Sediment Characterization New London Disposal Site

Disposal Area Monitoring System Damos

Contribution 39 April 11, 1984



SEDIMENT CHARACTERIZATION NLON DISPOSAL SITE MARCH - APRIL 1984

CONTRIBUTION # 39

April 11, 1984

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Submitted to:

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Submitted by:

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1.0 INTRODUCTION

On 27 March 1984, Science Applications, Inc. (SAI) conducted a sampling cruise to the Eastern Long Island Sound (ELIS) disposal area, located approximately 3 nautical miles south of the Thames River in New London, Connecticut. The purpose of this cruise was to obtain sediment core samples over the disposal mound at the New London 1983 (NLON83) disposal site. Figure 1.0-1 depicts the depth contour chart generated from a bathymetric survey conducted on 28 December 1983. This shows clearly well defined mound of dredge material approximately 23 feet high, extending to within 30 feet of the at approximately 41016.48'N by surface and located 72004.56'W. The object of this study was to obtain a total of samples down to a depth of at least 45 feet mean low core water in order to characterize the nature of the sediment Navigation during this study was provided by the SAI precision navigation and data acquisition system, utilizing a Del Norte Model 540 Trisponder microwave ranging system enabling positioning with an accuracy of 6 feet. Core samples were taken using a 15 foot, hydraulically powered vibracorer leased from Ocean Surveys Inc. of Old Saybrook, CT. All at-sea operations were done from the R/V UCONN, a 65 foot steel hulled vessel under charter from the University of Connecticut.

In order to characterize the nature of the material within the mound, a grid of 25 sampling stations was set up which covered the center of the pile as well as its flanks out to the 45 foot depth contour level. Positional stability was maintained through the use of either a one, two or three point mooring

system, depending on existing ocean current conditions. Figure 1.0-2 is a depth contour chart similar to that presented in Figure 1.0-1, but with the actual sample locations superimposed. Each of these samples were taken within 35 feet of their target positions and most (80%) were 15 feet or less from their targets. Table 1.0-1 lists the geographic locations of each core sample as well as their individual lengths. Each core sample was carefully removed from the corer, labelled and capped, stored in an upright position to minimize mixing, and transported to the SAI offices in Newport, RI.

On 29 March, a storm system of significant intensity passed close to the New London disposal site and necessitated the postponement of field operations until the week of 2 April. This storm also caused considerable damage to the lantern on the SAI maintained disposal buoy "DGC". Therefore, the lantern and battery system were replaced on 3 April.

2.0 RESULTS

Following completion of at-sea operations, each core sample was cut into 5 foot lengths and cut longitudinally. Each sample was then split and visual observations were taken. Cores from stations 4, 16, 17 and 18 were not cut and were set aside for viewing by Corps personnel. Each set of observations was then corrected for settling effects and diagrammed.

In general, the mound appears to consist of well consolidated layers of silt, sand and clay. While not distributed uniformly over the mound, evidence of stone and gravel were noted in several of the samples taken during this

