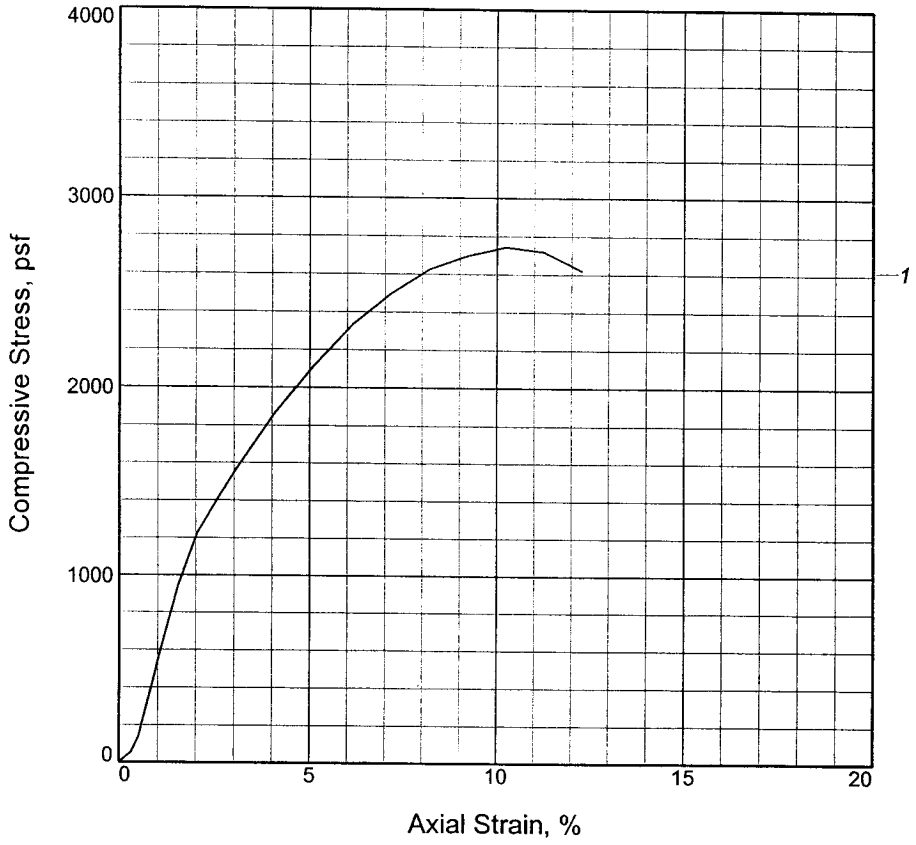
UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	2741.7			
Undrained shear strength, psf	1370.8			
Failure strain, %	10.2			
Strain rate, in./min.	0.058			
Water content, %	28.3			
Wet density, pcf	115.3			
Dry density, pcf	89.9			
Saturation, %	86.6			
Void ratio	0.8896			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: ST GR & T CH3 W/ ARS & LNS SM, TR-WD

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

Project No.: 19082
Date: 11-8-05

Remarks:
TORVANE = 1.250 TSF

Figure 1

Client: URS Corporation

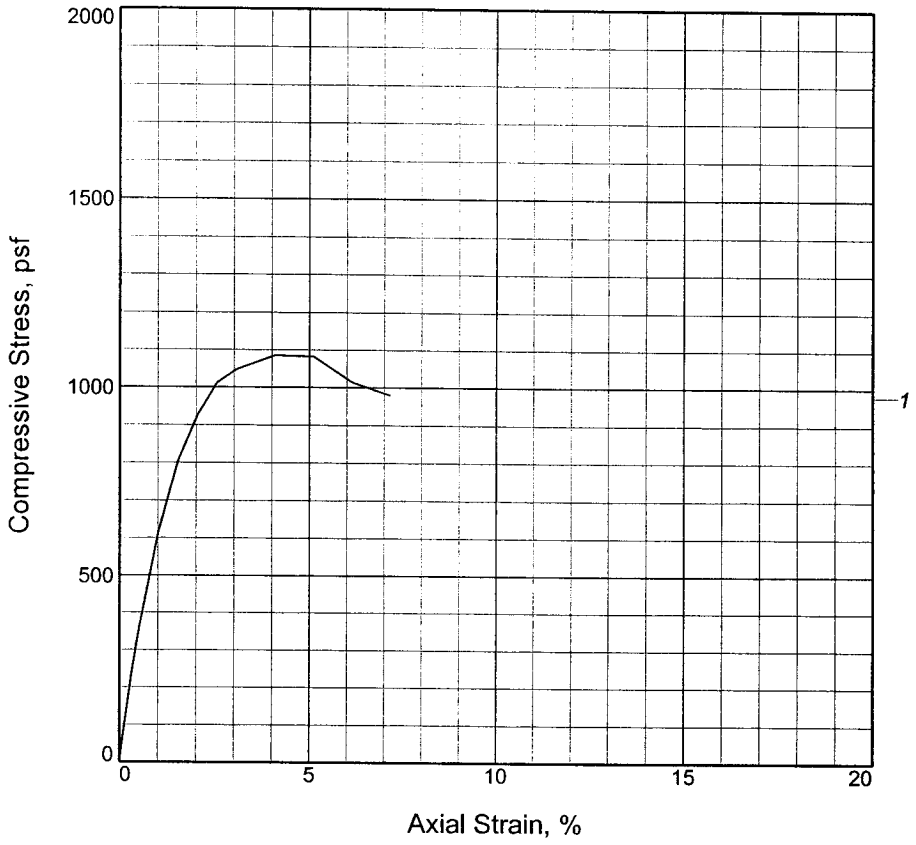
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: B-6WG **Depth:** 0.0
Sample Number: 1

UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Tested By: JL **Checked By:** JS

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	1085.2			
Undrained shear strength, psf	542.6			
Failure strain, %	4.1			
Strain rate, in./min.	0.058			
Water content, %	46.1			
Wet density, pcf	106.7			
Dry density, pcf	73.0			
Saturation, %	94.1			
Void ratio	1.3434			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: M GR & T CH4 W/ SL

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

Project No.: 19082
Date: 11-8-05

Remarks:
TORVANE = 0.630 TSF

Client: URS Corporation

Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: B-6WG **Depth:** 2.5
Sample Number: 2

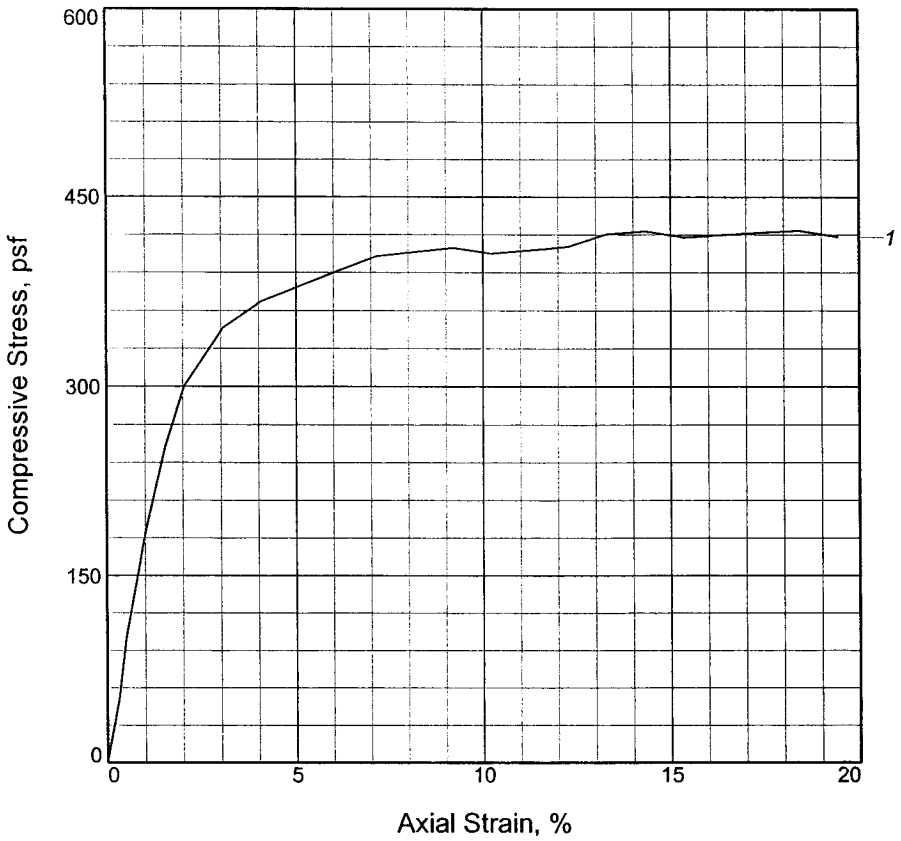
UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: JL **Checked By:** JS

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	409.4			
Undrained shear strength, psf	204.7			
Failure strain, %	9.2			
Strain rate, in./min.	0.055			
Water content, %	49.6			
Wet density, pcf	104.2			
Dry density, pcf	69.7			
Saturation, %	93.3			
Void ratio	1.4550			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: VSO GR & DGR CH4 W/ TR-WD, O

