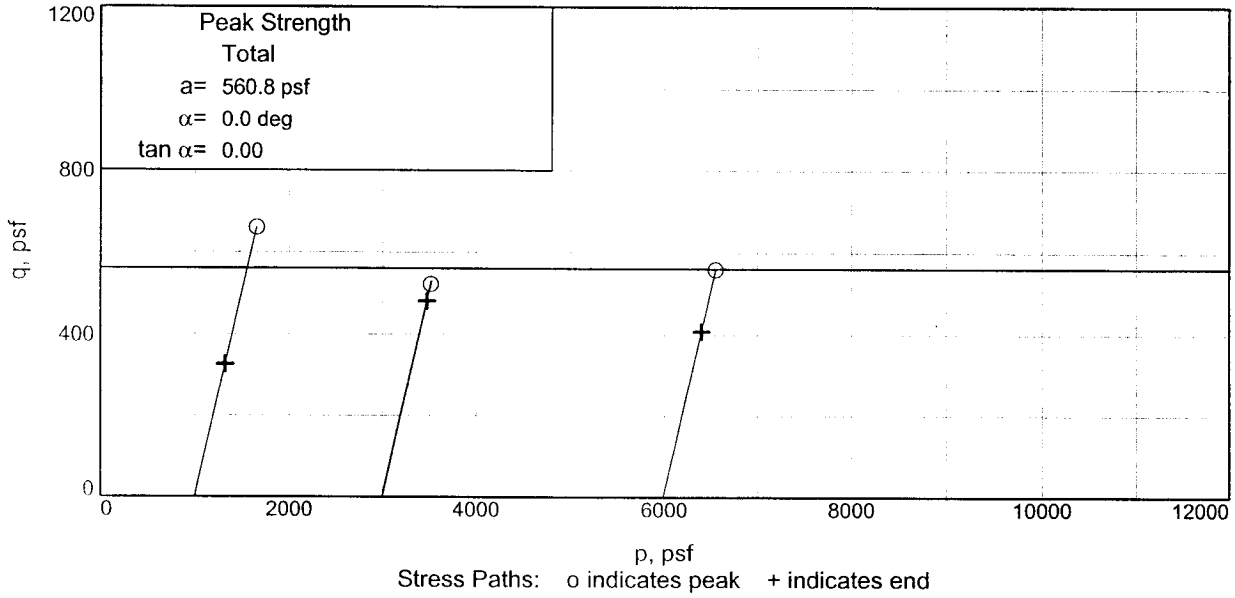
Tested By: LWR **Checked By:** JS









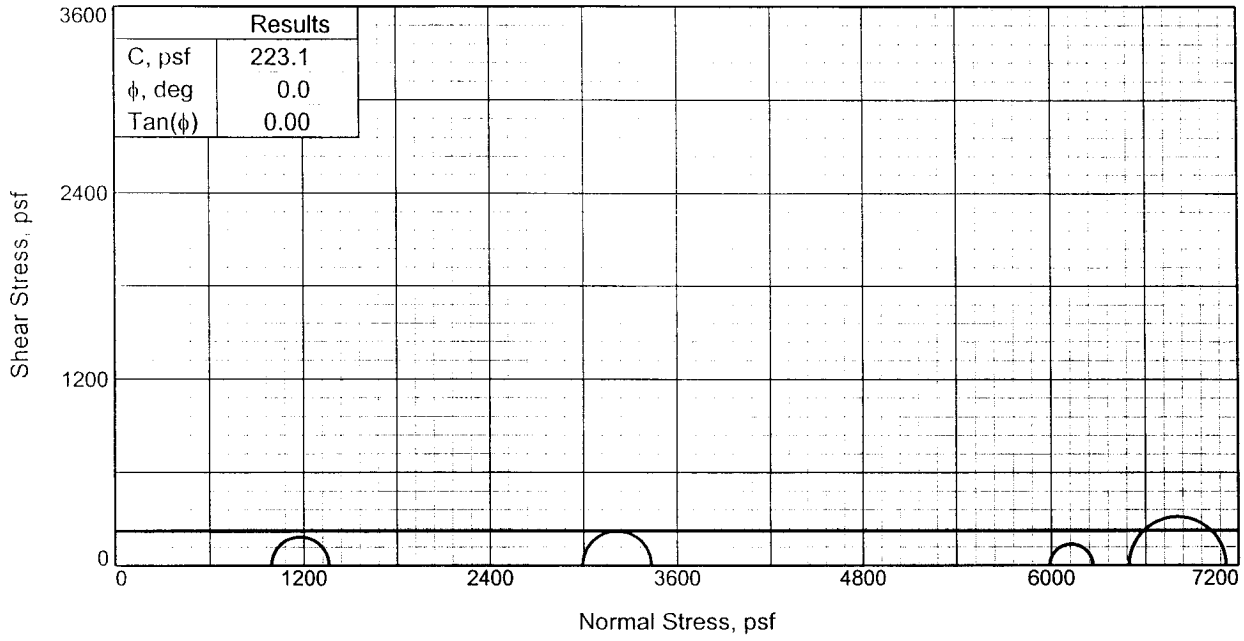


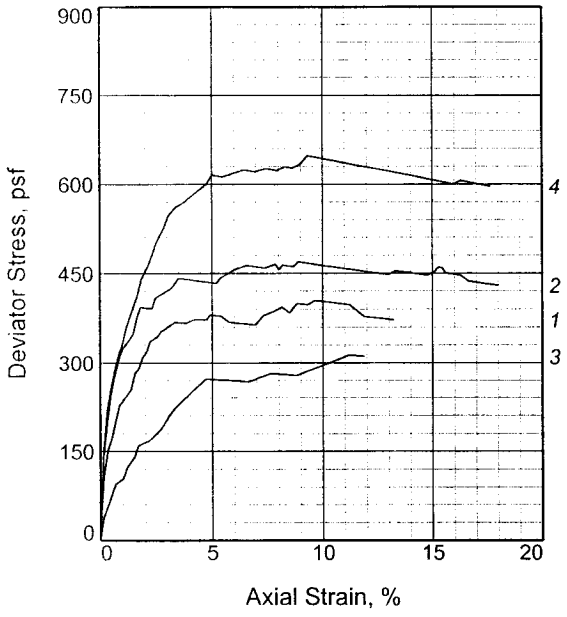
Stress Paths: o indicates peak + indicates end

Client: URS Corporation
Project: U.S. Army Corps of Engineers
Source of Sample: IHNC-TFG-1U **Depth:** 16.8 **Sample Number:** 5B
Project No.: 19082 **Figure** 2

EUSTIS ENGINEERING COMPANY, INC.

Tested By: LWR **Checked By:** JS





Specimen No.		1	2	3	4
Initial	Water Content,	58.8	59.0	58.8	43.2
	Dry Density, pcf	62.8	62.4	62.1	70.9
	Saturation,	94.0	93.2	92.2	84.2
	Void Ratio	1.7032	1.7229	1.7327	1.3967
	Diameter, in.	1.388	1.388	1.388	1.388
	Height, in.	2.930	2.930	2.930	2.930
At Test	Water Content,	62.6	63.2	63.6	51.2
	Dry Density, pcf	62.8	62.4	62.2	71.0
	Saturation,	100.0	100.0	100.0	100.0
	Void Ratio	1.7024	1.7195	1.7308	1.3927
	Diameter, in.	1.388	1.388	1.388	1.387
	Height, in.	2.930	2.929	2.929	2.928
Strain rate, in./min.		0.029	0.030	0.029	0.029
Back Pressure, psf		0.0	0.0	0.0	0.0
Cell Pressure, psf		993.6	2995.2	5990.4	6494.4
Fail. Stress, psf		368.0	441.0	272.1	623.8
Ult. Stress, psf		371.6	429.2	310.4	596.2
σ_1 Failure, psf		1361.6	3436.2	6262.5	7118.2
σ_3 Failure, psf		993.6	2995.2	5990.4	6494.4