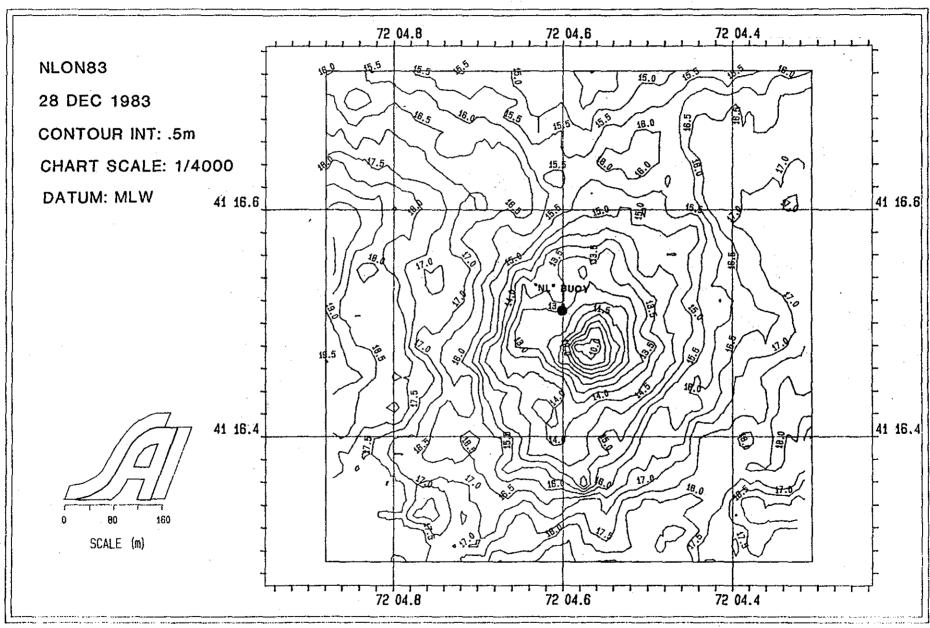


Fig. 1.0-1

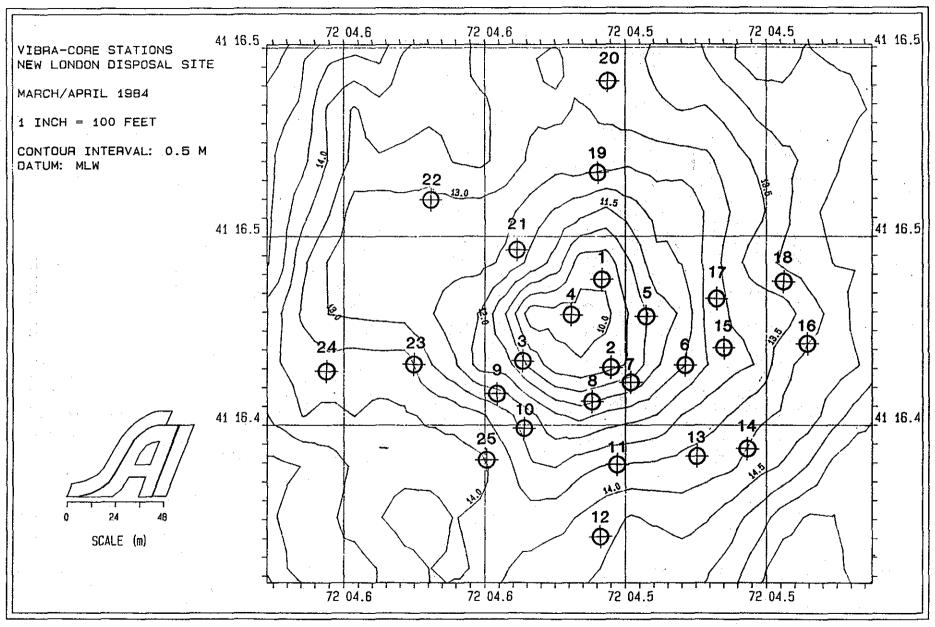


Fig. 1.0-2

TABLE 1.0-1

		NORTH	WEST	LENGTH
STATION	CORE #	LATITUDE	LONGITUDE	(INCHES)
1	1	41.1648874	72.0455835	156
2	2	41.1646496	72.0455480	108
3	3	41.1646769	72.0458702	156
4	20	41.1647956	72.0456982	168
5	4	41.1647954	72.0454332	180
6	10	41.1646710	72.0452758	180
7	15	41.1646171	72.0454836	168
8	14	41.1645632	72.0456197	144
9	19	41.1645851	72.0459634	156
10	13	41.1644878	72.0458633	132
11	7	41.1643957	72.0455268	180
12	16	41.1642013	72.0455916	168
13	8	41.1644225	72.0452403	168
14	9	41.1644331	72.0450757	156
15	11	41.1647141	72.0451397	180
16	25	41.1647139	72.0448532	156
17	5	41.1648384	72.0451753	84
18	6	41.1648868	72.0449389	162
19	22	41.1651737	72.0456045	150
20	17	41.1654168	72.0455612	168
21	18	41.1649632	72.0458913	144
22	21	41.1650985	72.0461919	108
23	24	41.1646664	72.0462497	156
24	23	41.1646450	72.0465648	108
25	12	41.1644122	72.0459994	180