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

Project No.: 19082

Date: 11-8-05

Remarks:
TORVANE = 0.250 TSF

Figure 1

Client: URS Corporation

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

Source of Sample: B-6WG **Depth:** 7.5

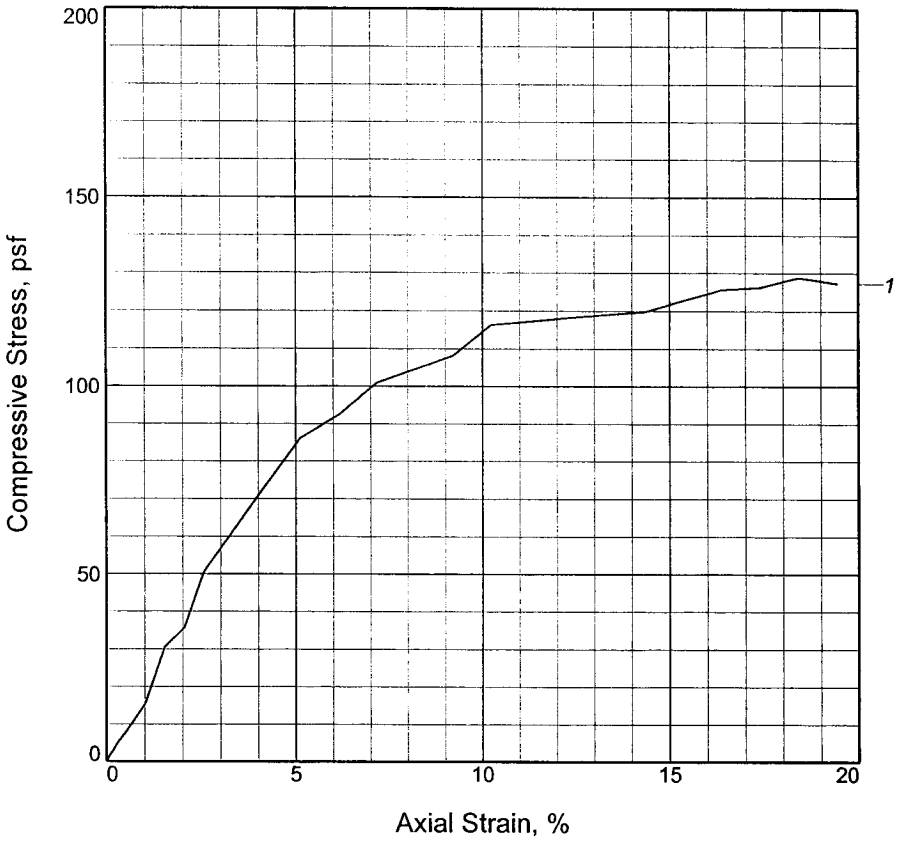
Sample Number: 4

UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Tested By: ZH **Checked By:** JS

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	128.8			
Undrained shear strength, psf	64.4			
Failure strain, %	18.4			
Strain rate, in./min.	0.589			
Water content, %	260.2			
Wet density, pcf	69.2			
Dry density, pcf	19.2			
Saturation, %	90.5			
Void ratio	7.6175			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: VSO GR CHOB W/ RT

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

Project No.: 19082
Date: 11-8-05

Remarks:
TORVANE = 0.120 TSF

Figure 1

Client: URS Corporation

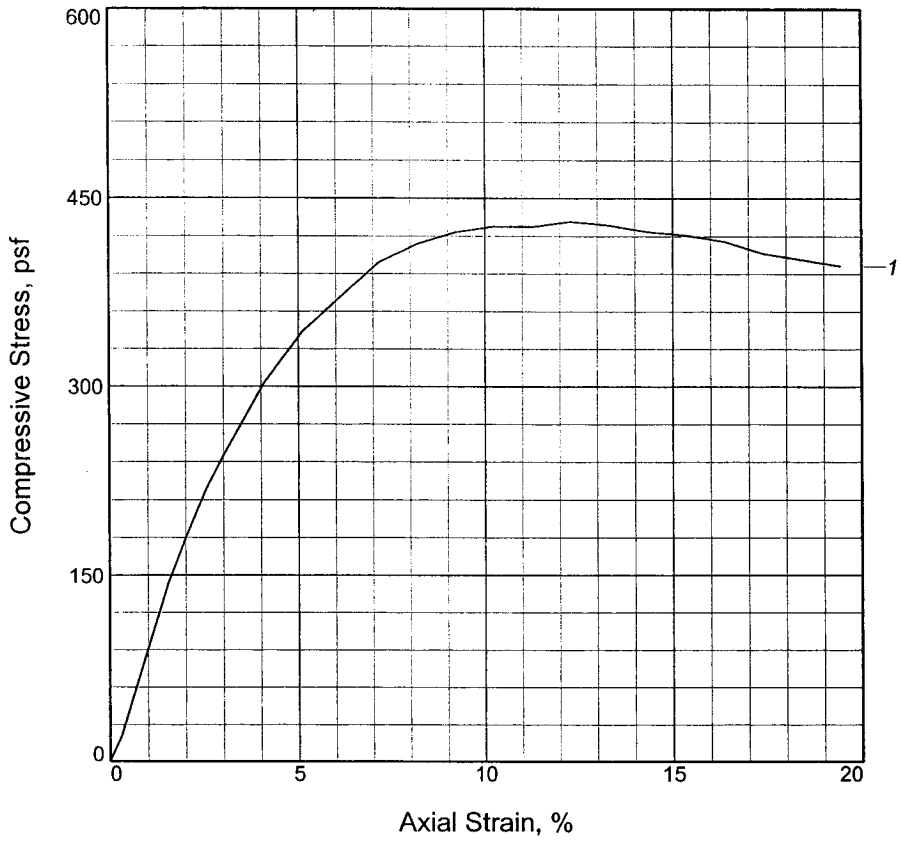
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: B-6WG **Depth:** 12.5
Sample Number: 6

UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Tested By: ZH **Checked By:** JS

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	427.5			
Undrained shear strength, psf	213.8			
Failure strain, %	10.2			
Strain rate, in./min.	0.589			
Water content, %	67.8			
Wet density, pcf	98.0			
Dry density, pcf	58.4			
Saturation, %	96.2			
Void ratio	1.9297			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: VSO GR CH4 W/ LNS SM, SL

