

Specimen No.	1	
Unconfined strength, psf	180.1	
Undrained shear strength, psf	90.0	
Failure strain, %	13.1	
Strain rate, in./min.	0.058	
Water content, %	70.2	
Wet density, pcf	92.7	
Dry density, pcf	54.5	
Saturation, %	89.8	
Void ratio	2.1412	
Specimen diameter, in.	1.388	
Specimen height, in.	2.930	
Height/diameter ratio	2.11	

Description: VSO GR & DGR CH3 W/TR-WD, LNS ML

PI =

Project No.: 19082

PL =

**Date:** 10-20-05 **Remarks:** 

LL =

TORVANE = 0.140 TSF

**Client:** URS Corporation

**Project:** U.S. Army Corps of Engineers Inner Harbor Navigational Canal

Assumed GS= 2.74

Source of Sample: B-3G Depth: 5.0

Sample Number: 3

**UNCONFINED COMPRESSION TEST** 

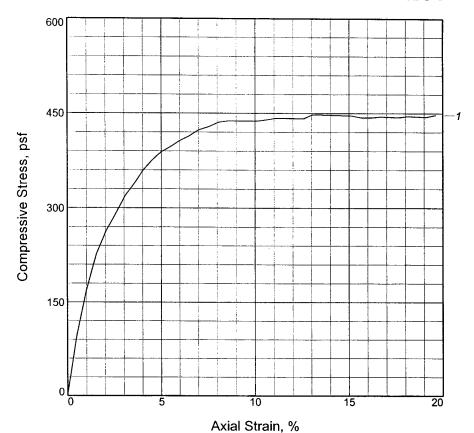
Type: UNDISTURBED

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: LWR

#### **UNCONFINED COMPRESSION TEST** 4001 300 Compressive Stress, psf 200 100 Axial Strain, % Specimen No. 1 Unconfined strength, psf 203.7 Undrained shear strength, psf 101.9 Failure strain, % 10.6 Strain rate, in./min. 0.057 Water content, % 90.9 Wet density, pcf 83.9 Dry density, pcf 43.9 Saturation, % 86.5 Void ratio 2.8372 Specimen diameter, in. 1.388 Specimen height, in. 2.930 Height/diameter ratio 2.11 Description: VSO GR & DGR CHOA W/ WD, ARS ML LL = PL = PI = Assumed GS= 2.7Type: UNDISTURBED Project No.: 19082 Client: URS Corporation Date: 10-20-05 Project: U.S. Army Corps of Engineers Remarks: Inner Harbor Navigational Canal Source of Sample: B-3G **Depth:** 10.0 Sample Number: 5 **UNCONFINED COMPRESSION TEST** EUSTIS ENGINEERING COMPANY, INC. Figure 1



Specimen No.	1	
Unconfined strength, psf	437.7	
Undrained shear strength, psf	218.9	
Failure strain, %	8.6	
Strain rate, in./min.	0.058	
Water content, %	58.7	
Wet density, pcf	100.0	
Dry density, pcf	63.0	
Saturation, %	93.8	
Void ratio	1.7154	
Specimen diameter, in.	1.388	
Specimen height, in.	2.930	
Height/diameter ratio	2.11	

Description: VSO GR CH4 W/LNS SM

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

Project No.: 19082 Client: URS Corporation

**Date:** 10-20-05

Remarks:

TORVANE = 0.200 TSF

1

**Project:** U.S. Army Corps of Engineers Inner Harbor Navigational Canal

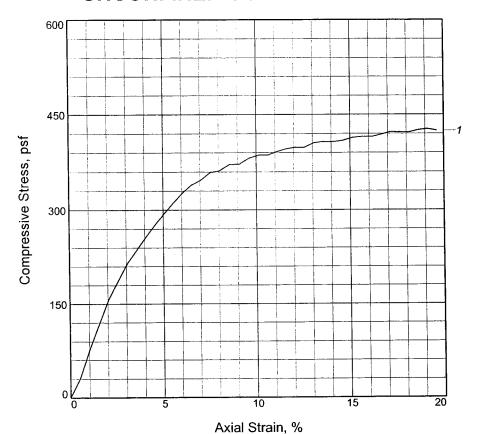
Source of Sample: B-3G Depth: 16.5

Sample Number: 8

UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Figure 1



Specimen No.	1	
Unconfined strength, psf	427.0	
Undrained shear strength, psf	213.5	
Failure strain, %	19.1	
Strain rate, in./min.	0.058	
Water content, %	50.6	
Wet density, pcf	104.1	
Dry density, pcf	69.1	
Saturation, %	94.1	
Void ratio	1.4744	
Specimen diameter, in.	1.388	
Specimen height, in.	2.930	
Height/diameter ratio	2.11	

