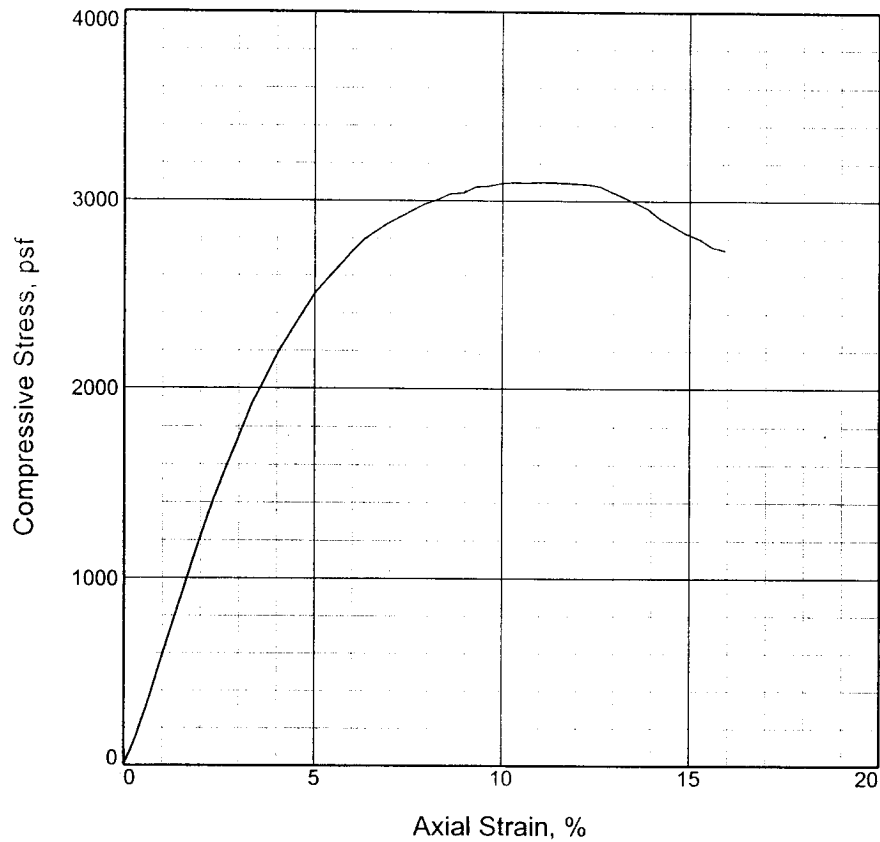


UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	3097.7			
Undrained shear strength, psf	1548.9			
Failure strain, %	10.3			
Strain rate, in./min.	0.058			
Water content, %	27.5			
Wet density, pcf	118.9			
Dry density, pcf	93.3			
Saturation, %	91.2			
Void ratio	0.8206			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: ST GR & T CH3 W/ ARS & LNS SM, RT

LL = PL = PI = Assumed GS= 2.72 Type: UNDISTURBED

Project No.: 19082

Date: 11/23/05

Remarks:

TORVANE = 0.750 TSF

Client: URS Corporation

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

Source of Sample: B-4G **Depth:** 0.0

Sample Number: 1

UNCONFINED COMPRESSION TEST

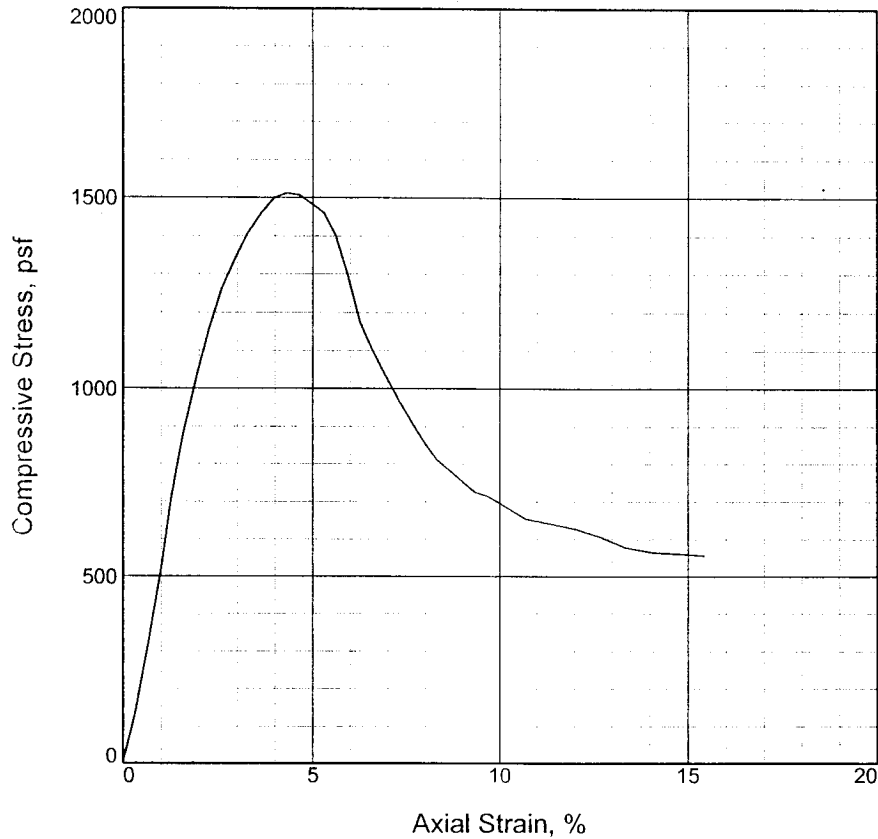
EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: RR

Checked By: DP

UNCONFINED COMPRESSION TEST



1

Specimen No.	1		
Unconfined strength, psf	1511.6		
Undrained shear strength, psf	755.8		
Failure strain, %	4.3		
Strain rate, in./min.	0.059		
Water content, %	43.0		
Wet density, pcf	105.0		
Dry density, pcf	73.5		
Saturation, %	89.2		
Void ratio	1.3115		
Specimen diameter, in.	1.388		
Specimen height, in.	2.930		
Height/diameter ratio	2.11		

Description: M GR & T CH3 W/ ARS SM, SIF

LL = PL = PI = Assumed GS= 2.72 Type: UNDISTURBED

Project No.: 19082

Date: 11/23/05

Remarks:

TORVANE = 0.375 TSF

Client: URS Corporation

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

Source of Sample: B-4G **Depth:** 2.5

Sample Number: 2

UNCONFINED COMPRESSION TEST

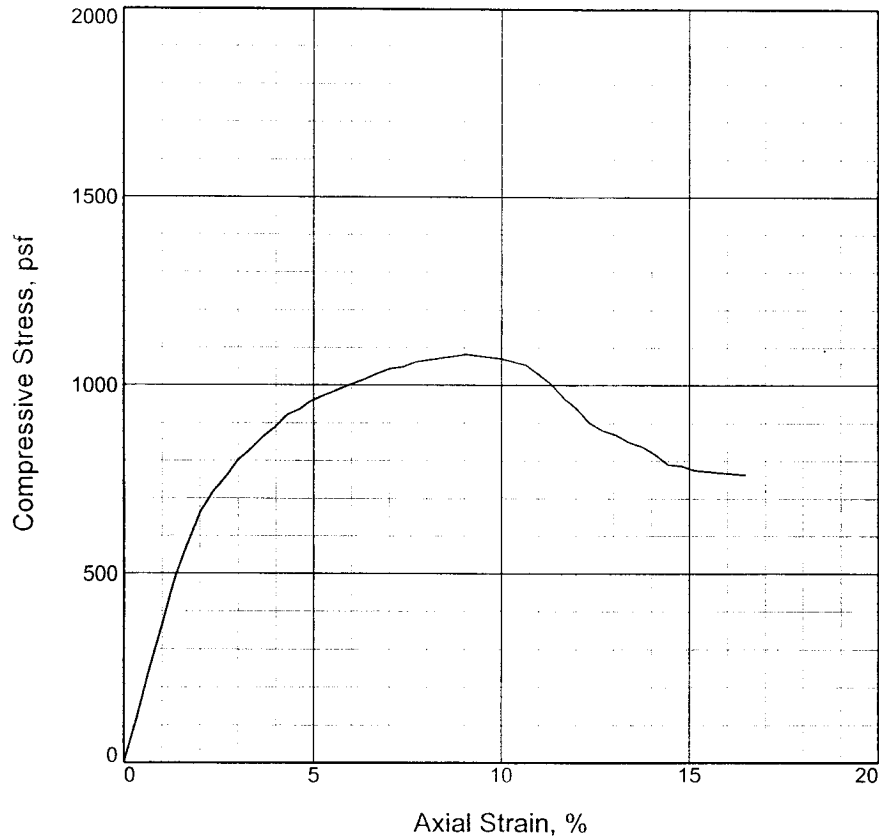
EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: RR