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

Project No.: 19082
Date: 11-8-05

Remarks:
TORVANE = 0.170 TSF

Figure 1

Client: URS Corporation

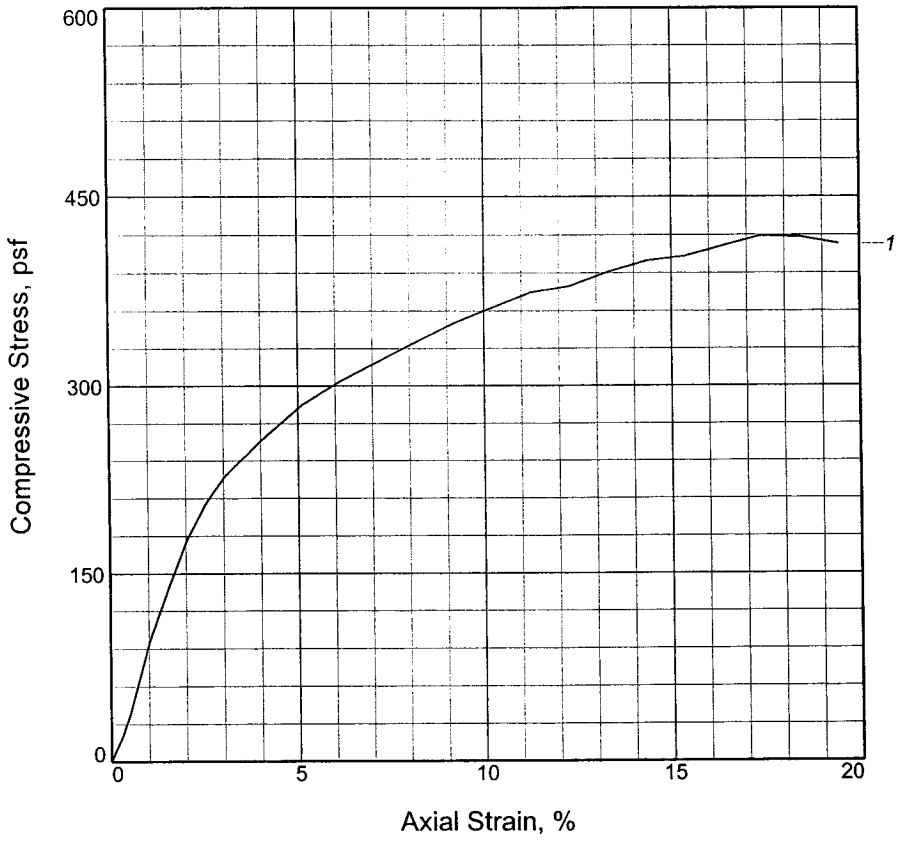
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: B-6WG **Depth:** 25.0
Sample Number: 11

UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Tested By: ZH **Checked By:** JS

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	419.1			
Undrained shear strength, psf	209.5			
Failure strain, %	17.4			
Strain rate, in./min.	0.059			
Water content, %	54.0			
Wet density, pcf	99.4			
Dry density, pcf	64.6			
Saturation, %	89.7			
Void ratio	1.6492			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: VSO GR CH4

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

Project No.: 19082
Date: 11-8-05
Remarks:
TORVANE = 0.160 TSF

Client: URS Corporation

Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: B-6WG **Depth:** 30.0
Sample Number: 13

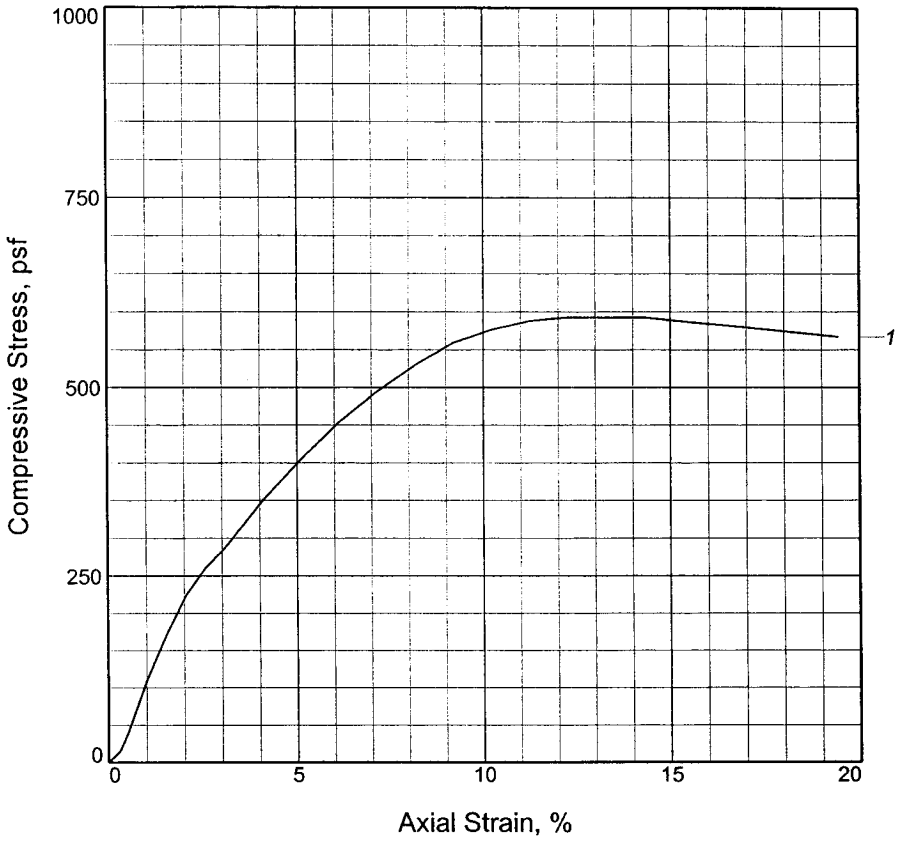
UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Figure 1

Tested By: ZH **Checked By:** JS

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	592.6			
Undrained shear strength, psf	296.3			
Failure strain, %	12.3			
Strain rate, in./min.	0.059			
Water content, %	71.7			
Wet density, pcf	94.3			
Dry density, pcf	54.9			
Saturation, %	92.9			
Void ratio	2.1148			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: SO GR CH4