Description: VSO GR CH4 W/ LYS CL

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

**Project No.:** 19082 **Date:** 10-20-05

Remarks:

**Client:** URS Corporation

**Project:** U.S. Army Corps of Engineers Inner Harbor Navigational Canal

Source of Sample: B-3G Depth: 17.5

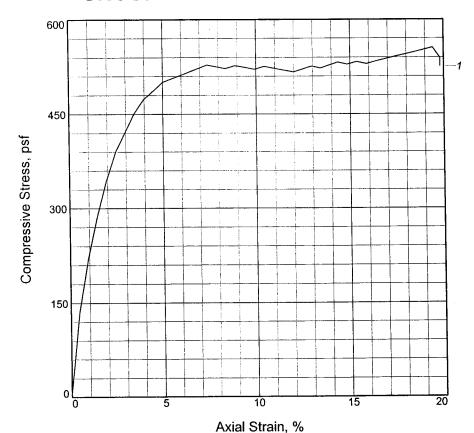
Sample Number: 9

**UNCONFINED COMPRESSION TEST** 

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: LWR



Specimen No.	1	
Unconfined strength, psf	527.8	
Undrained shear strength, psf	263.9	
Failure strain, %	7.4	
Strain rate, in./min.	0.057	
Water content, %	44.5	
Wet density, pcf	106.9	
Dry density, pcf	74.0	
Saturation, %	93.0	
Void ratio	1.3124	
Specimen diameter, in.	1.388	
Specimen height, in.	2.930	
Height/diameter ratio	2.11	

Description: SO GR CH4 W/LNS ML

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

Project No.: 19082 Date: 10-20-05

**Dato:** 10 20 03

Remarks: TORVANE = 0.300 TSF **Client:** URS Corporation

**Project:** U.S. Army Corps of Engineers Inner Harbor Navigational Canal

Source of Sample: B-3G Depth: 22.5

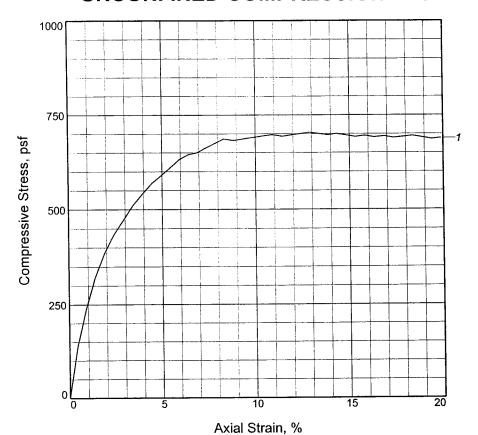
Sample Number: 11

**UNCONFINED COMPRESSION TEST** 

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: LWR



Specimen No.	1	
Unconfined strength, psf	686.3	
Undrained shear strength, psf	343.2	
Failure strain, %	8.3	
Strain rate, in./min.	0.056	
Water content, %	50.5	
Wet density, pcf	103.8	
Dry density, pcf	68.9	
Saturation, %	93.5	
Void ratio	1.4818	
Specimen diameter, in.	1.388	
Specimen height, in.	2.930	
Height/diameter ratio	2.11	

Description: SO GR CH4 W/ LNS SM

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

Project No.: 19082 Date: 10-20-05

Remarks:

TORVANE = 0.270 TSF

Client: URS Corporation

**Project:** U.S. Army Corps of Engineers Inner Harbor Navigational Canal

Source of Sample: B-3G Depth: 27.5

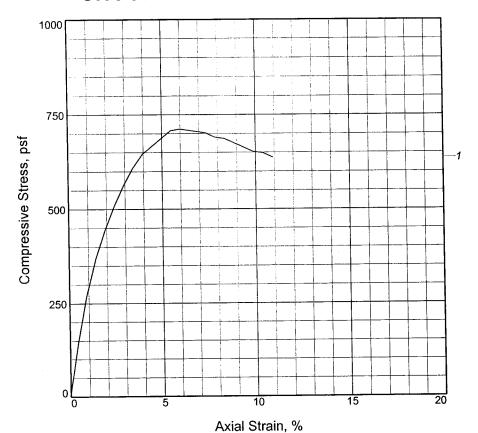
Sample Number: 13

UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: LWR



Specimen No.	1	
Unconfined strength, psf	711.9	
Undrained shear strength, psf	355.9	
Failure strain, %	6.0	
Strain rate, in./min.	0.057	
Water content, %	66.6	
Wet density, pcf	96.0	
Dry density, pcf	57.7	
Saturation, %	92.7	
Void ratio	1.9669	
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 Client: URS Corporation