study and some of the stones measured 2-2 1/2 inches in size. It is not known whether larger stones are present as the vibrating nature of the corer tends to push larger objects aside rather than being stopped. As can be seen in the following diagrams, some of the samples were quite complex. In most cases, however, each individual layer of material was quite thin, on the order of 2-3 inches, which is indicative of disposal from many small projects. Evidence of the cohesive nature of this material is given by the fact that four steel corer barrels were bent beyond repair during this project.

Detailed diagrams of each core sample as well as a summarized listing are presented in the following pages.

LIST OF PROBINGS						
	ELEVATION BELOW M.L.W					
BER	/ ,	J&	/s)	MATERIAL		
MUMBER	150	AN OF SERVE	ROBE OF	TION M.L.W MATERIAL MATERIAL		
NL1	32.1	45.Ì	13.0	FLUFF, SILTY CLAY, CLAY		
NL2	33.5	42.5	9.0	CLAY, SILT, STONES, SAND, CLAY		
NL3	37.9	50.9	13.0	SAND, SANDY CLAY, CLAY		
NL4	34.5	48.5	14.0	NOT OPENED		
NL5	36.6	51.6	15.0	SILT, SANDY SILT, CLAYEY SILT		
NL6	39.0	54.0	15.0	SILTY SAND, SILT, CLAY		
NL7	37.6	51.6	14.0	SILTY SAND, CLAY, SILT, CLAY		
NL8	38.5	50.5	12.0	SILTY SAND & STONES, CLAY, SAND, CLAY		
NL9	41.4	54.4	13.0	SAND, MUD, SILT, CLAY		
NL10	42.3	53.3	11.0	SAND & GRAVEL, SILT, CLAY, SILT, CLAY		
NL11	44.8	59.8	15.0	SAND, SILT, CLAY, SILT, CLAY, SILT, CLAY		
NL12	47.3	61.3	14.0	SAND & GRAVEL, SILT, CLAY		
NL13	45.1	59.1	14.0	SAND & GRAVEL, CLAY, SILT, CLAY		
NL14	45.9	58.9	13.0	SAND & STONES, SILT, SAND, CLAY, SILT		
NL15	42.2	57.2	15.0	SILT & GRAVEL, CLAY, SILT, CLAY, SILT, CLAY		
NL16	46.1	59.1	13.0	NOT OPENED		
NL17	41.5	48.5	7.0	NOT OPENED		
NL18	44.6	58.1	13.5	NOT OPENED .		
NL19	40.0	52.5	12.5	SAND, SILT, CLAY		
NL20	43.5	57.5	14.0	SAND, CLAY, SAND, CLAY		
NL21	41.0	53.0	12.0	SAND, CLAY, GRAVEL, SILT CLAY		
NL22	42.2	51.2	9.0	SILT, CLAY, MUD, SILT, CLAY		
NL23	45.0	58.0	13.0	SAND, SILT, CLAY		
NL24	44.1	53.1	9.0	SAND, SILT, CLAY		
NL25	46.1	61.1	15.0	SAND & GRAVEL, SILT, CLAY		

SITE: NEW LONDON	_ STATION:	NL1 TYPE:VIBR	ATOR
DATE SAMPLED: _4	1/2/84 DA	TE EXAMINED: 4/10/	84
CORE LENGTH: 1	.5' SAMPL	E LENGTH: 13.0	
INDEX		DESCRIPTION	<u> 1</u>
	-32.1 MLW		
-32.3		Gray, sandy fluff	
		Gray clay with occa pockets of shell an layers of black sil	d thin
-34.5			<u>.</u>
en e		Mixed sandy gray cl black sandy silt an hash	ay with d shell
•			
NOT TO SCALE!			
-45.1			