Checked By: DP

UNCONFINED COMPRESSION TEST



1

Specimen No.	1			
Unconfined strength, psf	1081.9			
Undrained shear strength, psf	540.9			
Failure strain, %	9.1			
Strain rate, in./min.	0.059			
Water content, %	58.6			
Wet density, pcf	102.1			
Dry density, pcf	64.4			
Saturation, %	96.9			
Void ratio	1.6560			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: M GR & T CH4 W/ TR-WD, SL

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

Project No.: 19082

Date: 11/23/05

Remarks:

TORVANE = 0.350 TSF

Client: URS Corporation

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

Source of Sample: B-4G **Depth:** 5.0

Sample Number: 3

UNCONFINED COMPRESSION TEST

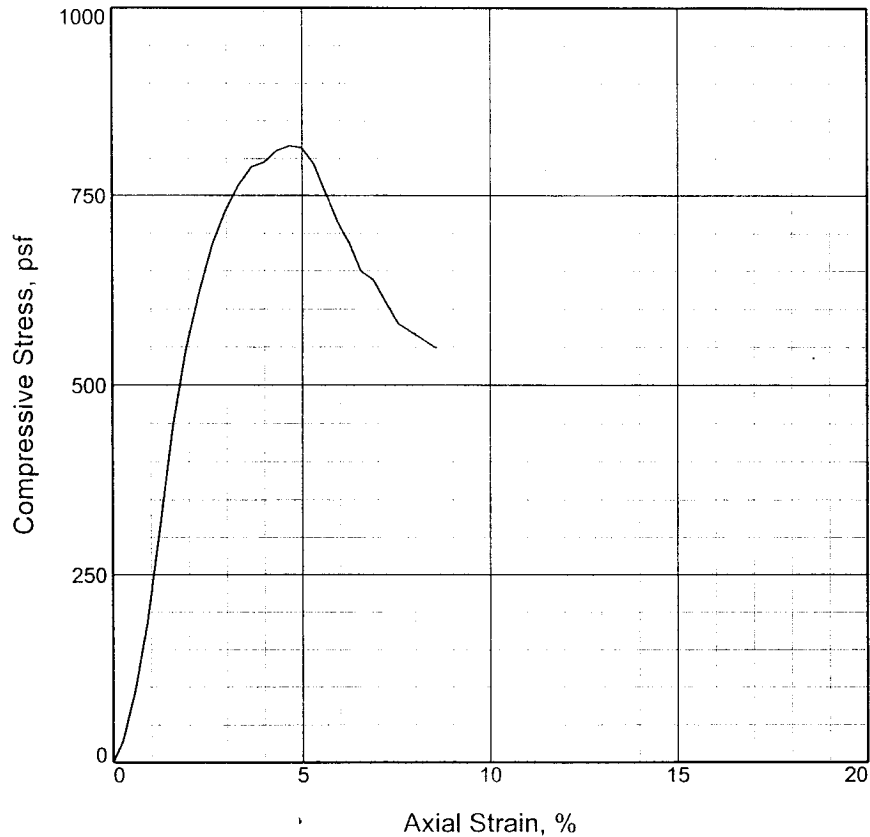
EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: RR

Checked By: DP

UNCONFINED COMPRESSION TEST



1

Specimen No.	1		
Unconfined strength, psf	816.5		
Undrained shear strength, psf	408.2		
Failure strain, %	4.7		
Strain rate, in./min.	0.058		
Water content, %	77.5		
Wet density, pcf	93.3		
Dry density, pcf	52.5		
Saturation, %	94.5		
Void ratio	2.2322		
Specimen diameter, in.	1.388		
Specimen height, in.	2.930		
Height/diameter ratio	2.11		

Description: SO GR & DGR CH4 W/ O, WD

LL = PL = PI = Assumed GS= 2.72 Type: UNDISTURBED

Project No.: 19082

Date: 11/23/05

Remarks:
TORVANE = 0.250 TSF

Client: URS Corporation

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

Source of Sample: B-4G **Depth:** 7.5

Sample Number: 4

UNCONFINED COMPRESSION TEST

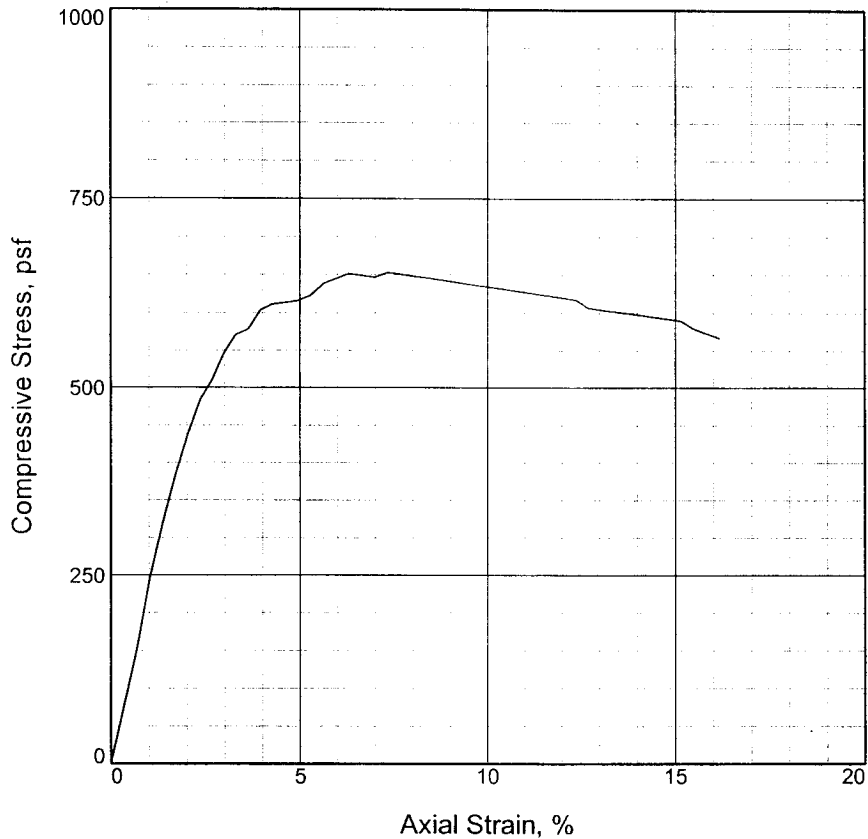
EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: RR

Checked By: DP

UNCONFINED COMPRESSION TEST



1

Specimen No.	1		
Unconfined strength, psf	650.9		
Undrained shear strength, psf	325.4		
Failure strain, %	6.3		
Strain rate, in./min.	0.059		
Water content, %	80.2		
Wet density, pcf	92.2		
Dry density, pcf	51.2		
Saturation, %	94.1		
Void ratio	2.3189		
Specimen diameter, in.	1.388		
Specimen height, in.	2.930		
Height/diameter ratio	2.11		

Description: SO GR CH4 W/ TR-WD

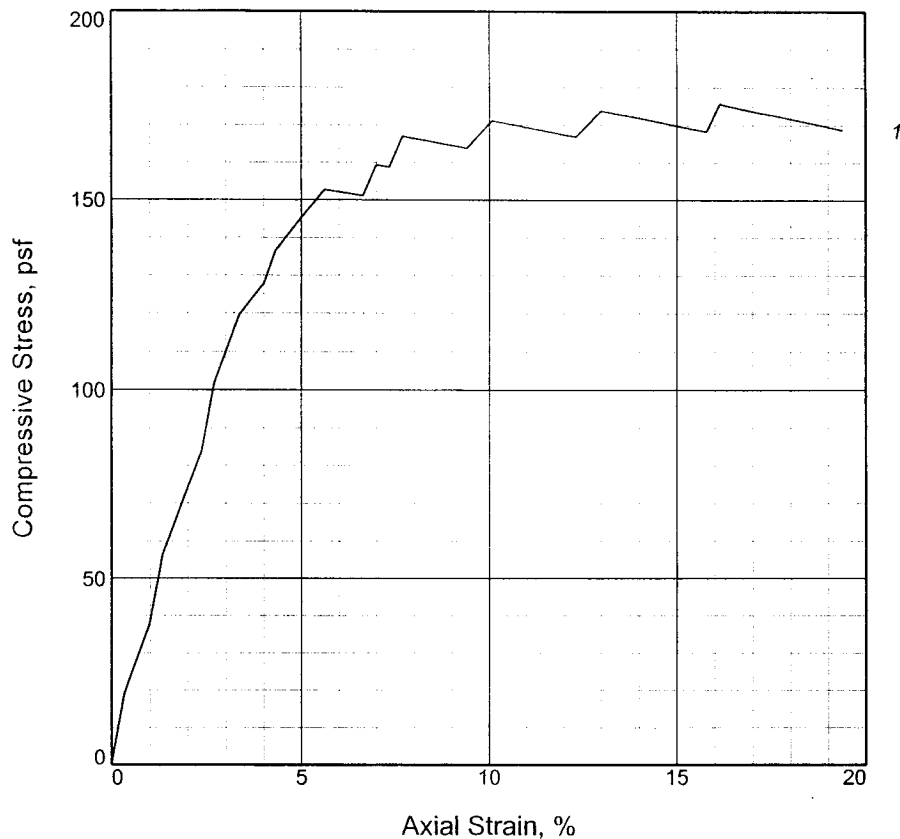
LL = PL = PI = Assumed GS= 2.72 Type: UNDISTURBED