**Date:** 10-20-05

Remarks:

TORVANE = 0.220 TSF

**Project:** U.S. Army Corps of Engineers Inner Harbor Navigational Canal

Source of Sample: B-3G Depth: 32.5

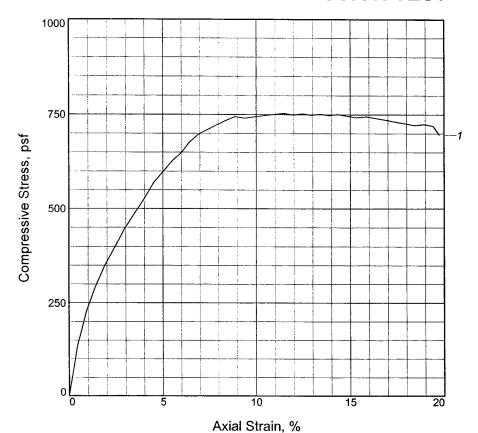
Sample Number: 15

**UNCONFINED COMPRESSION TEST** 

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: LWR



Specimen No.	1	
Unconfined strength, psf	744.2	
Undrained shear strength, psf	372.1	
Failure strain, %	8.9	
Strain rate, in./min.	0.058	
Water content, %	63.2	
Wet density, pcf	97.3	
Dry density, pcf	59.6	
Saturation, %	92.7	
Void ratio	1.8687	
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:** 10-20-05

Remarks:

TORVANE = 0.250 TSF

Client: URS Corporation

**Project:** U.S. Army Corps of Engineers Inner Harbor Navigational Canal

Source of Sample: B-3G Depth: 37.5

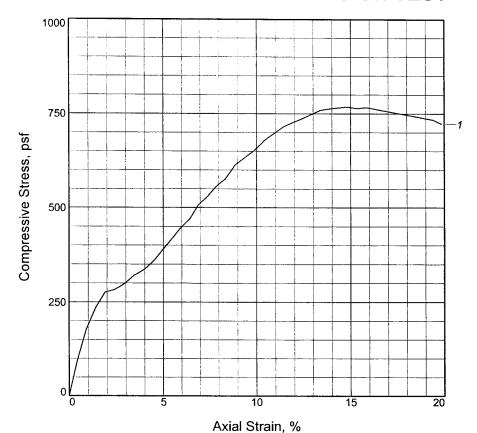
Sample Number: 17

**UNCONFINED COMPRESSION TEST** 

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: LWR



Specimen No.	1	
Unconfined strength, psf	768.1	
Undrained shear strength, psf	384.1	
Failure strain, %	14.8	
Strain rate, in./min.	0.057	
Water content, %	67.9	
Wet density, pcf	95.8	
Dry density, pcf	57.1	
Saturation, %	93.2	
Void ratio	1.9962	
Specimen diameter, in.	1.388	
Specimen height, in.	2.930	
Height/diameter ratio	2.11	

Description: SO GR CH4 W/LYS SM, SL

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

Project No.: 19082 Client: URS Corporation

Project No.: 19082 Date: 10-20-05

Remarks:

Figure 1

TORVANE = 0.200 TSF

**Project:** U.S. Army Corps of Engineers Inner Harbor Navigational Canal

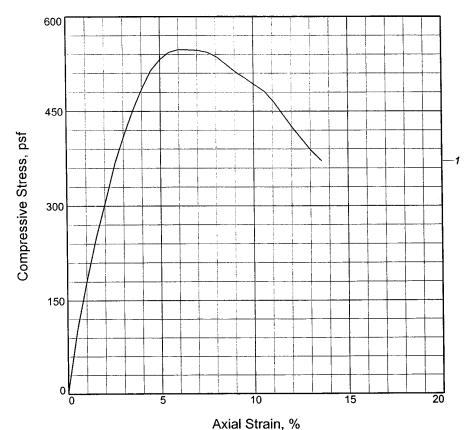
Source of Sample: B-3G Depth: 42.5

Sample Number: 19

UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

#### **UNCONFINED COMPRESSION TEST** 600 450 Compressive Stress, psf 300 150 Axial Strain, % Specimen No. 1 Unconfined strength, psf 581.0 Undrained shear strength, psf 290.5 Failure strain, % 4.5 Strain rate, in./min. 0.056 Water content, % 42.9 Wet density, pcf 104.1 Dry density, pcf 72.8 Saturation, % 87.1 Void ratio 1.3492 Specimen diameter, in. 1.388 Specimen height, in. 2.930 Height/diameter ratio 2.11 Description: SO GR CH3 W/LYS SM, SIF LL = PL = PI = Assumed GS= 2.74 Type: UNDISTURBED **Project No.:** 19082 **Client:** URS Corporation Date: 10-20-05 Project: U.S. Army Corps of Engineers Remarks: Inner Harbor Navigational Canal Source of Sample: B-3G **Depth:** 47.5 Sample Number: 21 **UNCONFINED COMPRESSION TEST** EUSTIS ENGINEERING COMPANY, INC. Figure 1



Specimen No.	1	
Unconfined strength, psf	547.4	
Undrained shear strength, psf	273.7	
Failure strain, %	6.0	
Strain rate, in./min.	0.058	
Water content, %	28.2	
Wet density, pcf	115.4	
Dry density, pcf	90.0	
Saturation, %	87.2	
Void ratio	0.8731	
Specimen diameter, in.	1.388	
Specimen height, in.	2.930	
Height/diameter ratio	2.11	

Description: SO GR CL5 W/ SIF

LL = PL = PI = Assumed GS = 2.7 Type: UNDISTURBED

Project No.: 19082 Date: 10-20-05

Remarks:

TORVANE = 0.300 TSF

Client: URS Corporation

**Project:** U.S. Army Corps of Engineers Inner Harbor Navigational Canal

Source of Sample: B-3G Depth: 52.5

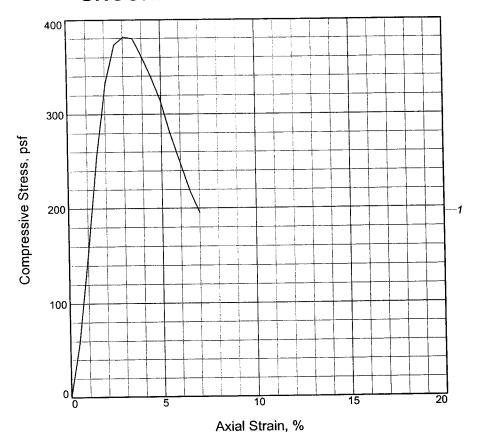
Sample Number: 23

**UNCONFINED COMPRESSION TEST** 

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: LWR



Specimen No.	1	
Unconfined strength, psf	381.5	
Undrained shear strength, psf	190.7	
Failure strain, %	3.1	
Strain rate, in./min.	0.057	
Water content, %	23.4	
Wet density, pcf	119.6	
Dry density, pcf	97.0	
Saturation, %	85.5	
Void ratio	0.7385	
Specimen diameter, in.	1.388	
Specimen height, in.	2.930	
Height/diameter ratio	2.11	

Description: VSO GR CL3 W/ LYS CH

LL = PL = PI = Assumed GS = 2.7 Type: UNDISTURBED

Project No.: 19082 Date: 10-20-05 Client: URS Corporation

**Project:** U.S. Army Corps of Engineers Inner Harbor Navigational Canal

Source of Sample: B-3G Depth: 55.0

Sample Number: 24

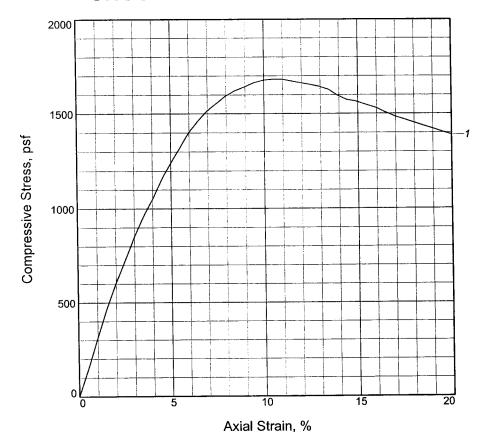
**UNCONFINED COMPRESSION TEST** 

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: LWR

Remarks:



Specimen No.	1	
Unconfined strength, psf	1682.5	
Undrained shear strength, psf	841.3	
Failure strain, %	10.5	
Strain rate, in./min.	0.057	
Water content, %	22.7	
Wet density, pcf	124.1	
Dry density, pcf	101.1	
Saturation, %	92.0	
Void ratio	0.6668	
Specimen diameter, in.	1.388	
Specimen height, in.	2.930	
Height/diameter ratio	2.11	