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CH3 W/ ARS ML, RT

LL= 62 **PL=** 14 **PI=** 48
Assumed Specific Gravity= 2.72
Remarks: TORVANE = 0.120 TSF

Client: URS Corporation

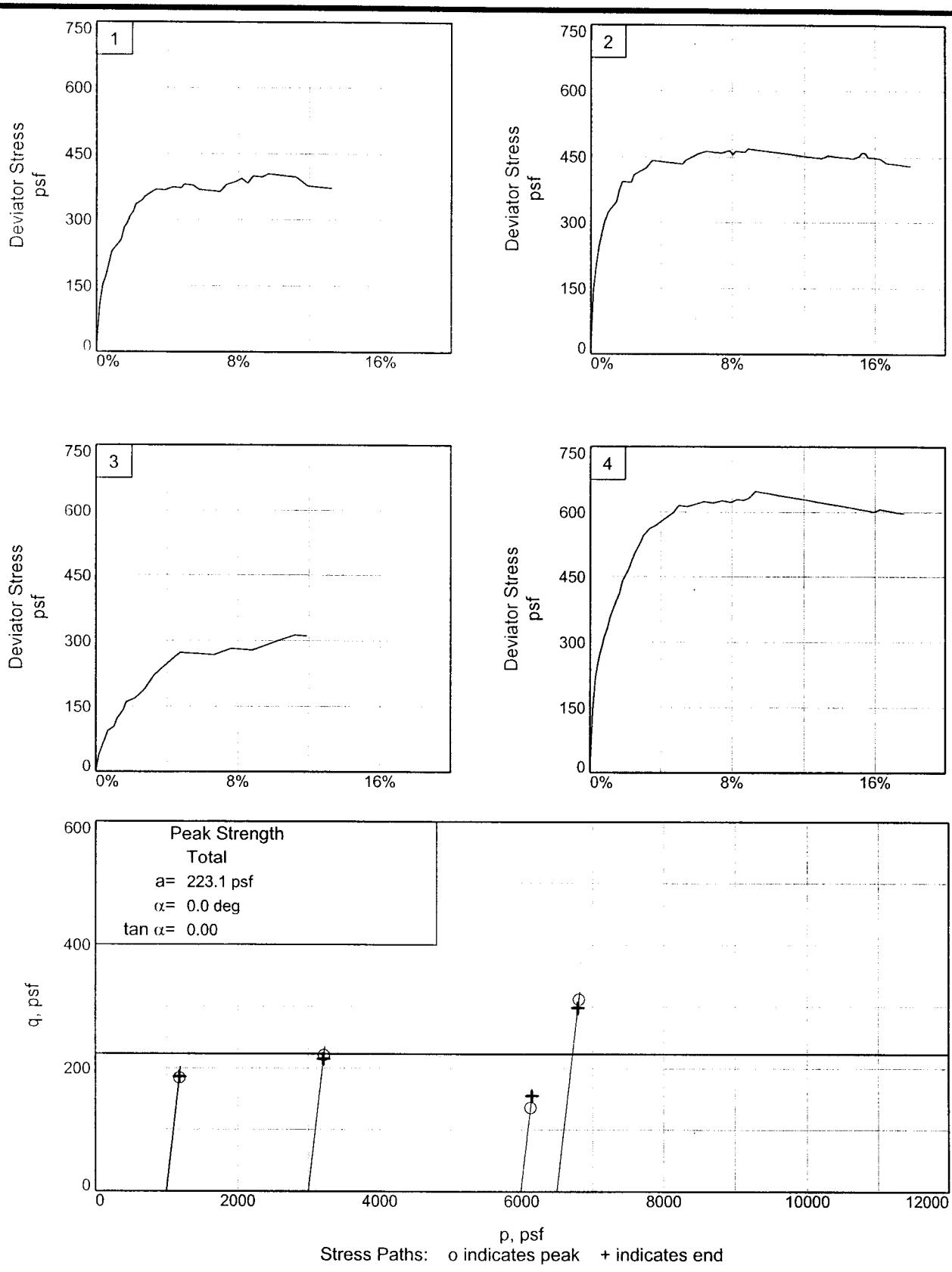
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: IHNC-TFG-1U **Depth:** 28.8
Sample Number: 8B
Proj. No.: 19082 **Date:** 11-14-05

TRIAXIAL SHEAR TEST REPORT

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: LWR **Checked By:** JS

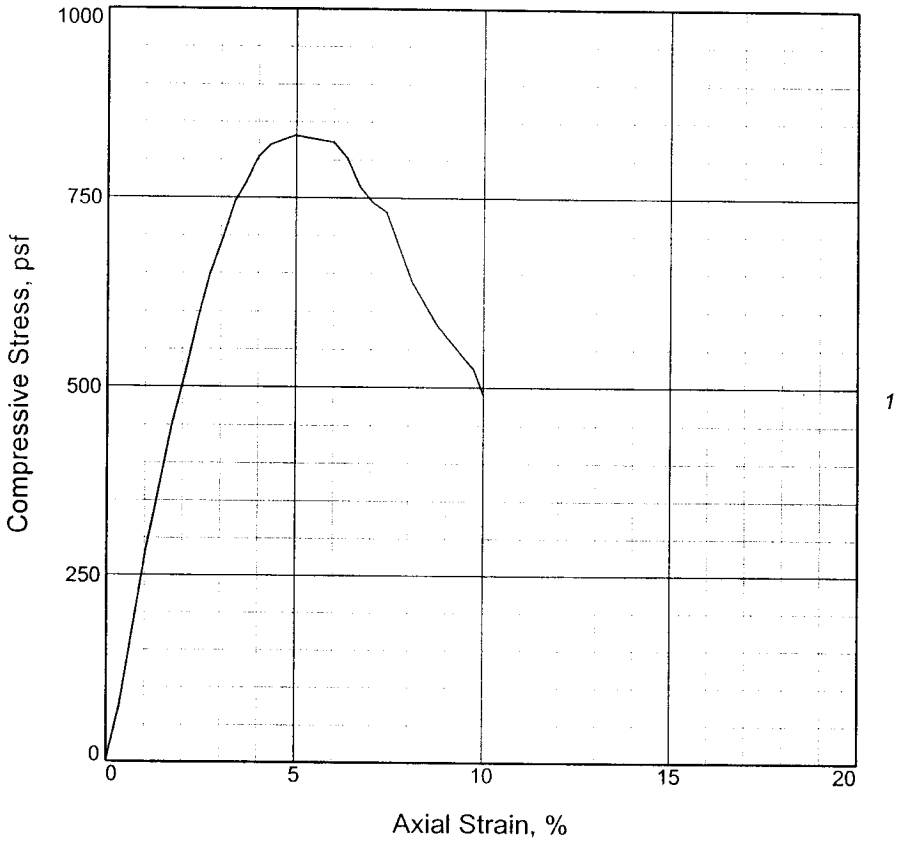


Client: URS Corporation
Project: U.S. Army Corps of Engineers
Source of Sample: IHNC-TFG-1U **Depth:** 28.8 **Sample Number:** 8B
Project No.: 19082 **Figure** 2

EUSTIS ENGINEERING COMPANY, INC.