<p>Project No.: 19082 Date: 11/23/05 Remarks: TORVANE = 0.160 TSF</p>	<p>Client: URS Corporation Project: U.S. Army Corps of Engineers Inner Harbor Navigational Canal Source of Sample: B-4G Depth: 10.0 Sample Number: 5</p>
<p>UNCONFINED COMPRESSION TEST</p> <p>EUSTIS ENGINEERING COMPANY, INC.</p>	

Figure 1

Tested By: RR _____ Checked By: DP _____

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	151.6			
Undrained shear strength, psf	75.8			
Failure strain, %	6.3			
Strain rate, in./min.	0.059			
Water content, %	154.9			
Wet density, pcf	79.8			
Dry density, pcf	31.3			
Saturation, %	95.8			
Void ratio	4.2851			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: VSO GR & DGR CHOB W/ WD

LL = PL = PI = Assumed GS= 2.65 Type: UNDISTURBED

Project No.: 19082

Date: 11/23/05

Remarks:

TORVANE = 0.060 TSF

Client: URS Corporation

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

Source of Sample: B-4G **Depth:** 12.5

Sample Number: 6

UNCONFINED COMPRESSION TEST

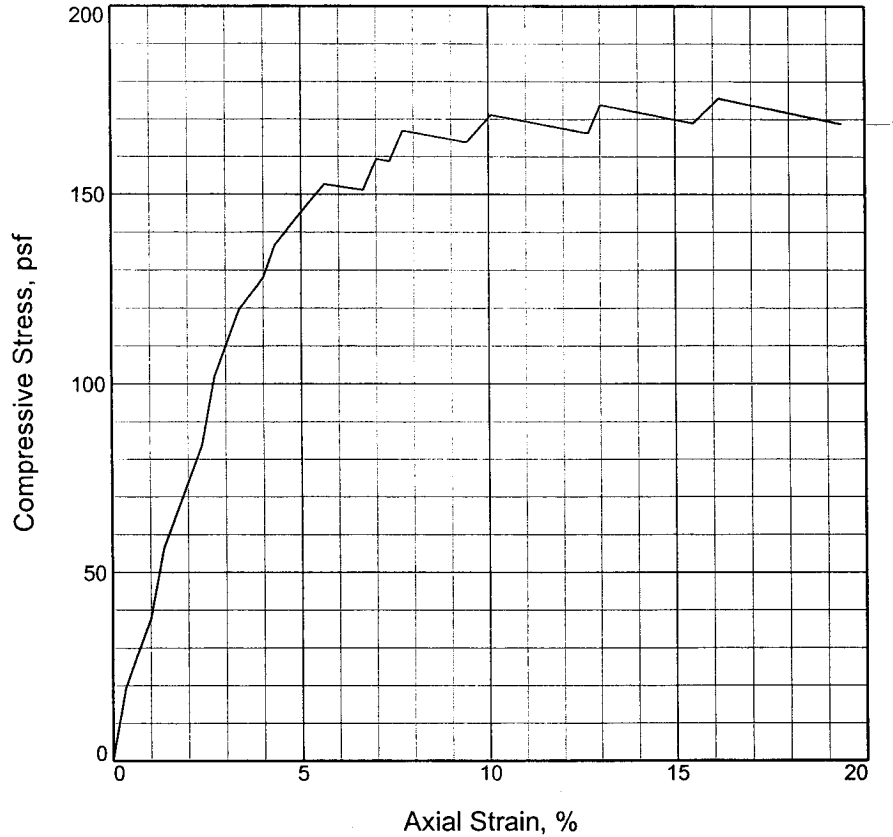
EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: RR

Checked By: JS

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	152.7			
Undrained shear strength, psf	76.3			
Failure strain, %	5.6			
Strain rate, in./min.	0.000			
Water content, %	62.7			
Wet density, pcf	99.8			
Dry density, pcf	61.4			
Saturation, %	96.0			
Void ratio	1.7881			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: VSO GR CH4 W/ LNS ML

LL =	PL =	PI =	Assumed GS= 2.74	Type: UNDISTURBED
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Project No.: 19082

Date: 11-23-05

Remarks:

TORVANE = 0.100 TSF

Client: URS Corporation

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

Source of Sample: B-4G **Depth:** 17.5

Sample Number: 8

UNCONFINED COMPRESSION TEST

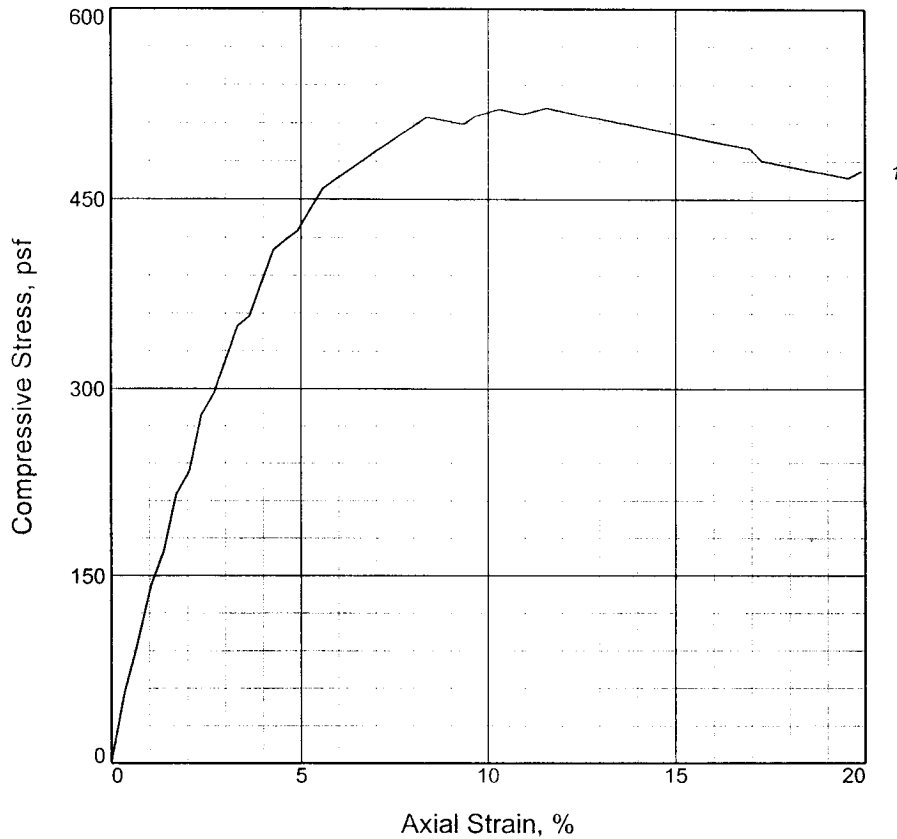
EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: RR

Checked By: JS

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	514.6			
Undrained shear strength, psf	257.3			
Failure strain, %	8.4			
Strain rate, in./min.	0.058			
Water content, %	63.4			
Wet density, pcf	97.7			
Dry density, pcf	59.8			
Saturation, %	93.7			
Void ratio	1.8415			
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= 2.72	Type: UNDISTURBED
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Project No.: 19082

Date: 11/23/05

Remarks:

TORVANE = 0.100 TSF

Client: URS Corporation

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

Source of Sample: B-4G **Depth:** 22.5

Sample Number: 10

UNCONFINED COMPRESSION TEST

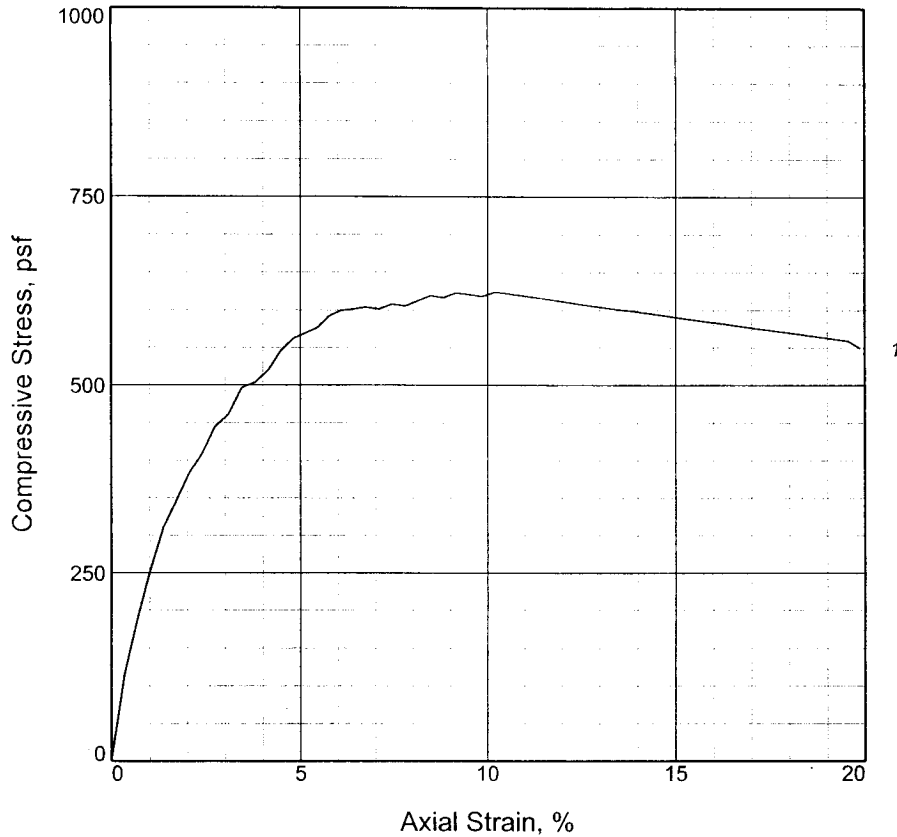
EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: RR

Checked By: DP

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	603.5			
Undrained shear strength, psf	301.7			
Failure strain, %	6.8			
Strain rate, in./min.	0.059			
Water content, %	72.9			
Wet density, pcf	93.6			
Dry density, pcf	54.1			
Saturation, %	92.4			
Void ratio	2.1606			
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: 11/23/05

Remarks:

TORVANE = 0.100 TSF

Client: URS Corporation

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

Source of Sample: B-4G **Depth:** 27.5

Sample Number: 12

UNCONFINED COMPRESSION TEST

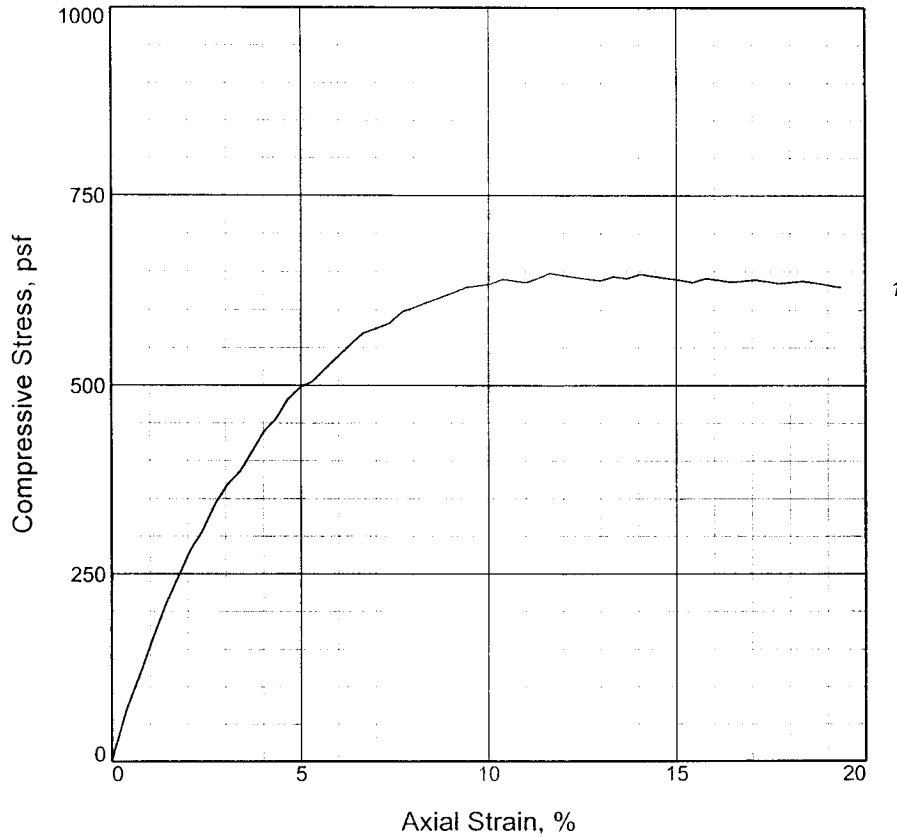
EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: RR

Checked By: DP

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	639.6			
Undrained shear strength, psf	319.8			
Failure strain, %	10.4			
Strain rate, in./min.	0.059			
Water content, %	50.3			
Wet density, pcf	105.8			
Dry density, pcf	70.4			
Saturation, %	96.9			
Void ratio	1.4123			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: SO GR CH4 W/ LNS & ARS ML

LL = PL = PI = Assumed GS= 2.72 Type: UNDISTURBED

Project No.: 19082
Date: 11/23/05
Remarks:
 TORVANE = 0.150 TSF

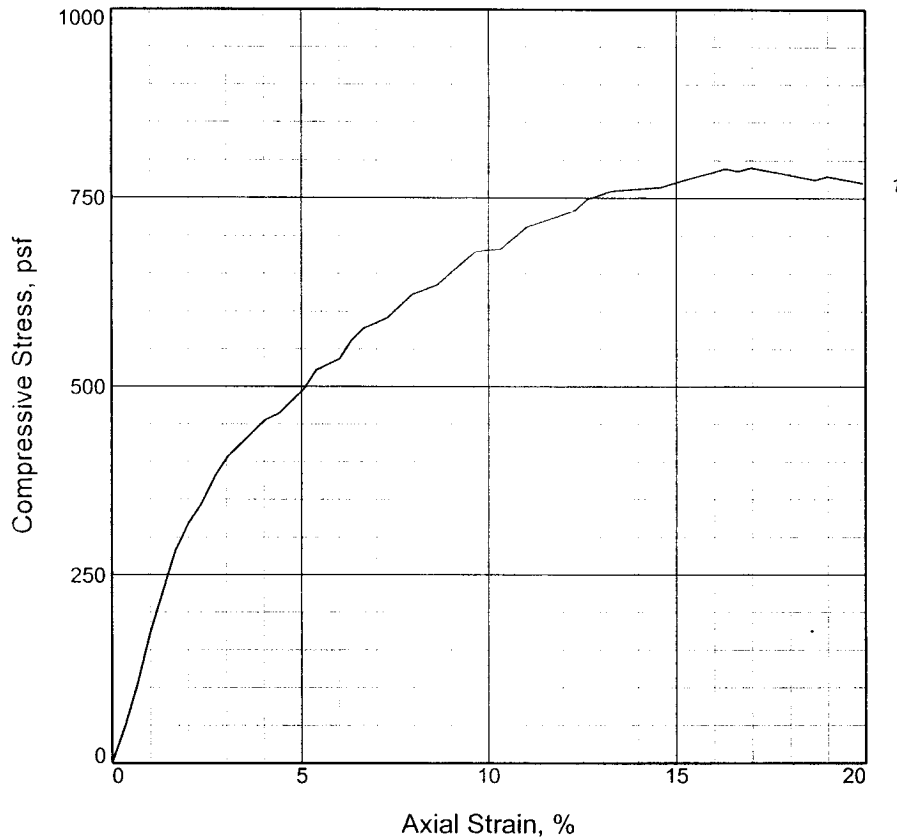
Client: URS Corporation
Project: U.S. Army Corps of Engineers
 Inner Harbor Navigational Canal
Source of Sample: B-4G **Depth:** 32.5
Sample Number: 14

UNCONFINED COMPRESSION TEST
EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: ZH Checked By: DP

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	788.7			
Undrained shear strength, psf	394.3			
Failure strain, %	16.3			
Strain rate, in./min.	0.058			
Water content, %	60.6			
Wet density, pcf	101.6			
Dry density, pcf	63.3			
Saturation, %	97.9			
Void ratio	1.6837			
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= 2.72 Type: UNDISTURBED

Project No.: 19082

Date: 11/23/05

Remarks:

TORVANE = 0.150 TSF

Client: URS Corporation

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

Source of Sample: B-4G **Depth:** 37.5

Sample Number: 16

UNCONFINED COMPRESSION TEST

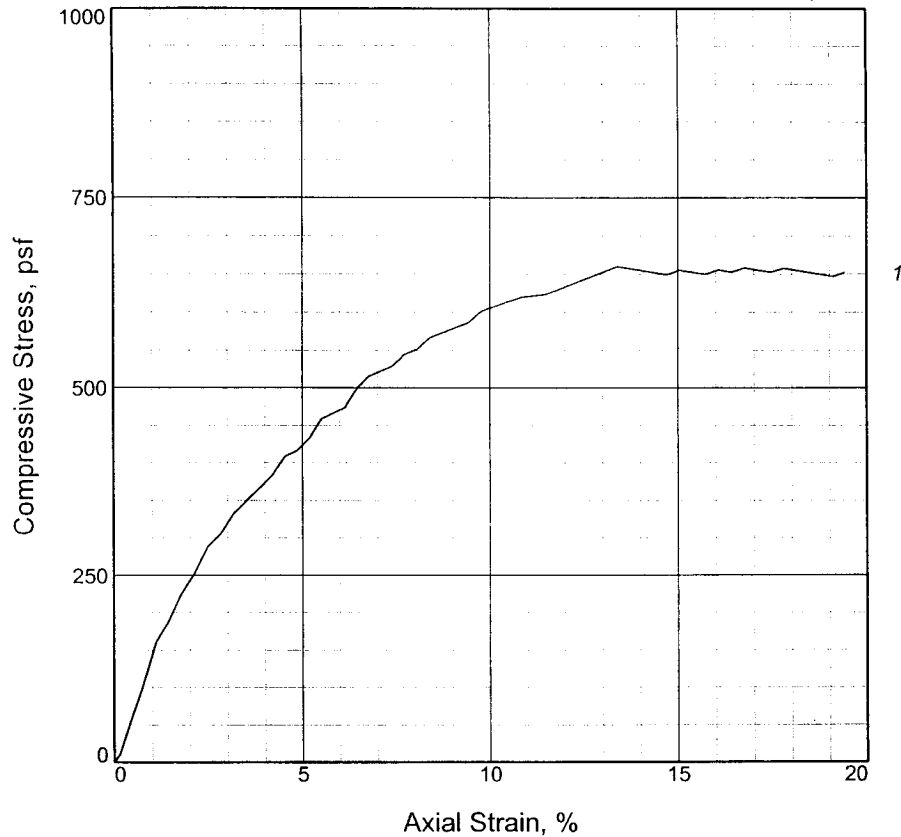
EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: ZH

Checked By: DP

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	659.3			
Undrained shear strength, psf	329.7			
Failure strain, %	13.4			
Strain rate, in./min.	0.058			
Water content, %	71.4			
Wet density, pcf	97.3			
Dry density, pcf	56.8			
Saturation, %	97.5			
Void ratio	1.9906			
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= 2.72 Type: UNDISTURBED

Project No.: 19082

Date: 11/27/05

Remarks:

TORVANE = 0.150 TSF

Client: URS Corporation

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

Source of Sample: B-4G **Depth:** 45.0

Sample Number: 19

UNCONFINED COMPRESSION TEST

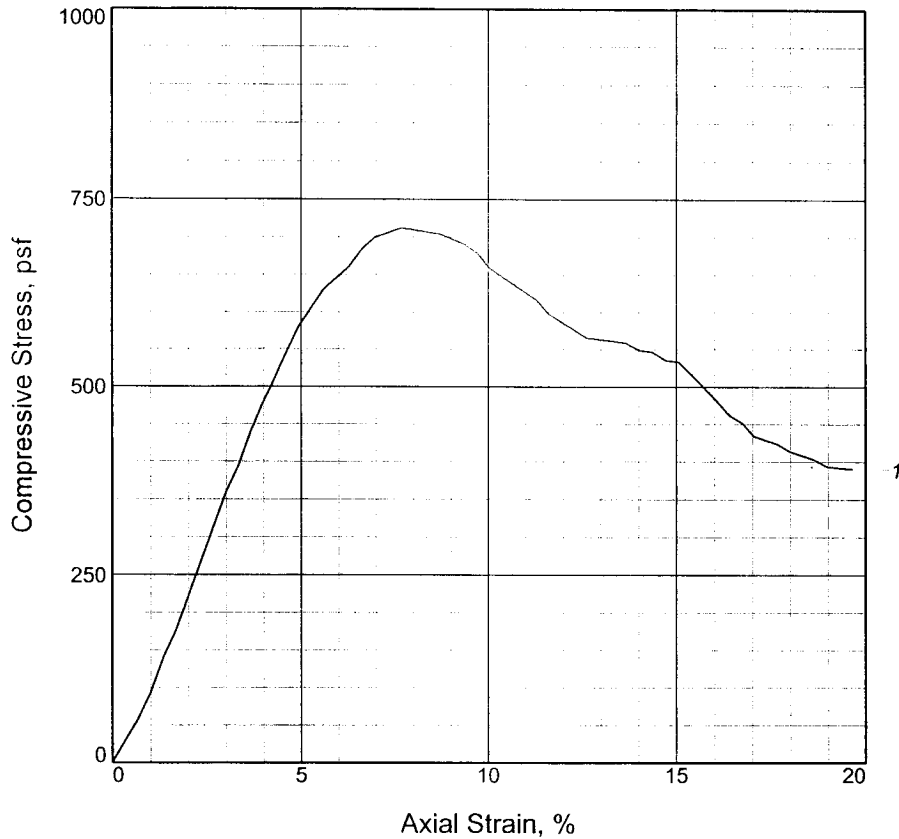
EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: ZH

Checked By: DP

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	711.7			
Undrained shear strength, psf	355.8			
Failure strain, %	7.7			
Strain rate, in./min.	0.058			
Water content, %	40.1			
Wet density, pcf	110.2			
Dry density, pcf	78.7			
Saturation, %	94.2			
Void ratio	1.1589			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: SO GR CH4 W/ LNS & ARS, SIF

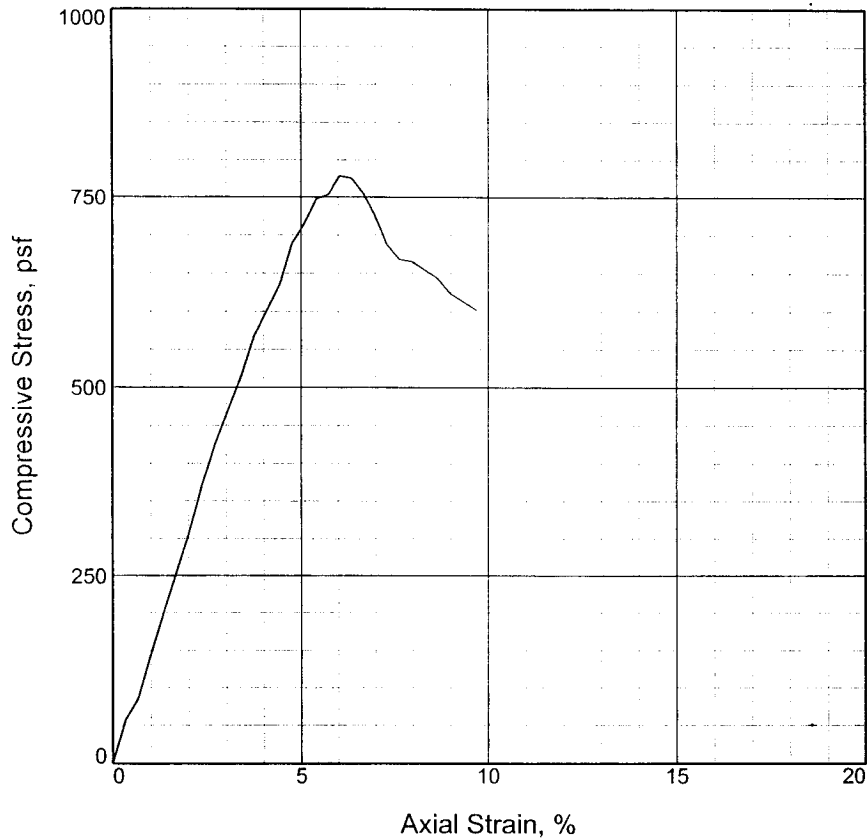
LL = PL = PI = Assumed GS= 2.72 Type: UNDISTURBED

<p>Project No.: 19082 Date: 11/23/05 Remarks: TORVANE = 0.120 TSF</p>	<p>Client: URS Corporation Project: U.S. Army Corps of Engineers Inner Harbor Navigational Canal Source of Sample: B-4G Depth: 50.0 Sample Number: 21</p>
UNCONFINED COMPRESSION TEST EUSTIS ENGINEERING COMPANY, INC.	