**Description:** M LGR CL6 W/RT

Type: UNDISTURBED Assumed GS= 2.7 PL = PI = Client: URS Corporation Project No.: 19082 **Date:** 10-20-05

Remarks: TORVANE = 0.520 TSF

Inner Harbor Navigational Canal

Project: U.S. Army Corps of Engineers

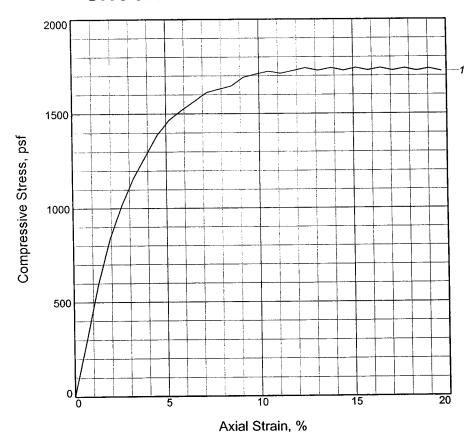
**Depth:** 65.0 **Source of Sample:** B-3G

Sample Number: 28 **UNCONFINED COMPRESSION TEST** 

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Checked By: JS Tested By: LWR



Specimen No.	1	
Unconfined strength, psf	1723.6	
Undrained shear strength, psf	861.8	
Failure strain, %	10.5	
Strain rate, in./min.	0.057	
Water content, %	20.9	
Wet density, pcf	127.0	
Dry density, pcf	105.0	
Saturation, %	93.4	
Void ratio	0.6047	
Specimen diameter, in.	1.388	
Specimen height, in.	2.930	
Height/diameter ratio	2.11	

Description: M LGR CL6

LL = PL = PI = Assumed GS = 2.7 Type: UNDISTURBED

Project No.: 19082 Date: 10-20-05

Remarks:

TORVANE = 0.925 TSF

Client: URS Corporation

**Project:** U.S. Army Corps of Engineers Inner Harbor Navigational Canal

Source of Sample: B-3G Depth: 67.5

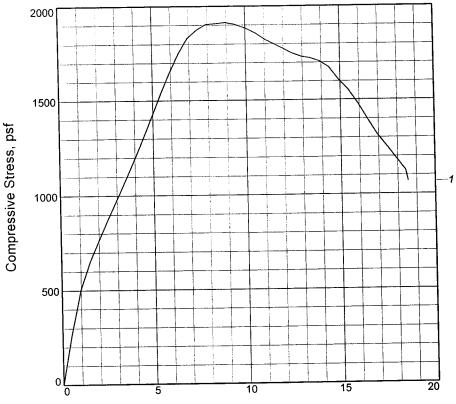
Sample Number: 29

**UNCONFINED COMPRESSION TEST** 

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: LWR



Avial	Strain.	0/2
AXIAI	otrain.	70

Specimen No.	1	
Unconfined strength, psf	1913.2	
Undrained shear strength, psf	956.6	
Failure strain, %	9.0	
Strain rate, in./min.	0.058	
Water content, %	39.2	
Wet density, pcf	111.5	
Dry density, pcf	80.1	
Saturation, %	94.5	
Void ratio	1.1354	
Specimen diameter, in.	1.388	
Specimen height, in.	2.930	
Height/diameter ratio	2.11	

**Description:** M GR CH4 W/ LNS SM

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

Project No.: 19082 **Date:** 10-20-05

Remarks:

TORVANE = 0.430 TSF

**Client:** URS Corporation

Project: U.S. Army Corps of Engineers Inner Harbor Navigational Canal

**Depth:** 76.5 Source of Sample: B-3G

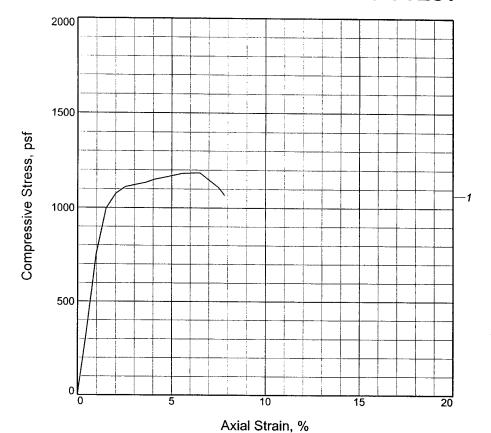
Sample Number: 33

UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: LWR



Specimen No.	1	
Unconfined strength, psf	1185.1	
Undrained shear strength, psf	592.5	
Failure strain, %	6.5	
Strain rate, in./min.	0.057	
Water content, %	56.5	
Wet density, pcf	103.5	
Dry density, pcf	66.1	
Saturation, %	98.5	
Void ratio	1.5493	
Specimen diameter, in.	1.388	
Specimen height, in.	2.930	
Height/diameter ratio	2.11	