Tested By: LWR **Checked By:** JS

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	832.0			
Undrained shear strength, psf	416.0			
Failure strain, %	5.0			
Strain rate, in./min.	0.059			
Water content, %	63.0			
Wet density, pcf	98.4			
Dry density, pcf	60.4			
Saturation, %	94.1			
Void ratio	1.8329			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: SO GR CH3 W/ LNS & LYS ML

LL =	PL =	PI =	**Assumed GS=** 2.74	**Type:** UNDISTURBED

Project No.: 19082
Date: 11-14-05

Remarks:
TORVANE = 0.100 TSF

Client: URS Corporation

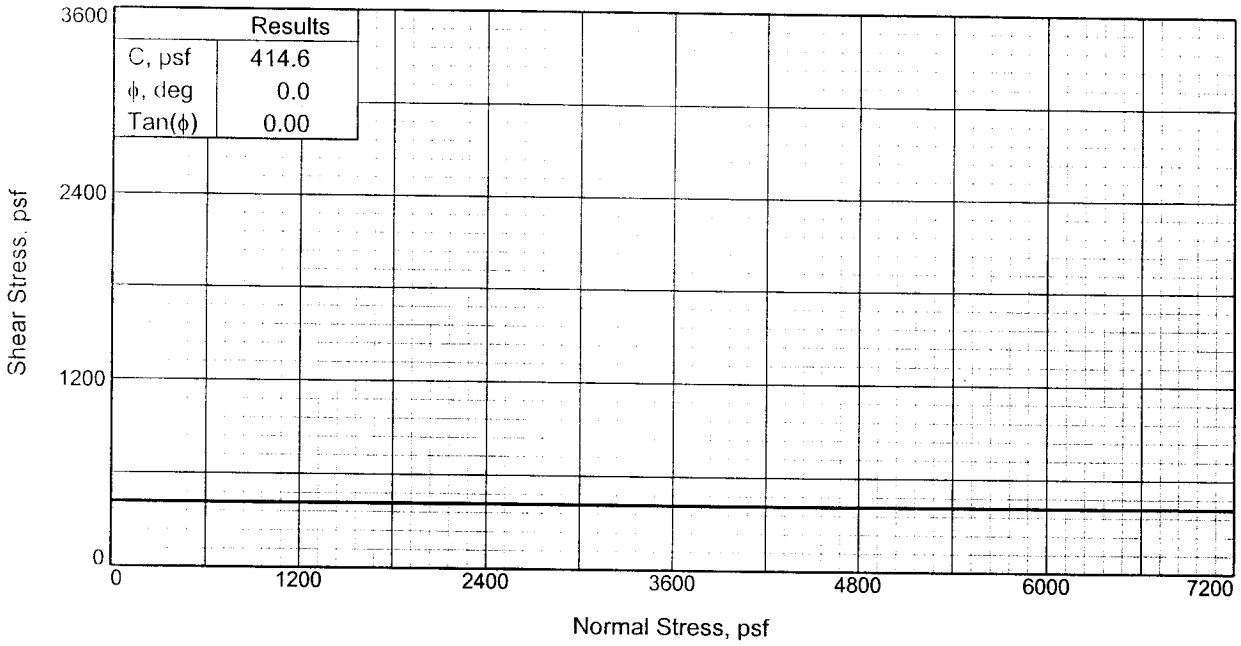
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: IHNC-TFG-1U **Depth:** 32.8
Sample Number: 9B

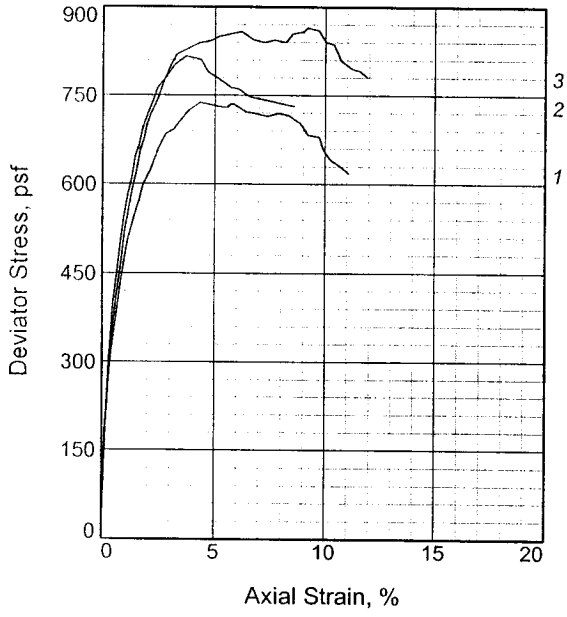
UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: LWR **Checked By:** JS





Specimen No.		1	2	3
Initial	Water Content,	72.0	74.4	73.5
	Dry Density, pcf	55.7	53.6	55.4
	Saturation,	95.1	93.0	96.4
	Void Ratio	2.0737	2.1913	2.0875
	Diameter, in.	1.388	1.388	1.388
	Height, in.	2.930	2.930	2.930
At Test	Water Content,	75.7	79.8	76.0
	Dry Density, pcf	55.7	53.7	55.5
	Saturation,	100.0	100.0	100.0
	Void Ratio	2.0737	2.1877	2.0834
	Diameter, in.	1.388	1.387	1.387
	Height, in.	2.930	2.929	2.929
Strain rate, in./min.		0.030	0.029	0.030
Back Pressure, psf		0.0	0.0	0.0
Cell Pressure, psf		993.6	2995.2	5990.4
Fail. Stress, psf		737.4	816.1	857.7
Ult. Stress, psf		617.6	731.1	780.1
σ_1 Failure, psf		1731.0	3811.3	6848.1
σ_3 Failure, psf		993.6	2995.2	5990.4

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: VSO GR CH4

LL= 92 **PL=** 24 **PI=** 68
Assumed Specific Gravity= 2.74
Remarks: TORVANE = 0.100 TSF

Client: URS Corporation

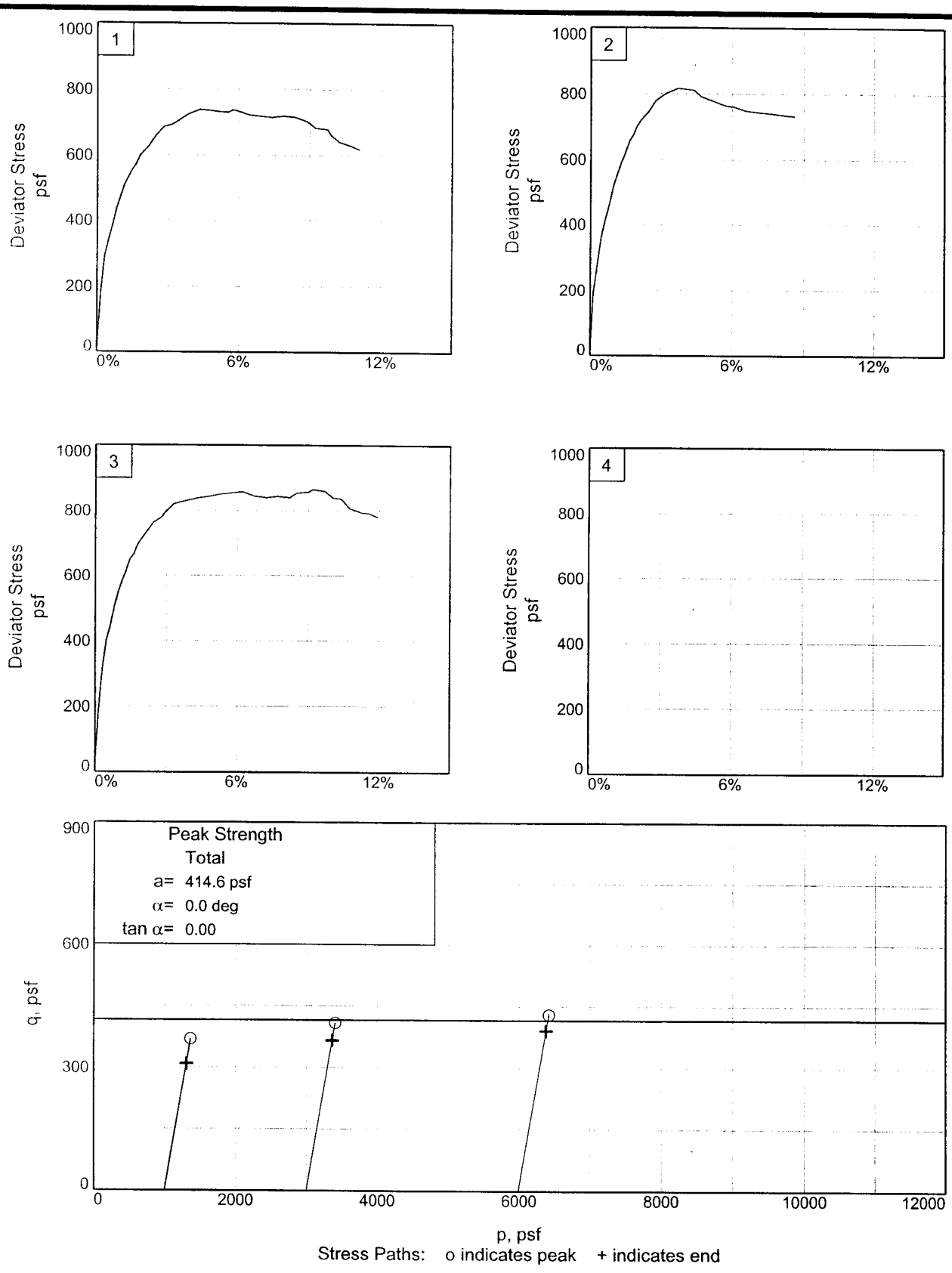
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: IHNC-TFG-1U **Depth:** 36.8
Sample Number: 10B
Proj. No.: 19082 **Date:** 11-14-05