Figure 1

Tested By: ZH Checked By: DP

UNCONFINED COMPRESSION TEST



1

Specimen No.	1			
Unconfined strength, psf	778.0			
Undrained shear strength, psf	389.0			
Failure strain, %	6.0			
Strain rate, in./min.	0.059			
Water content, %	45.3			
Wet density, pcf	104.4			
Dry density, pcf	71.8			
Saturation, %	90.3			
Void ratio	1.3645			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: SO GR CH4 W/ LNS & ARS SM

LL = PL = PI = Assumed GS= 2.72 Type: UNDISTURBED

Project No.: 19082

Date: 11/23/05

Remarks:

TORVANE = 0.200 TSF

Client: URS Corporation

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

Source of Sample: B-4G **Depth:** 52.5

Sample Number: 22

UNCONFINED COMPRESSION TEST

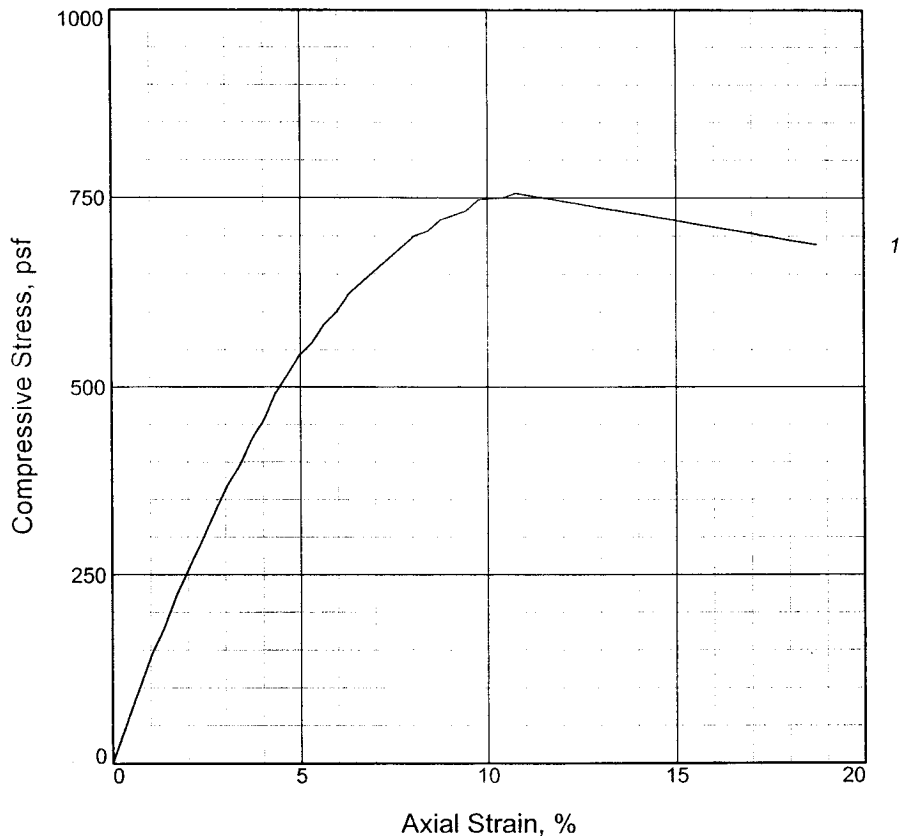
EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: ZH

Checked By: DP

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	755.9			
Undrained shear strength, psf	378.0			
Failure strain, %	10.8			
Strain rate, in./min.	0.059			
Water content, %	43.7			
Wet density, pcf	111.6			
Dry density, pcf	77.7			
Saturation, %	99.5			
Void ratio	1.2018			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: SO GR CH4 W/ ARS SM, SIF

LL =	PL =	PI =	Assumed GS= 2.74	Type: UNDISTURBED
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Project No.: 19082

Date: 11/23/05

Remarks:

TORVANE = 0.180 TSF

Client: URS Corporation

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

Source of Sample: B-4G **Depth:** 57.5

Sample Number: 24

UNCONFINED COMPRESSION TEST

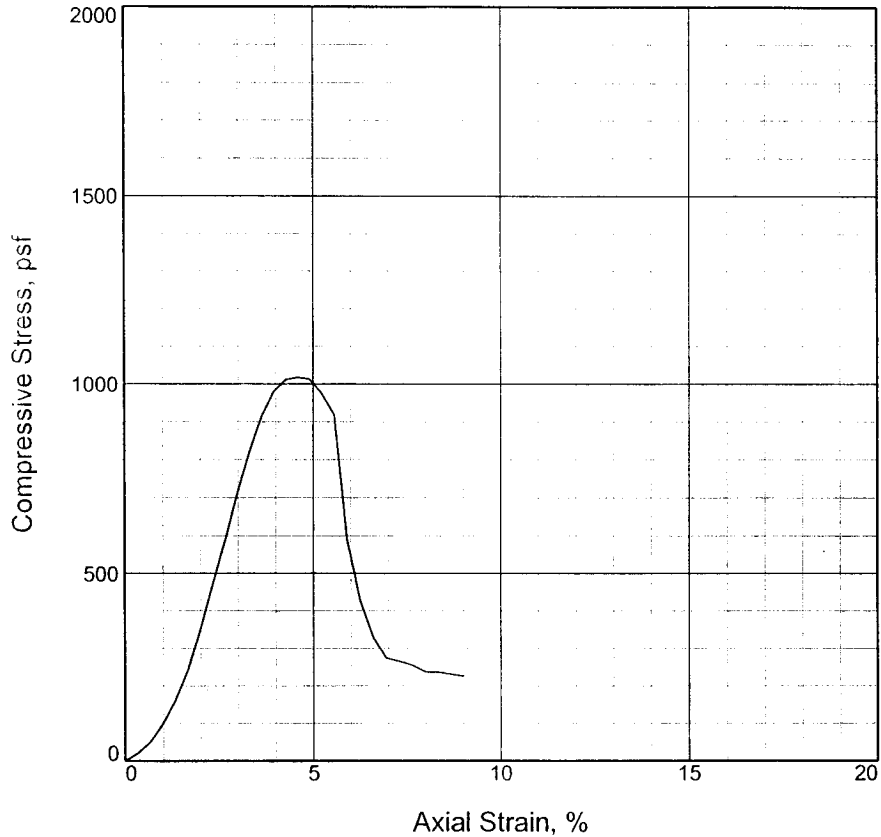
EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: ZH

Checked By: DP

UNCONFINED COMPRESSION TEST



1

Specimen No.	1			
Unconfined strength, psf	1017.0			
Undrained shear strength, psf	508.5			
Failure strain, %	4.6			
Strain rate, in./min.	0.051			
Water content, %	25.2			
Wet density, pcf	123.6			
Dry density, pcf	98.8			
Saturation, %	95.1			
Void ratio	0.7194			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: M GR CL4 W/ SIF

LL = PL = PI = Assumed GS= 2.72 Type: UNDISTURBED

Project No.: 19082

Date: 11/23/05

Remarks:

Client: URS Corporation

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

Source of Sample: B-4G **Depth:** 62.5

Sample Number: 26

UNCONFINED COMPRESSION TEST

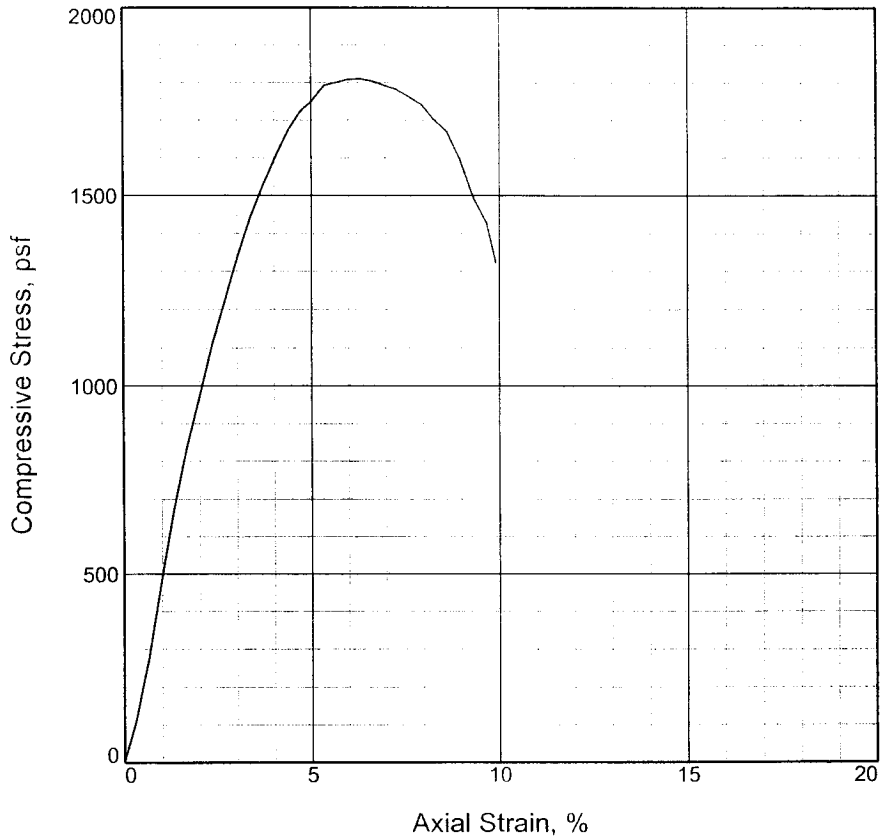
EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: ZH