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

Project No.: 19082
Date: 11-8-05
Remarks:
TORVANE = 0.200 TSF

Figure 1

Client: URS Corporation

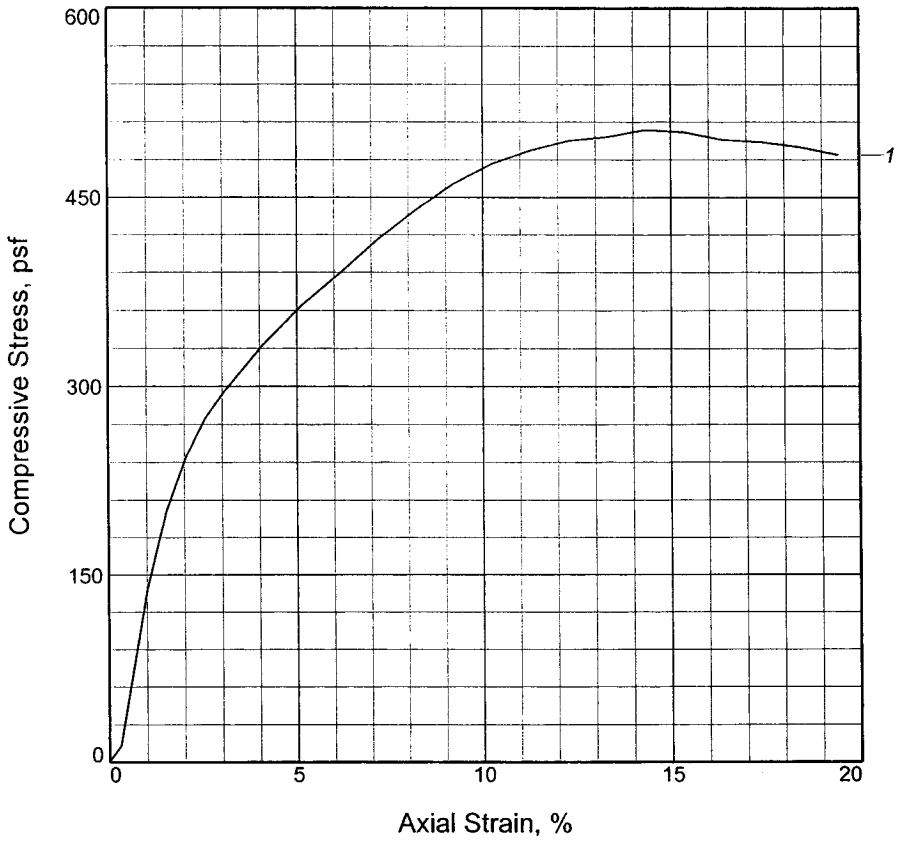
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: B-6WG **Depth:** 35.0
Sample Number: 15

UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Tested By: ZH **Checked By:** JS

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	503.4			
Undrained shear strength, psf	251.7			
Failure strain, %	14.3			
Strain rate, in./min.	0.059			
Water content, %	77.3			
Wet density, pcf	93.6			
Dry density, pcf	52.8			
Saturation, %	94.6			
Void ratio	2.2395			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: SO GR CH4

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

Project No.: 19082

Date: 11-8-05

Remarks:
TORVANE = 0.200 TSF

Figure 1

Client: URS Corporation

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

Source of Sample: B-6WG **Depth:** 40.0

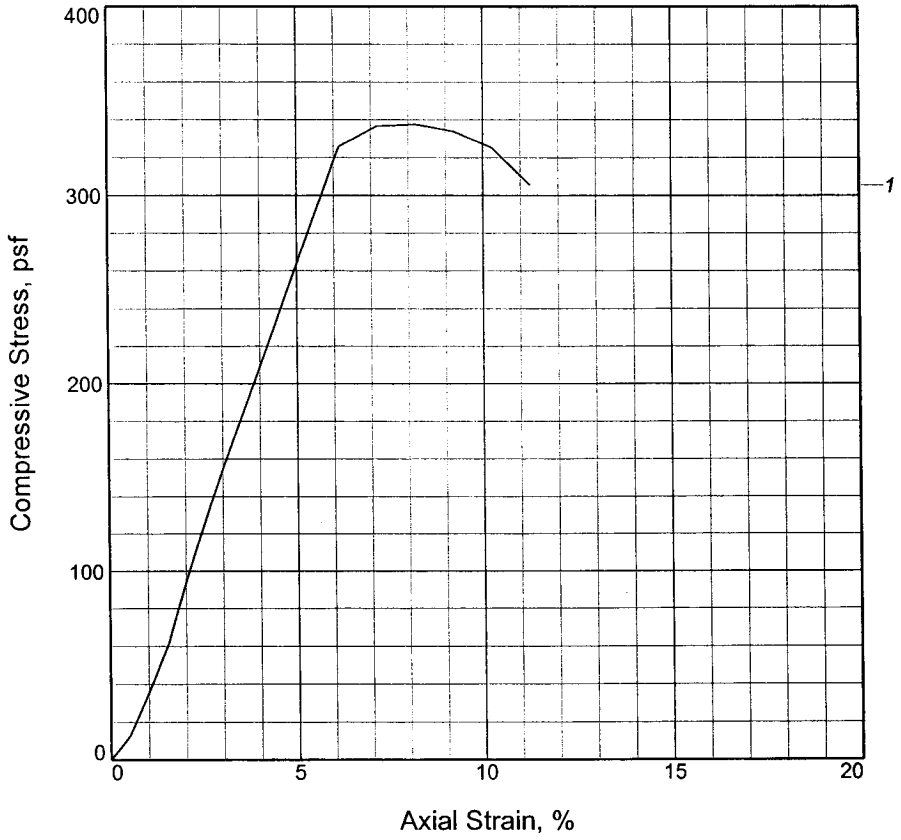
Sample Number: 17

UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Tested By: ZH **Checked By:** JS