TRIAXIAL SHEAR TEST REPORT

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: LWR **Checked By:** JS

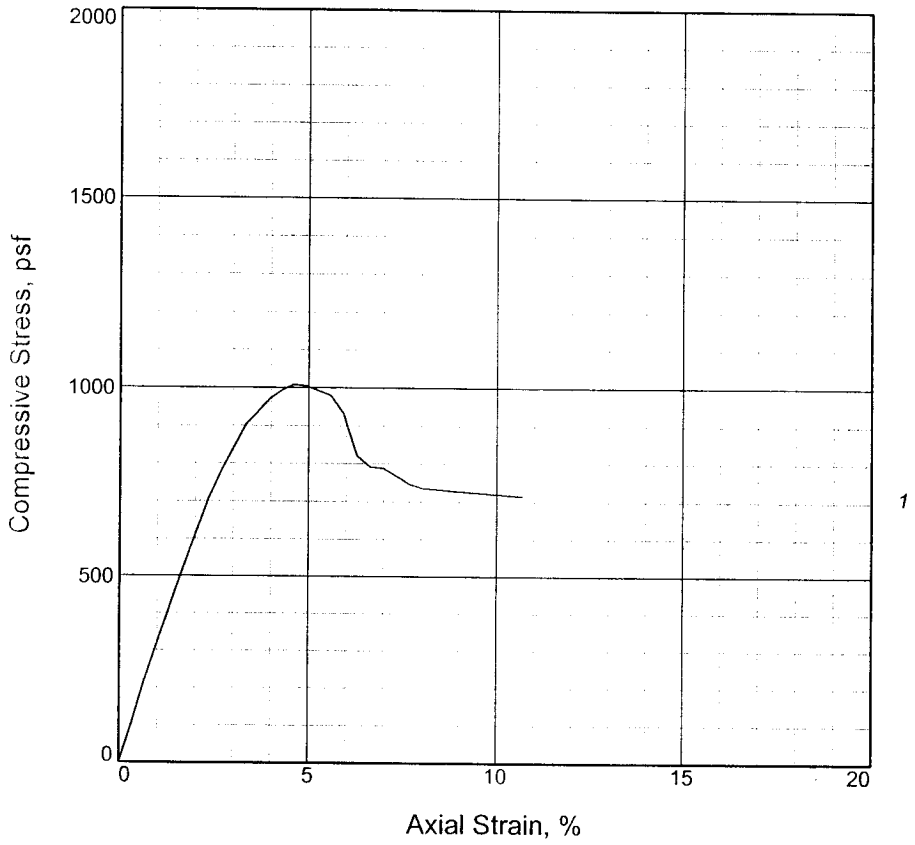


Client: URS Corporation
Project: U.S. Army Corps of Engineers
Source of Sample: IHNC-TFG-1U **Depth:** 36.8 **Sample Number:** 10B
Project No.: 19082 **Figure** 2

EUSTIS ENGINEERING COMPANY, INC.

Tested By: LWR **Checked By:** JS

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	1007.8			
Undrained shear strength, psf	503.9			
Failure strain, %	4.6			
Strain rate, in./min.	0.059			
Water content, %	64.6			
Wet density, pcf	97.6			
Dry density, pcf	59.3			
Saturation, %	93.9			
Void ratio	1.8845			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: M GR CH4 W/ SL

LL =	PL =	PI =	**Assumed GS=** 2.74	**Type:** UNDISTURBED

Project No.: 19082
Date: 11-14-05

Remarks:
TORVANE = 0.160 TSF

Client: URS Corporation

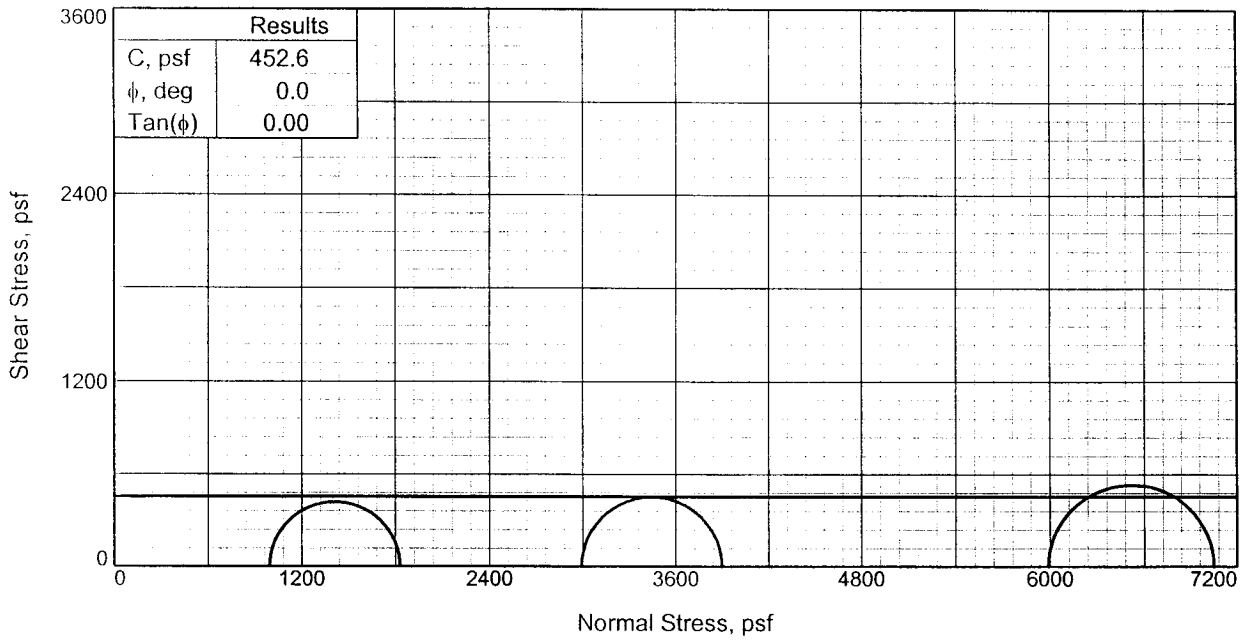
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: IHNC-TFG-1U **Depth:** 40.8
Sample Number: 11B