Checked By: DP

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	1810.2			
Undrained shear strength, psf	905.1			
Failure strain, %	6.3			
Strain rate, in./min.	0.058			
Water content, %	37.6			
Wet density, pcf	113.8			
Dry density, pcf	82.7			
Saturation, %	97.1			
Void ratio	1.0536			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: M GR CH4 W/ ARS SM

LL = **PL =** **PI =** **Assumed GS= 2.72** **Type: UNDISTURBED**

Project No.: 19082
Date: 11/23/05
Remarks:
 TORVANE = 0.300 TSF

Client: URS Corporation
Project: U.S. Army Corps of Engineers
 Inner Harbor Navigational Canal
Source of Sample: B-4G **Depth:** 67.5
Sample Number: 28

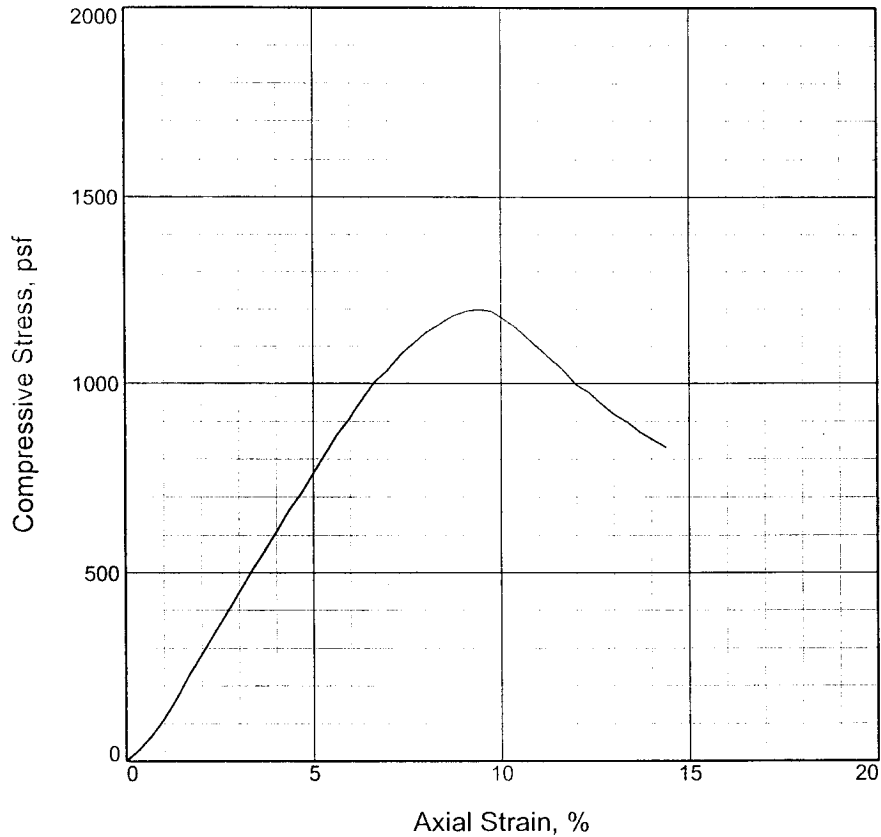
UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: ZH **Checked By:** DP

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	1198.2			
Undrained shear strength, psf	599.1			
Failure strain, %	9.4			
Strain rate, in./min.	0.059			
Water content, %	25.6			
Wet density, pcf	121.2			
Dry density, pcf	96.6			
Saturation, %	92.6			
Void ratio	0.7458			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: M GR CH2 W/ TR-WD

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

Project No.: 19082
Date: 11/27/05
Remarks:
 TORVANE = 0.150 TSF

Client: URS Corporation
Project: U.S. Army Corps of Engineers
 Inner Harbor Navigational Canal
Source of Sample: B-4G **Depth:** 72.5
Sample Number: 30

UNCONFINED COMPRESSION TEST

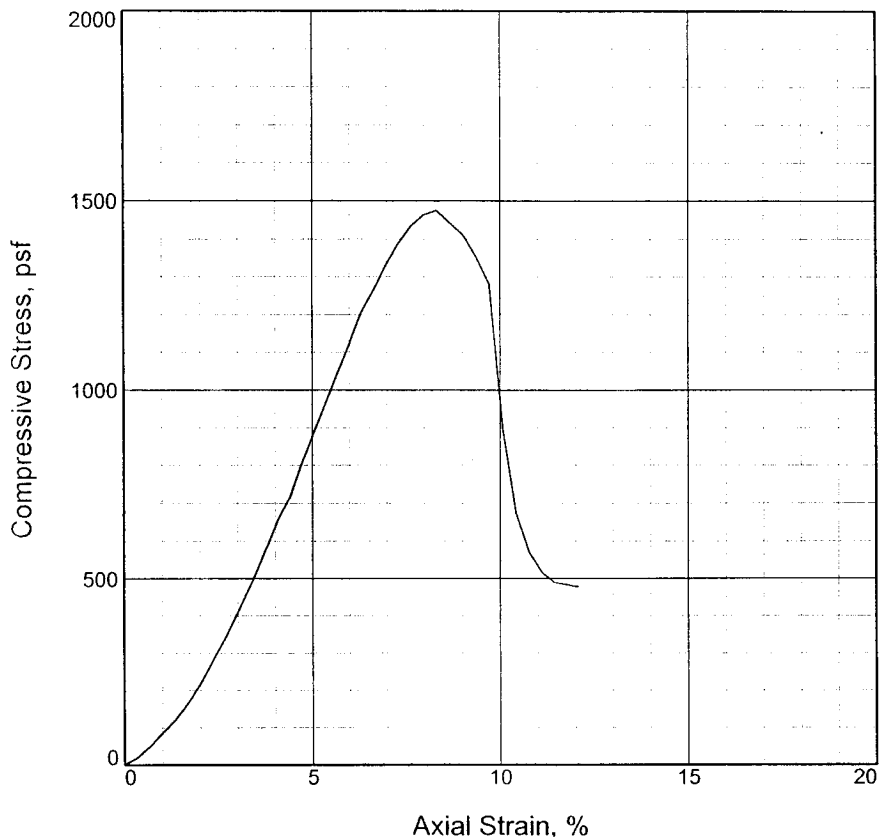
EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: ZH

Checked By: DP

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	1474.2			
Undrained shear strength, psf	737.1			
Failure strain, %	8.3			
Strain rate, in./min.	0.059			
Water content, %	22.7			
Wet density, pcf	126.2			
Dry density, pcf	102.8			
Saturation, %	96.1			
Void ratio	0.6392			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: M GR CL4

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

Project No.: 19082

Date: 11/27/05

Remarks:

TORVANE = 0.230 TSF

Client: URS Corporation

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

Source of Sample: B-4G **Depth:** 77.5

Sample Number: 32

UNCONFINED COMPRESSION TEST

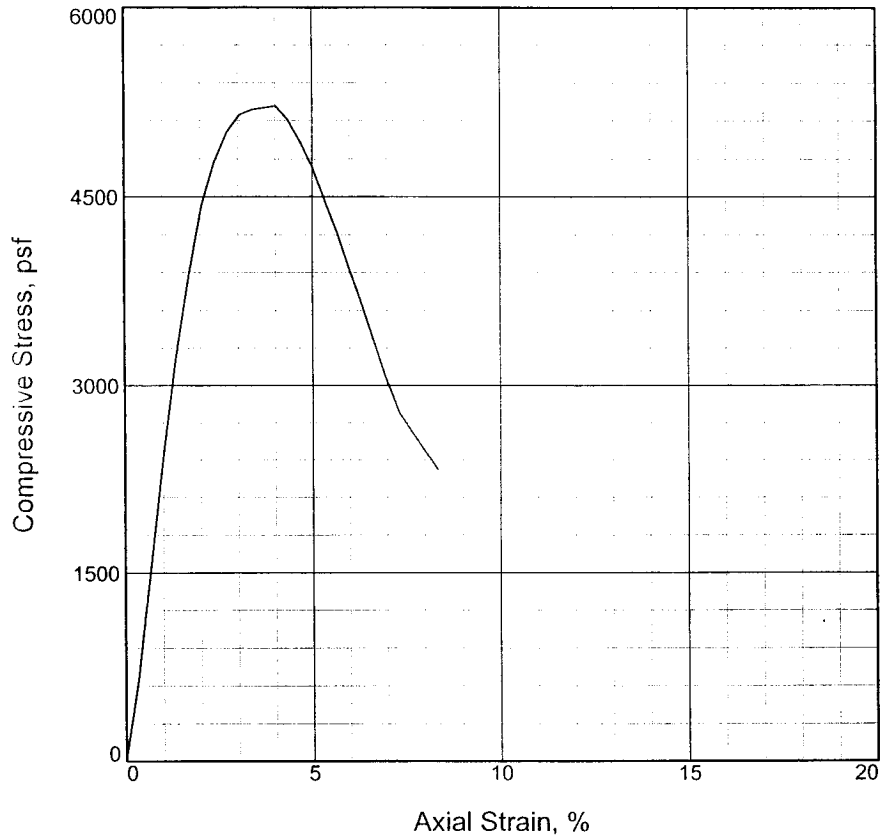
EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: ZH

Checked By: DP

UNCONFINED COMPRESSION TEST



1

Specimen No.	1			
Unconfined strength, psf	5214.6			
Undrained shear strength, psf	2607.3			
Failure strain, %	4.0			
Strain rate, in./min.	0.059			
Water content, %	31.5			
Wet density, pcf	115.6			
Dry density, pcf	87.9			
Saturation, %	92.0			
Void ratio	0.9323			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: VTS GR & T CH4 W. ARS ML, SL

LL = PL = PI = Assumed GS= 2.72 Type: UNDISTURBED

Project No.: 19082
Date: 11/27/05
Remarks:
 TORVANE = 1.000 TSF

Client: URS Corporation
Project: U.S. Army Corps of Engineers
 Inner Harbor Navigational Canal
Source of Sample: B-4G **Depth:** 82.5
Sample Number: 34

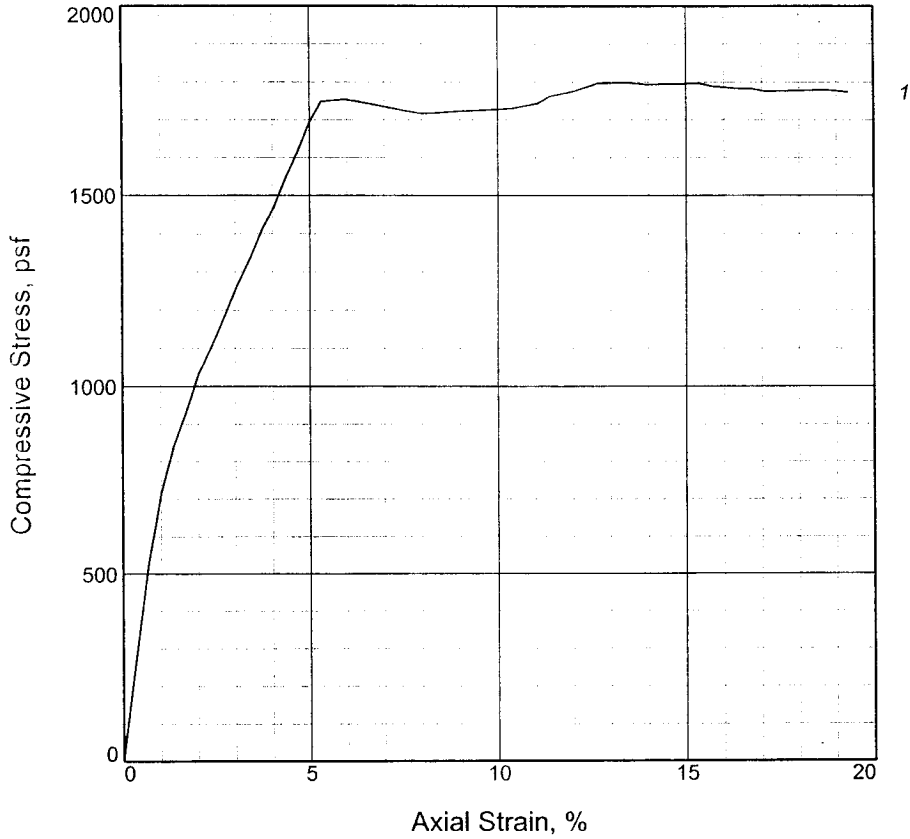
UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: ZH Checked By: DP

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	1754.1			
Undrained shear strength, psf	877.0			
Failure strain, %	6.0			
Strain rate, in./min.	0.059			
Water content, %	41.6			
Wet density, pcf	109.7			
Dry density, pcf	77.5			
Saturation, %	94.3			
Void ratio	1.2071			
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: 11/27/05
Remarks:
 TORVANE = 0.525 TSF

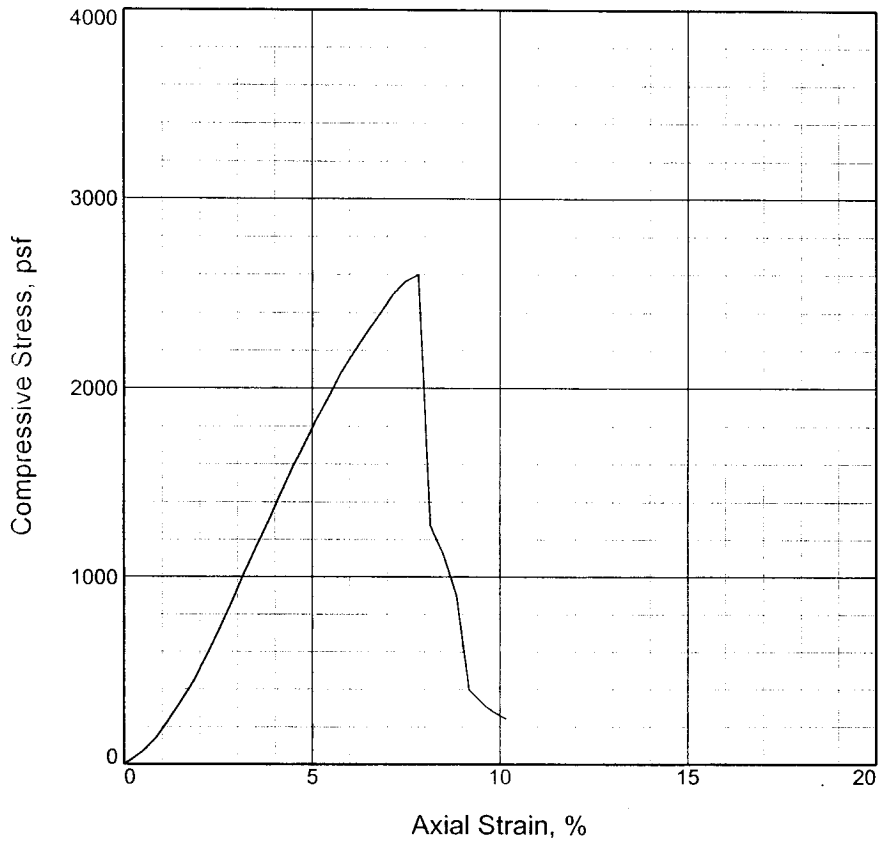
Client: URS Corporation
Project: U.S. Army Corps of Engineers
 Inner Harbor Navigational Canal
Source of Sample: B-4G **Depth:** 87.5
Sample Number: 36

UNCONFINED COMPRESSION TEST
EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: ZH Checked By: DP

UNCONFINED COMPRESSION TEST



1

Specimen No.	1			
Unconfined strength, psf	2596.2			
Undrained shear strength, psf	1298.1			
Failure strain, %	7.8			
Strain rate, in./min.	0.056			
Water content, %	23.5			
Wet density, pcf	122.4			
Dry density, pcf	99.1			
Saturation, %	92.0			
Void ratio	0.6824			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: SO GR CL4 W/ TR-WD

LL = PL = PI = Assumed GS= 2.67 Type: UNDISTURBED

Project No.: 19082

Date: 11/27/05

Remarks:

TORVANE = 0.240 TSF

Client: URS Corporation

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

Source of Sample: B-4G **Depth:** 92.5

Sample Number: 38

UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: ZH

Checked By: DP