SITE: NEW LOND	ON STATION:	NL2 TYPE: VIBRATOR	
DATE SAMPLE	D: <u>4/2/84</u> DA	TE EXAMINED: 4/10/8-	
CORE LENGTH:	15'SAMPL	E LENGTH: 9.0	
INDE	<u>×</u>	DESCRIPTION	
	-33.5 MIW	1	
-34.8 -		Dry gray clay	
-35.1		Black oily silt	
-37.1 _		Gray sandy clay with 2-3 cm stones	
-37 . 5 —		Gray silty sand	
-40.6		Dry brown silt & gray clay with some shell material	·
-41.2		Gray clay	
-41.6		Oily black silt	
NOT TO SCALE!		Dry brown sandy silt	
3 Z . • 3			
CORE #:2	DIAMETER:_2 7	7/8" MEASUREMENTS IN: FEE	T: :

SITE: NEW LONDON	_ STATION: N	L3 TYPE:VIBRATOR
DATE SAMPLED:	4/2/84 DA	TE EXAMINED: 4/10/84
CORE LENGTH:1	.5' SAMPL	E LENGTH: 13.0
INDEX		DESCRIPTION
	-37.9 MLW	
-38.2		Sandy gravel with shell hash
-39.6		Gray clay with pockets of shells
-43.5		Gray sandy clay with pockets of black silt
-47.9		Gray clay
NOT TO SCALE!		Gray clay with pockets of black oily silt

CORE #: 3 DIAMETER: 2 7/8" MEASUREMENTS IN: FEET

SITE: NEW LONDON ST	ATION: NL5 TYPE: VIBRATOR
DATE SAMPLED: 4/2/8	4 DATE EXAMINED: 4/6/84
CORE LENGTH: 15'	SAMPLE LENGTH:15
INDEX	DESCRIPTION
-36.	6 MLW
-37.7	Gray sandy silt
-38.0	Black silt with shell hash
-38.6	Gray clayey silt
-38.9	Black organic silt
-39.7	Brown clay
	Marbled brown clay with black oily silt & shell hash
-46.6	Gray clayey silt with
-42.2	wood chips
-44.8	Gray clayey silt
-45.8	Brown sandy clay
-46.4	Gray clay
-46.6	Sandy gray clay
-47.3	Gray clay
-47.3	
	Black clayey silt
-49.8	
	Black silty clay with . shell & stones
NOT TO SCALE!	
53.6	

CORE #: 4 DIAMETER: 2 7/8" MEASUREMENTS IN: FEET

SITE:	NEW LONDON	STAT	ION: NI	.6 T	YPE: VIBRATOR	_
DATE	SAMPLED:_	4/2/84	DATE	EXAMINED):4/6/84	
						
CORE	LENGTH:	15'	SAMPLE	LENGTH:	15'	

INDEX

DESCRIPTION

	-39.0 MLW	
20. 7	·	Gray cohesive silt
-39.7 	i	Black silty sand
-40.1	1	Gray cohesive silt
-40.2	1	Black silty sand with stones
-40.5	1	Gray silty sand with wood chips
-41.2		Gray cohesive silt
-41.8		Black organic silt with shell hash
-44.0	}	Gray cohesive silt
-44.3	1	Black silt
-44.9	1	Black silt
-49.1		Dry cohesive gray silt
; ;		Dry cohesive clayey gray
-52.6	·	silt
-52.9		Black silty sand
···· J & • J		Dry, cohesive clayey gray
	,	silt
NOT TO SCALE!		
-54.0		