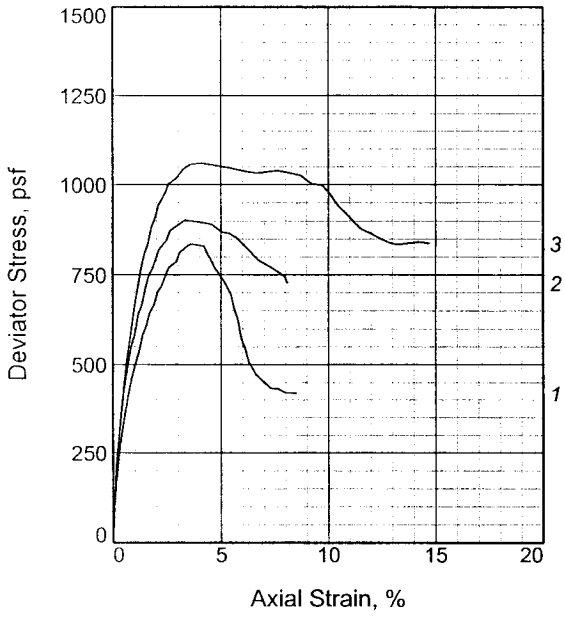
UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: LWR **Checked By:** JS





Specimen No.		1	2	3
Initial	Water Content,	64.7	64.9	64.4
	Dry Density, pcf	59.9	59.4	58.0
	Saturation,	95.4	94.7	90.4
	Void Ratio	1.8570	1.8777	1.9511
	Diameter, in.	1.388	1.388	1.388
	Height, in.	2.930	2.930	2.930
At Test	Water Content,	67.7	68.4	71.0
	Dry Density, pcf	59.9	59.5	58.1
	Saturation,	100.0	100.0	100.0
	Void Ratio	1.8561	1.8745	1.9465
	Diameter, in.	1.388	1.387	1.387
	Height, in.	2.930	2.929	2.929
Strain rate, in./min.		0.029	0.030	0.029
Back Pressure, psf		0.0	0.0	0.0
Cell Pressure, psf		993.6	2995.2	5990.4
Fail. Stress, psf		835.3	902.3	1059.9
Ult. Stress, psf		418.1	726.4	836.6
σ_1 Failure, psf		1828.9	3897.5	7050.3
σ_3 Failure, psf		993.6	2995.2	5990.4

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CH4 W/ LNS ML

LL= 86 **PL=** 19 **PI=** 67
Assumed Specific Gravity= 2.74
Remarks: TORVANE = 0.210 TSF

Client: URS Corporation

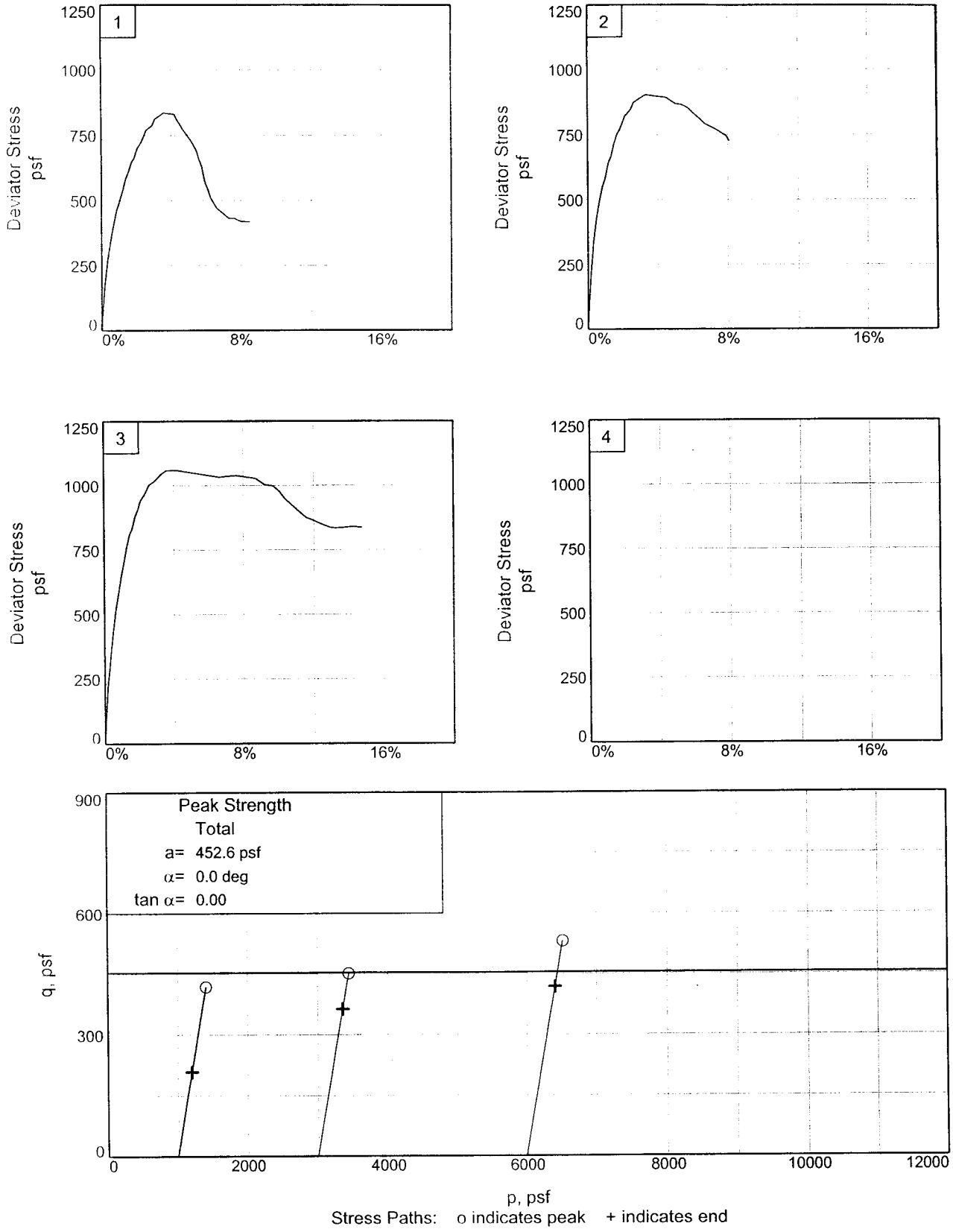
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: IHNC-TFG-1U **Depth:** 44.8
Sample Number: 12B
Proj. No.: 19082 **Date:** 11-14-05

TRIAXIAL SHEAR TEST REPORT

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: LWR **Checked By:** JS



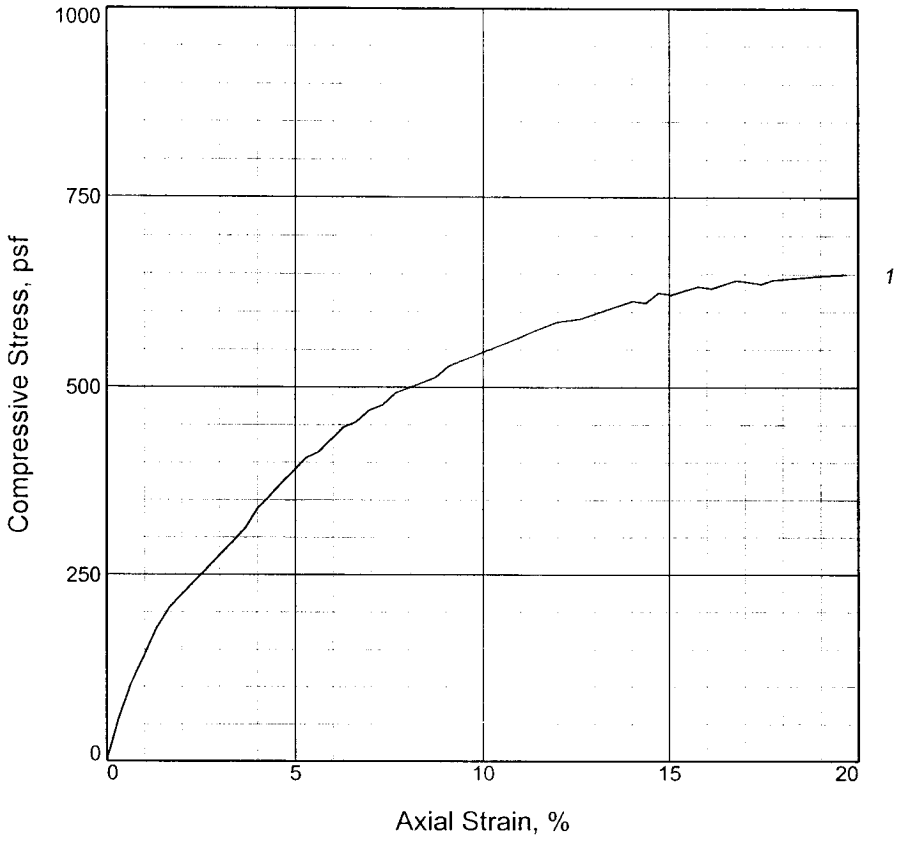
Client: URS Corporation
Project: U.S. Army Corps of Engineers
Source of Sample: IHNC-TFG-1U **Depth:** 44.8 **Sample Number:** 12B
Project No.: 19082