Description: M GR CH4 W/LNS & LYS ML, SL

LL = PL = PI = Assumed GS = 2.7 Type: UNDISTURBED

Project No.: 19082 Client: URS Corporation

**Date:** 10-20-05 **Remarks:** 

Figure 1

TORVANE = 0.370 TSF

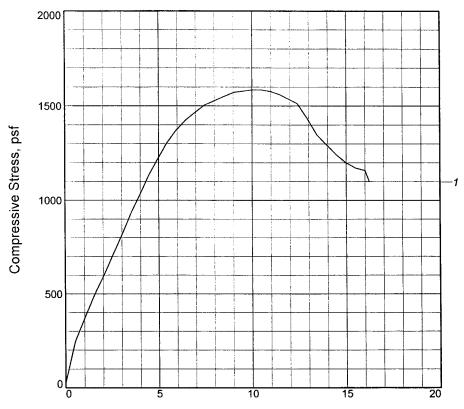
**Project:** U.S. Army Corps of Engineers Inner Harbor Navigational Canal

Source of Sample: B-3G Depth: 82.5

Sample Number: 36

**UNCONFINED COMPRESSION TEST** 

EUSTIS ENGINEERING COMPANY, INC.



Axial Strain, %

Specimen No.	1	
Unconfined strength, psf	1584.3	
Undrained shear strength, psf	792.1	
Failure strain, %	10.0	
Strain rate, in./min.	0.057	
Water content, %	26.4	
Wet density, pcf	119.7	
Dry density, pcf	94.7	
Saturation, %	92.8	
Void ratio	0.7604	
Specimen diameter, in.	1.388	
Specimen height, in.	2.930	
Height/diameter ratio	2.11	

Description: M GR CL4 W/LNS CH

LL = PL = PI = **Assumed GS=** 2.67 Type: UNDISTURBED **Client:** URS Corporation

Project No.: 19082 **Date:** 10-20-05

Remarks:

TORVANE = 0.350 TSF

Project: U.S. Army Corps of Engineers Inner Harbor Navigational Canal

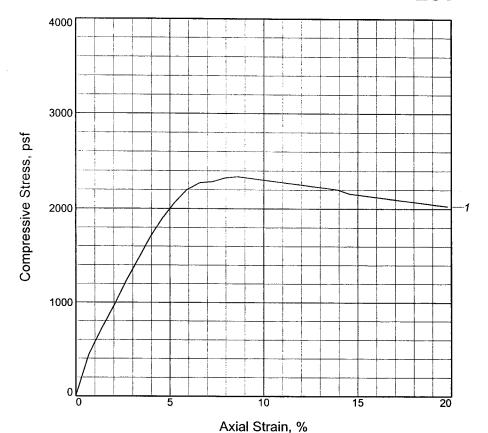
**Source of Sample:** B-3G **Depth:** 87.5

Sample Number: 38

**UNCONFINED COMPRESSION TEST** 

EUSTIS ENGINEERING COMPANY, INC.

Figure 1



Specimen No.	1	
Unconfined strength, psf	2337.3	
Undrained shear strength, psf	1168.7	
Failure strain, %	8.6	
Strain rate, in./min.	0.056	
Water content, %	36.5	
Wet density, pcf	113.9	
Dry density, pcf	83.4	
Saturation, %	95.2	
Void ratio	1.0508	
Specimen diameter, in.	1.388	
Specimen height, in.	2.930	
Height/diameter ratio	2.11	

Description: ST GR CH4 W/SL, LNS ML

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

Project No.: 19082 Client: URS Corporation

**Date:** 10-20-05

Remarks:

Figure 1

TORVANE = 0.460 TSF

**Project:** U.S. Army Corps of Engineers Inner Harbor Navigational Canal

Source of Sample: B-3G Depth: 95.0

Sample Number: 41

**UNCONFINED COMPRESSION TEST** 

EUSTIS ENGINEERING COMPANY, INC.