CORE #: 10 DIAMETER: 2 7/8" MEASUREMENTS IN: FEET

SITE: NEW LONDON	STATION:	NL7 TYPE: VIBRATOR
DATE SAMPLED: 4	/2/84 DA	TE EXAMINED: 4/10/84
CORE LENGTH: 1	5 SAMPL	E LENGTH: 14.0
INDEX		DESCRIPTION
-38,2	-37.6 MLW	Gray silty sand with
-39.4		Gray sandy clay with shell hash
-41.5	•	Gray clay with shell hash
-42.0		Gray clay
-42.3 —		Black oily silt
-42.8		Gray silty sand
-44.3 —		Gray sandy clay
-44.3		Black oily silt
-44.8		Gray clay with shells & wood chips
-46.5		Gray clay with occasional stones & shells
-51.6	· · · · · · · · · · · · · · · · · · ·	

CORE #: 15 DIAMETER: 2 7/8" MEASUREMENTS IN: FEET

SITE:	NEW LONDON	STAT	ION:NI	.8	TYPE: VIBRATOR	_
DATE	SAMPLED:_	4/2/84	DATE	EXAMINE	D: <u>4/9/84</u>	
CORE	LENGTH:	15'	SAMPLE	LENGTH:_	12.0	

INDEX

DESCRIPTION

	-38.5 MLW	Gray silty sand with clay
-39.9		lumps, 3-4cm stones & shell hash
42.0		Gray clay
-42.8		· _
-44.7		Brown sandy clay
-45.0		Gray sandy clay
-45.7		Mixed gray clay & black silt
-45.9		Black silt
-46.5		Black silty clay
-47.1		Sandy gray clay
-48.9		Gray clay
-49.0		Sand & shell hash
		Gray clay
NOT TO SCALE!		
-50.5		

CORE #: 14 DIAMETER: 2 7/8" MEASUREMENTS IN: FEET

SITE: NEW_LONDON	_ STATION:	NL9 TYPE: VIBRATOR
DATE SAMPLED: 4	/3/84 DA	TE EXAMINED:4/6/84
CORE LENGTH: 1	5 SAMPL	E LENGTH: 13.0
INDEX		DESCRIPTION
	-41_4 MLW	
-42.8		Watery medium sand with 2-5cm stones & shell
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Coarse sand
-44.0		
-44.9		Gray, dry, silty co- hesive mud
-47.1		Black sandy cohesive silt with wood chips
-49.1		Dry gray cohesive mud
-53.2		Dry gray cohesive clay with occasional shells
-53.2		Black coarse silty sand
-54.1		
NOT TO SCALE!		Gray clay
-54.4		

CORE #: 19 DIAMETER: 2 7/8" MEASUREMENTS IN: FEET

SITE: NEW LONDO	N STATION:	NL10 TYPE: VIBRATOR
DATE SAMPLED:	_4/2/84 DA	TE EXAMINED: 4/9/84
CORE LENGTH:_	15' SAMPL	E LENGTH: 11.0
INDEX		DESCRIPTION
	-42.3 MLW	· 1
-42.8 —		Silty coarse sand & pebbles
		Dark gray clay
-43.9 —	· · · · · · · · · · · · · · · · · · ·	
-44.5		Gray clayey silt with coarse sand & large amounts of shell hash
-46.1		Brown cohesive silt with pockets of black silt
		,
		Gray clay
•		
-50.1		
-50.2 —		Black silt
		Mostly gray clay with pockets of black silt & shells
-52.1 —	·	
÷		
		Brown clayey silt
NOT TO SCALE!		
-53.3		

CORE #: 13 DIAMETER: 2 7/8" MEASUREMENTS IN: FEET

SITE: NEW LONDON	_ STATION	: NL11 TYPE:VIBRATOR
DATE SAMPLED:	1/2/84	DATE EXAMINED: 4/6/84
CORE LENGTH:	15' SA	MPLE LENGTH: 15'
INDEX		DESCRIPTION
	-44.8 MLW	1
-45.5		Coarse sand
-46.3		Sandy gray clay
-47.6		Black sandy organic silt
-50.5		Slightly cohesive gray dry silt
- 56.3 ——	,	Dry gray slightly cohesive mud with occasional shell
-57.0		Black watery organic silt
-57.7		Dry gray slightly co- hesive mud
-58.7		Dark gray dry mud with some shell
-58.8		Coarse sand with 2-3cm stones
NOT TO SCALE!	;	Dark gray dry mud with shell hash
-59.8		