Figure 2

EUSTIS ENGINEERING COMPANY, INC.

Tested By: LWR **Checked By:** JS

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	613.7			
Undrained shear strength, psf	306.8			
Failure strain, %	14.0			
Strain rate, in./min.	0.059			
Water content, %	67.7			
Wet density, pcf	94.9			
Dry density, pcf	56.6			
Saturation, %	91.7			
Void ratio	2.0223			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: SO GR CH4 W/ SL

LL =	PL =	PI =	**Assumed GS=** 2.74	**Type:** UNDISTURBED

Project No.: 19082
Date: 11-14-05

Remarks:
TORVANE = 0.100 TSF

Figure 1

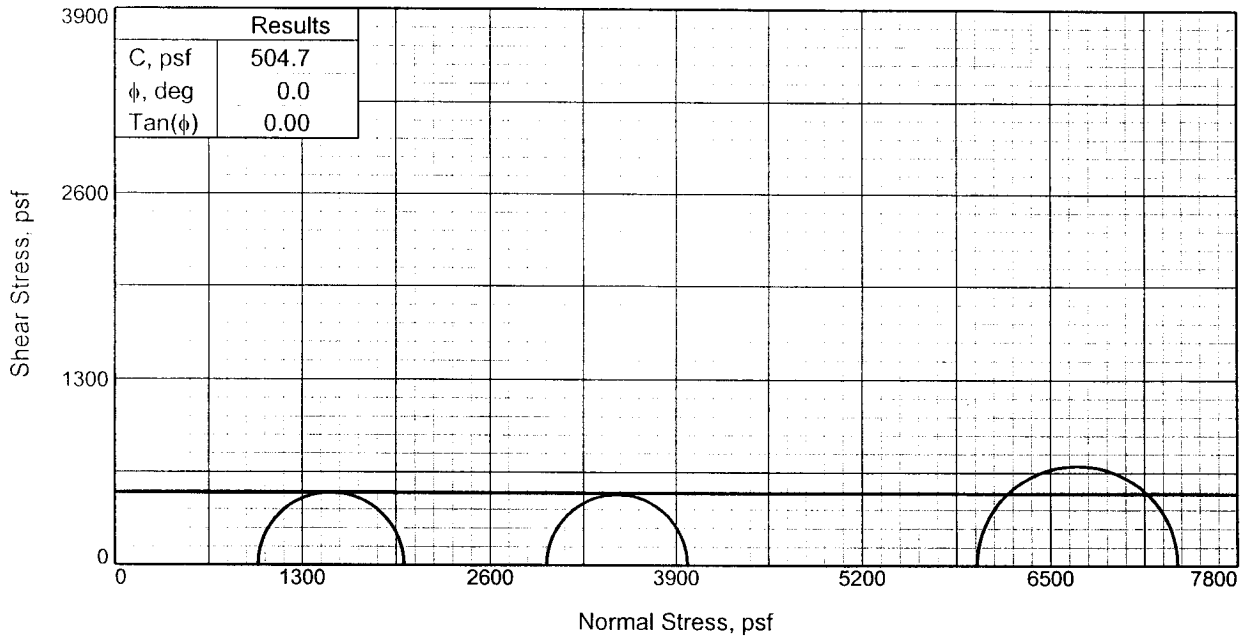
Client: URS Corporation

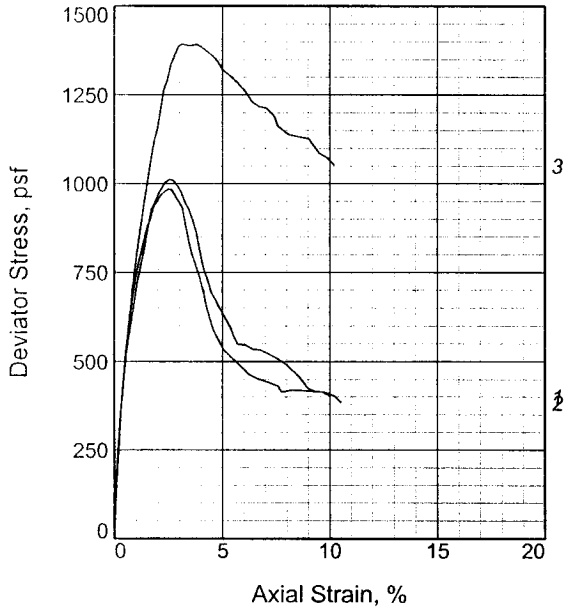
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: IHNC-TFG-1U **Depth:** 48.8
Sample Number: 13B

UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Tested By: LWR **Checked By:** JS





Specimen No.		1	2	3
Initial	Water Content,	72.4	75.3	65.2
	Dry Density, pcf	55.3	53.9	59.7
	Saturation,	94.8	94.9	95.6
	Void Ratio	2.0925	2.1749	1.8671
	Diameter, in.	1.388	1.388	1.388
	Height, in.	2.930	2.930	2.930
At Test	Water Content,	76.3	79.2	68.0
	Dry Density, pcf	55.3	53.9	59.7
	Saturation,	100.0	100.0	100.0
	Void Ratio	2.0909	2.1713	1.8644
	Diameter, in.	1.388	1.387	1.388
	Height, in.	2.929	2.929	2.929
Strain rate, in./min.		0.030	0.029	0.030
Back Pressure, psf		0.0	0.0	0.0
Cell Pressure, psf		993.6	2995.2	5990.4
Fail. Stress, psf		1011.3	984.4	1392.8
Ult. Stress, psf		402.5	383.4	1051.4
σ_1 Failure, psf		2004.9	3979.6	7383.2
σ_3 Failure, psf		993.6	2995.2	5990.4

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: M GR CH4 W/ SL, LNS ML

LL= 100 **PL=** 22 **PI=** 78
Assumed Specific Gravity= 2.74
Remarks: TORVANE = 0.240 TSF

Client: URS Corporation

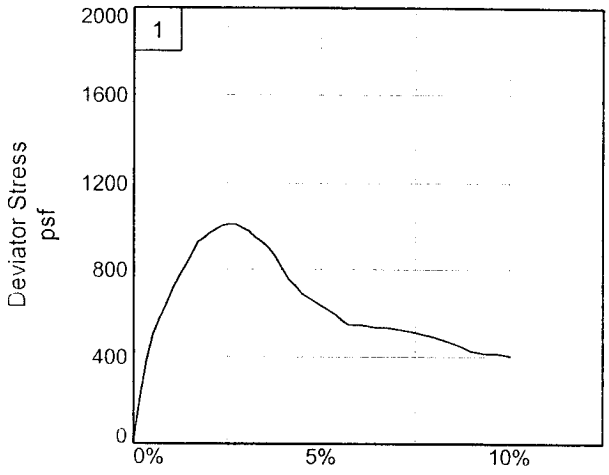
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: IHNC-TFG-1U **Depth:** 52.8
Sample Number: 14B
Proj. No.: 19082 **Date:** 11-14-05