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	337.5			
Undrained shear strength, psf	168.7			
Failure strain, %	8.2			
Strain rate, in./min.	0.059			
Water content, %	27.0			
Wet density, pcf	115.2			
Dry density, pcf	90.7			
Saturation, %	84.9			
Void ratio	0.8591			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: VSO GR CL5 W/ SIF

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

Project No.: 19082
Date: 11-8-05
Remarks:
TORVANE = 0.170 TSF

Figure 1

Client: URS Corporation

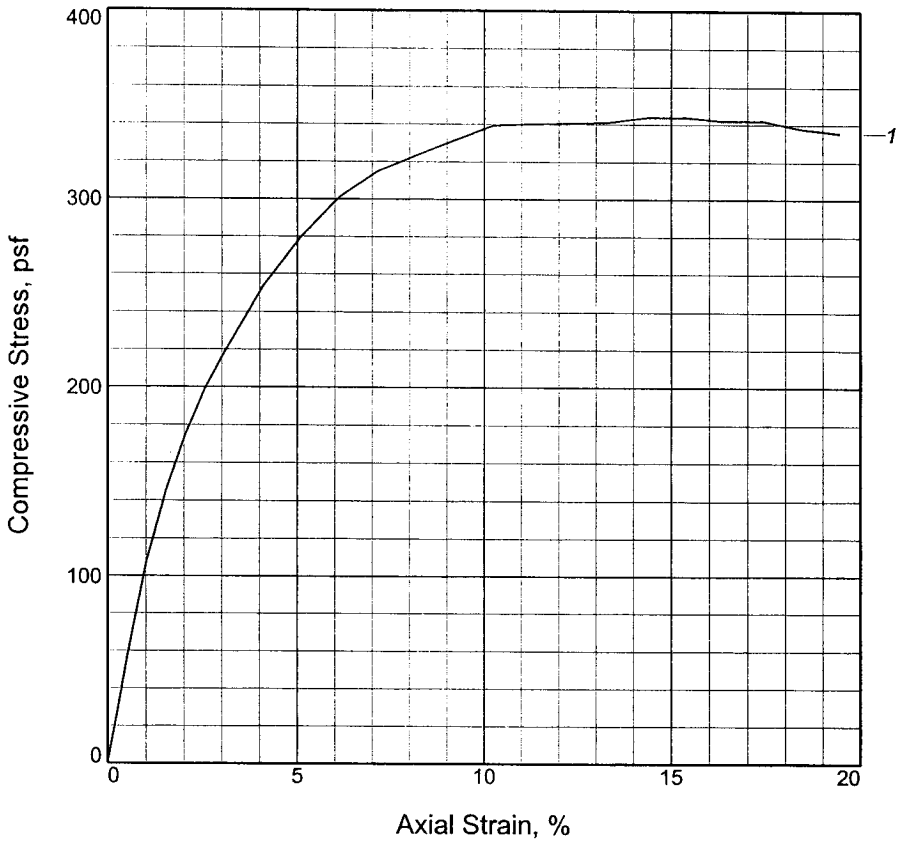
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: B-6WG **Depth:** 45.0
Sample Number: 19

UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Tested By: ZH **Checked By:** JS

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	344.0			
Undrained shear strength, psf	172.0			
Failure strain, %	15.4			
Strain rate, in./min.	0.059			
Water content, %	46.1			
Wet density, pcf	105.9			
Dry density, pcf	72.5			
Saturation, %	92.9			
Void ratio	1.3594			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: VSO GR CH3 W/ ARS & LNS SM

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

Project No.: 19082
Date: 11-8-05

Remarks:
TORVANE = 0.150 TSF

Figure 1

Client: URS Corporation

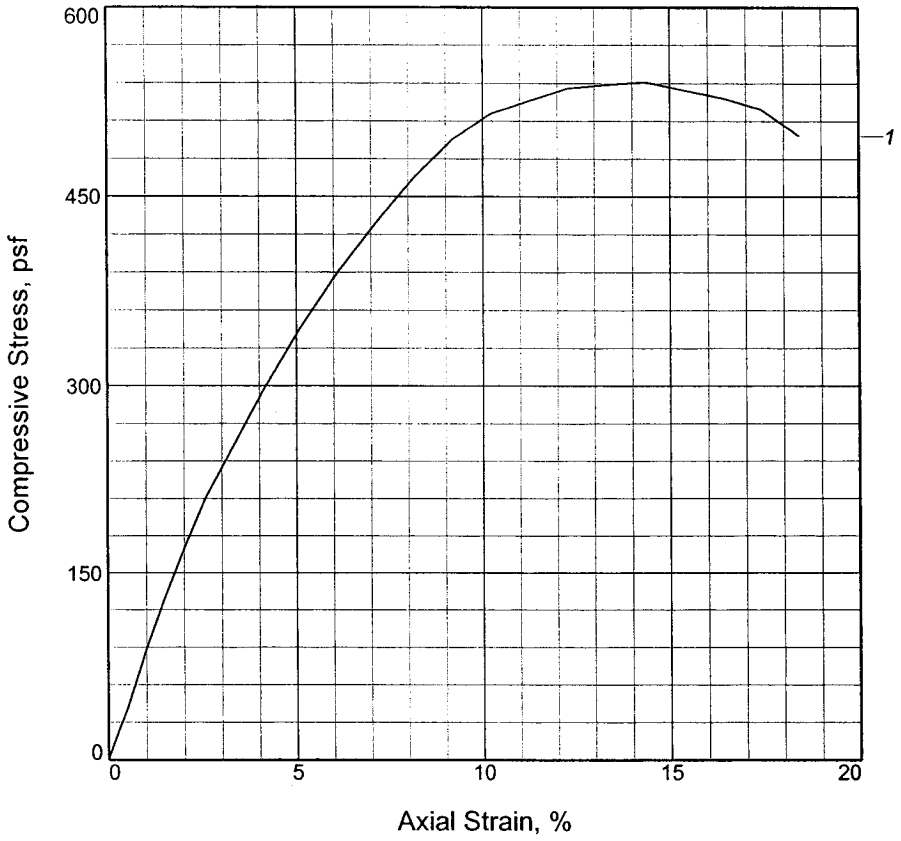
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: B-6WG **Depth:** 50.0
Sample Number: 21

UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Tested By: ZH **Checked By:** JS

UNCONFINED COMPRESSION TEST



Specimen No.	1			
Unconfined strength, psf	541.1			
Undrained shear strength, psf	270.5			
Failure strain, %	14.3			
Strain rate, in./min.	0.059			
Water content, %	34.3			
Wet density, pcf	111.7			
Dry density, pcf	83.2			
Saturation, %	89.5			
Void ratio	1.0415			
Specimen diameter, in.	1.388			
Specimen height, in.	2.930			
Height/diameter ratio	2.11			

Description: SO GR CH3 W/ ARS & LNS SM

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

Project No.: 19082
Date: 11-8-05

Remarks:
TORVANE = 0.210 TSF

Figure 1

Client: URS Corporation

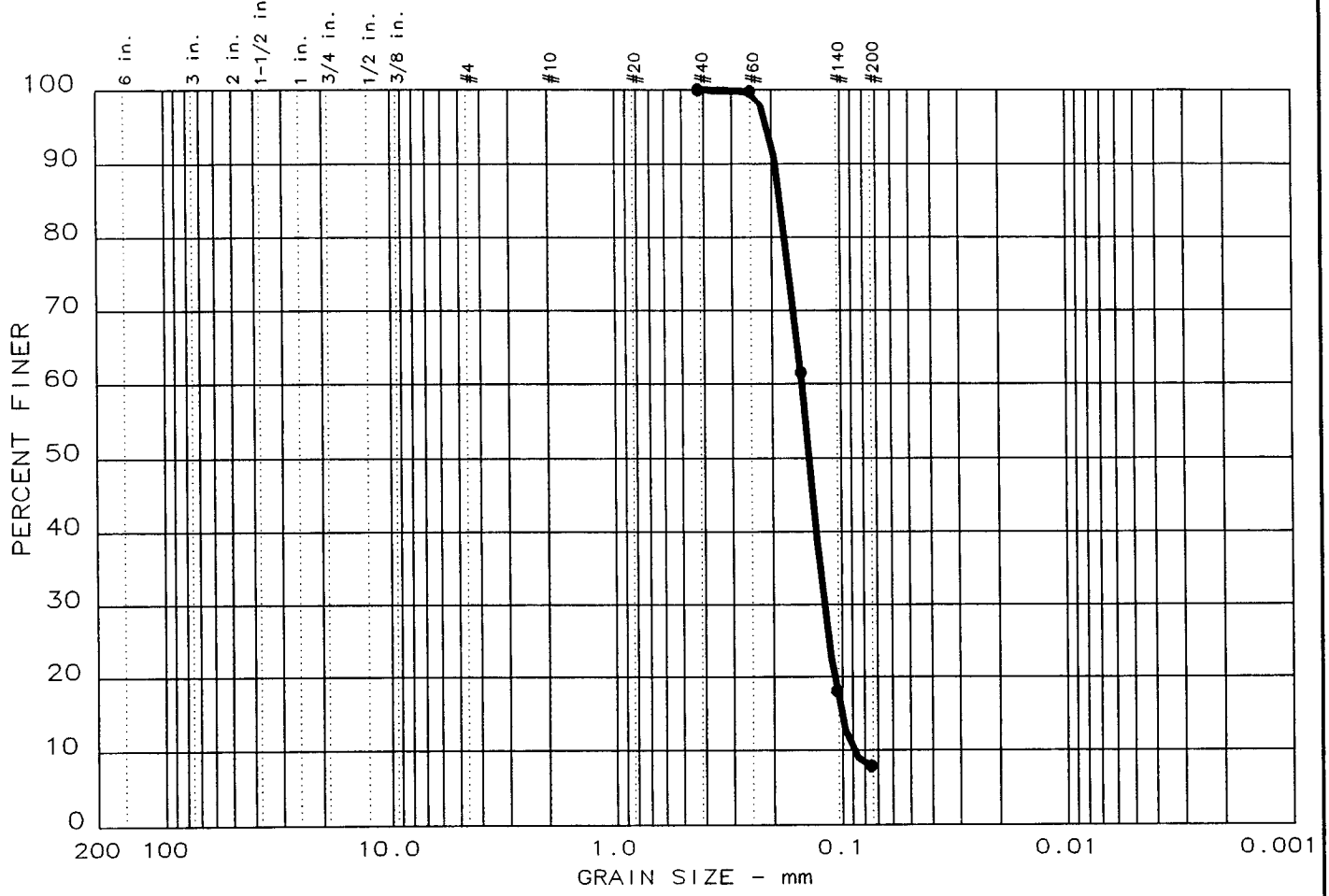
Project: U.S. Army Corps of Engineers
Inner Harbor Navigational Canal
Source of Sample: B-6WG **Depth:** 52.5
Sample Number: 22

UNCONFINED COMPRESSION TEST

EUSTIS ENGINEERING COMPANY, INC.