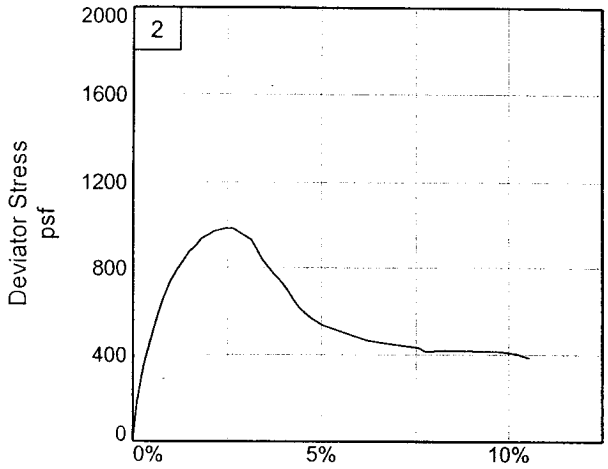
TRIAXIAL SHEAR TEST REPORT

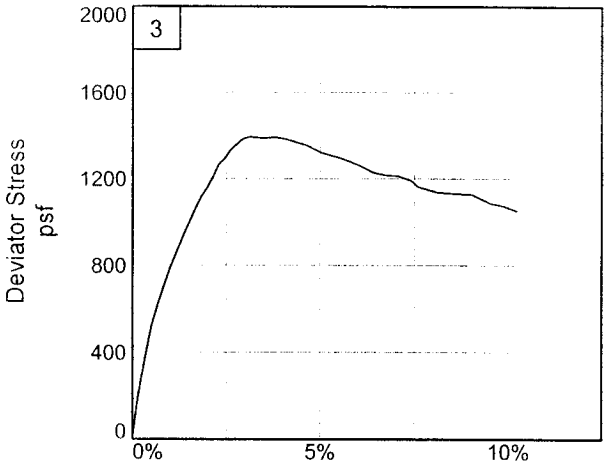
EUSTIS ENGINEERING COMPANY, INC.