Tested By: ZH **Checked By:** JS

PARTICLE SIZE DISTRIBUTION TEST REPORT



	% +3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PI
●	0.0	0.0	92.1	7.9		SP		

SIEVE inches size	PERCENT FINER ●		
	GRAIN SIZE		
D_{60}	0.15		
D_{30}	0.12		
D_{10}	0.08		
	COEFFICIENTS		
C_c	1.07		
C_u	1.7		

SIEVE number size	PERCENT FINER ●		
40	100.0		
60	99.8		
100	61.5		
140	18.1		
200	7.9		

Sample information:

● Boring 6WG, Sample 24
GR SP

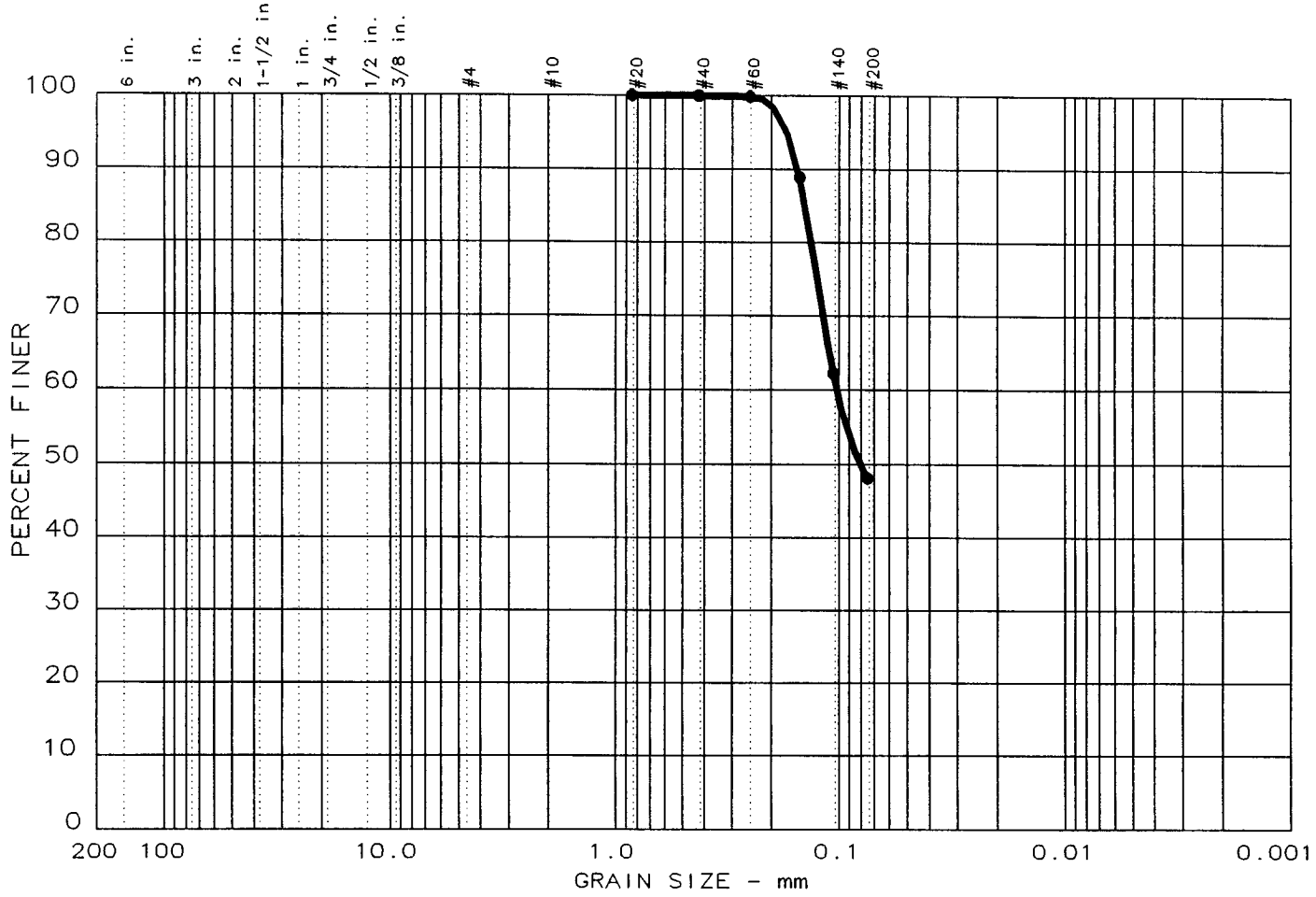
Remarks:
Sample depth 57.5'

Eustis Engineering Company, Inc.

Project No.: 19082
Project: USACE

Date: 11-15-05 Data Sheet No. ——

PARTICLE SIZE DISTRIBUTION TEST REPORT



	% +3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PI
●	0.0	0.0	51.9	48.1		SP		

SIEVE inches size	PERCENT FINER ●		
GRAIN SIZE			
D_{60}	0.10		
D_{30}			
D_{10}			
COEFFICIENTS			
C_c			
C_u			

SIEVE number size	PERCENT FINER ●		
20	100.0		
40	99.9		
60	99.8		
100	88.9		
140	62.2		
200	48.1		

Sample information:
● Boring 6WG, Sample 30
GR SP

Remarks:
Sample depth 72.5'

Eustis Engineering Company, Inc.

Project No.: 19082
Project: USACE

Date: 11-15-05 Data Sheet No. ——