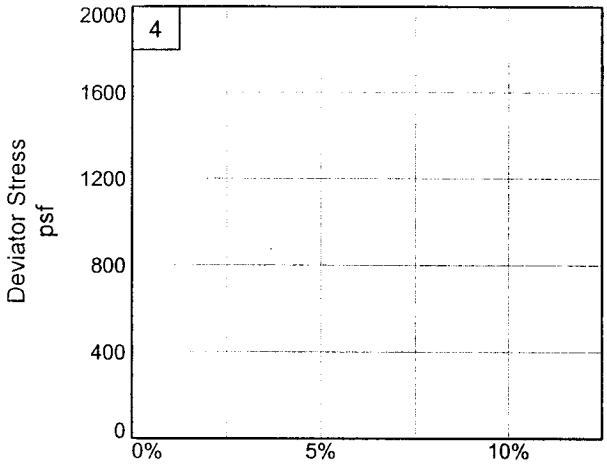
Figure 1

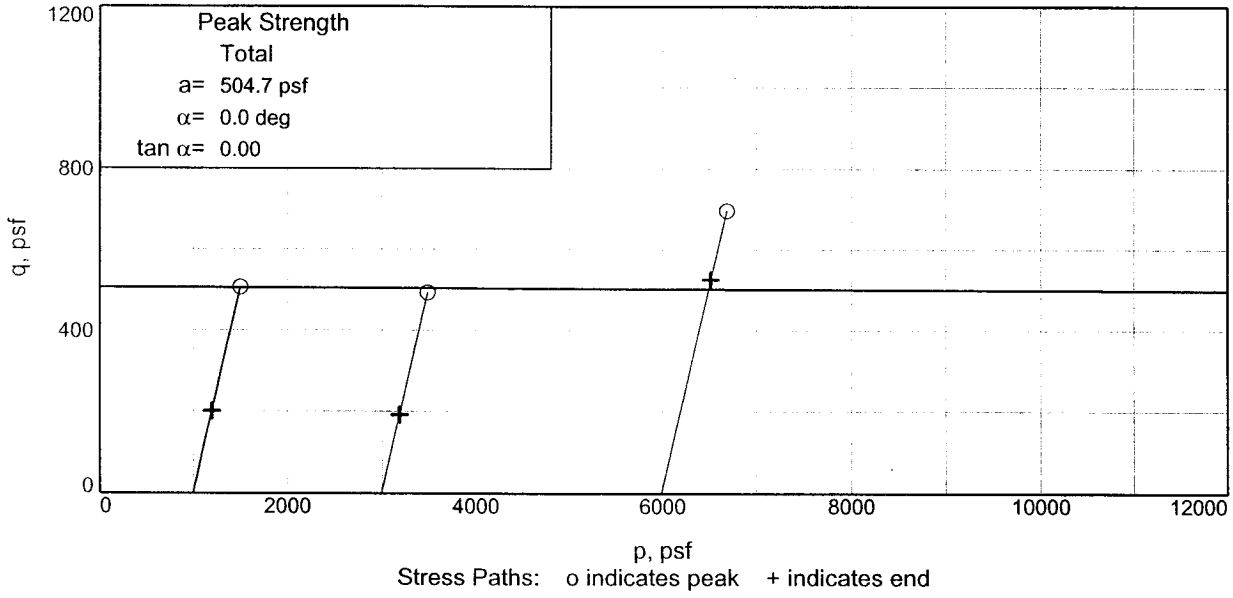
Tested By: LWR **Checked By:** JS









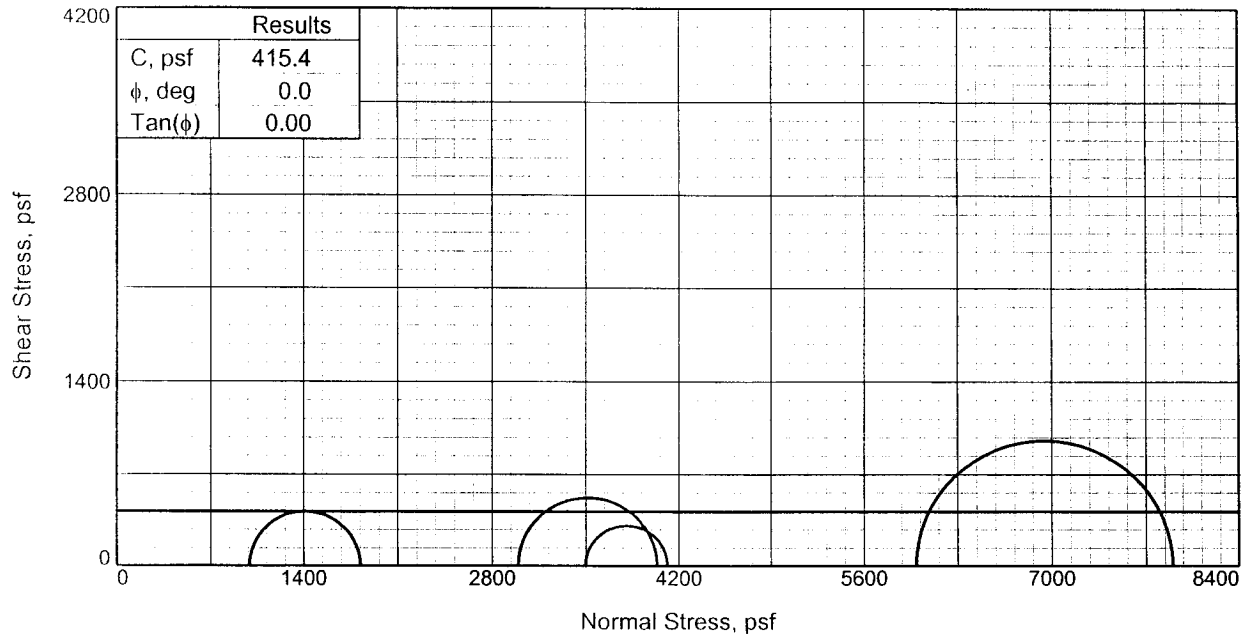


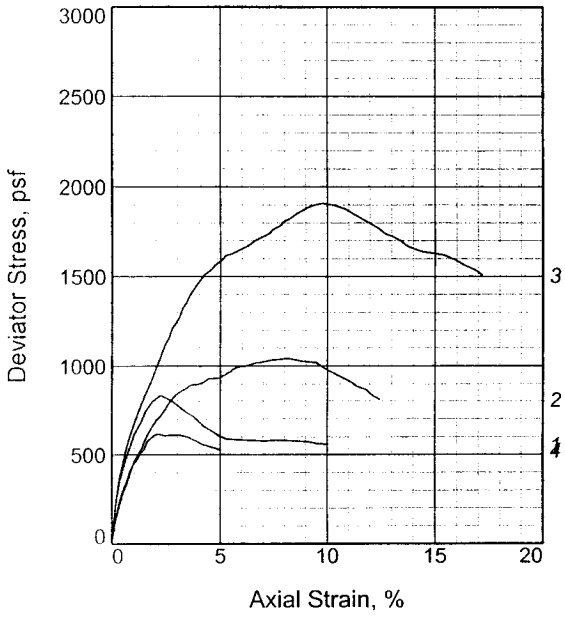
Stress Paths: o indicates peak + indicates end

Client: URS Corporation
Project: U.S. Army Corps of Engineers
Source of Sample: IHNC-TFG-1U **Depth:** 52.8 **Sample Number:** 14B
Project No.: 19082 **Figure** 2

EUSTIS ENGINEERING COMPANY, INC.

Tested By: LWR **Checked By:** JS





Specimen No.		1	2	3	4
Initial	Water Content,	24.8	25.0	26.4	24.7
	Dry Density, pcf	95.9	93.8	92.1	91.8
	Saturation,	88.4	83.7	85.0	79.6
	Void Ratio	0.7568	0.8111	0.8444	0.8366
	Diameter, in.	1.388	1.388	1.388	1.388
	Height, in.	2.930	2.930	2.930	2.930
At Test	Water Content,	27.9	29.7	31.0	30.9
	Dry Density, pcf	96.1	93.9	92.2	91.9
	Saturation,	100.0	100.0	100.0	100.0
	Void Ratio	0.7544	0.8087	0.8427	0.8338
	Diameter, in.	1.387	1.387	1.388	1.387
	Height, in.	2.929	2.929	2.929	2.929
Strain rate, in./min.		0.029	0.030	0.029	0.030
Back Pressure, psf		0.0	0.0	0.0	0.0
Cell Pressure, psf		993.6	2995.2	5990.4	3499.2
Fail. Stress, psf		829.4	1041.3	1908.1	615.4
Ult. Stress, psf		556.8	808.7	1506.2	524.6
σ_1 Failure, psf		1823.0	4036.5	7898.5	4114.6
σ_3 Failure, psf		993.6	2995.2	5990.4	3499.2

Type of Test:
Unconsolidated Undrained
Sample Type: UNDISTURBED
Description: SO GR CL3 W/ SIF, ARS CH

LL= 25 **PL=** 7 **PI=** 18
Assumed Specific Gravity= 2.70
Remarks:

Client: URS Corporation

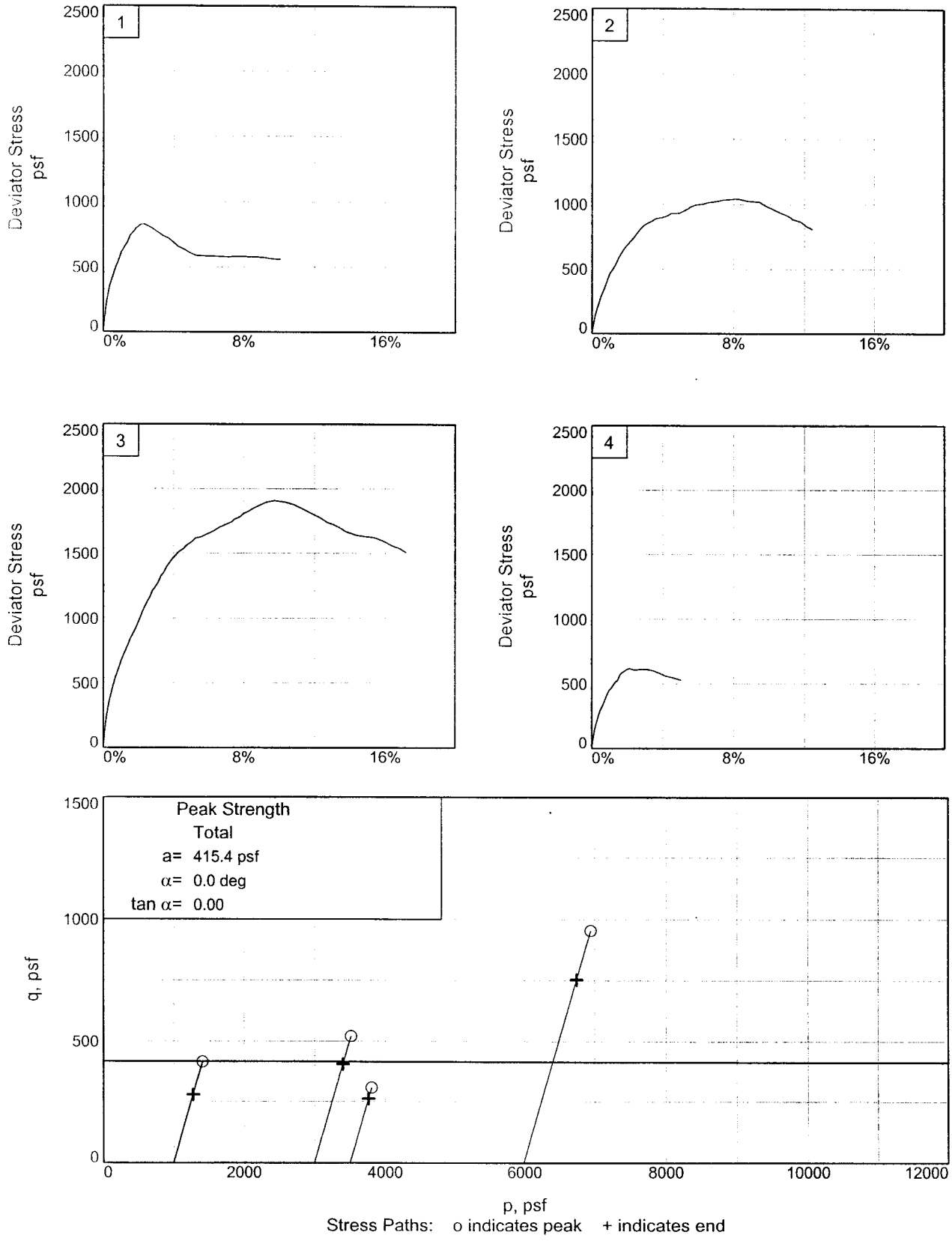
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: IHNC-TFG-1U **Depth:** 56.8
Sample Number: 15B
Proj. No.: 19082 **Date:** 11-14-05

TRIAXIAL SHEAR TEST REPORT

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: LWR **Checked By:** JS



Client: URS Corporation
Project: U.S. Army Corps of Engineers
Source of Sample: IHNC-TFG-1U **Depth:** 56.8 **Sample Number:** 15B
Project No.: 19082 **Figure** 2

EUSTIS ENGINEERING COMPANY, INC.

Tested By: LWR **Checked By:** JS