CORE #: ______ DIAMETER: 2 7/8" MEASUREMENTS IN: FEET

SITE: NEW LONDON	_ STATION:	NL12	TYPE:VIBRATOR
DATE SAMPLED:	4/3/84 DA	TE EXAM	INED: 4/9/84
CORE LENGTH:	.5' SAMPL	E LENGT	TH:14.0
INDEX			DESCRIPTION
	-47.3 MLW		
-49.0		Coarse 3-4cm s	sand with pebbles & stones
,		Brown o	clayey silt
-49.8			
		٠.	
		Brown s	silty sand
-54.4			
		Black of large s	organic silt with shell fragments
-55.2			
			ayey silt with fragments
-60.4			
		Brownis	sh dry mud
-61.4			
			sandy silt with stones & shell
-62.2			1
NOT TO SCALE!	1 - 30 k 1 - 30 k	Dry cla	ayey silt
-61.3	exactly see that		

CORE #: 16 DIAMETER: 2 7/8" MEASUREMENTS IN: FEET

		•
SITE: NEW LONDON	_ STATION:	NL13 TYPE: VIBRATOR
DATE SAMPLED:	4/2/84 DA	TE EXAMINED: 4/9/84
CORE LENGTH: 1	.5' SAMPL	E LENGTH: 14.0
INDEX		DESCRIPTION
	-45.1 MLW	
-45.8		Silty sand with shell & stones
-48.5		Marbled gray clay with brown & black silt & shell fragments
		Gray clay with wood chips
-51.3		
-52.0		Marbled gray clay & black silt
-52.5 ———		Gray clay with wood chips
-53.0		Mixed gray clay & black silt
-54.1		Gray clay
-56.8		Gray clay with pockets of black silt & wood chips
-57.3		Watery gray clayey silt & stones
NOT TO SCALE!		Gray clay with pockets of black & brown silt & sand

CORE #: 8 DIAMETER: 2 7/8" MEASUREMENTS IN: FEET

SITE: NEW LONDON	STATION:_1	NL14 TYPE: VIBRATOR
DATE SAMPLED: 4	/2/84 DA	TE EXAMINED: 4/9/84
CORE LENGTH: 1	5 SAMPL	E LENGTH: 13.0
INDEX		DESCRIPTION
-46.3	-45.9 MLW	Watery silty sand with 4-5cm clay balls and 2-3cm stones
		Dry gray clayey silt some shells & 1-2cm stones
-51.6 -51.6		Brwon water & silt with pebbles & shell
-54.1		Dry cohesive clayey silt
'~54 . 4		Gray silty sand & gravel
-55.2		gray clayey silt
- 57 . 7		Brownish gray clayey silt with shell & wood chips
-58.3-		Black coarse silty sand with 3-4cm stones
NOT TO SCALE!		Gray dry clayey silt
~~~		

CORE #: 9 DIAMETER: 2 7/8" MEASUREMENTS IN: FEET:

SITE: NEW LO	SITE: NEW LONDON STATION: NL15 TYPE: VIBRATOR				
DATE SAMPLED: 4/2/84 DATE EXAMINED: 4/9/84					
CORE LENG	ГН: <u>1</u>	5' SAMPL	E LENGTH: 15.0		
IN	INDEX DESCRIPTION				
		-42.2 MLW			
-42.7			Watery gray silt with gravel & shell		
	,	• • •			
			Gray clay with sparse pockets of brown & black silt with some shell		
-53.1	٠				
-53.3			Oily black silt & stones		
			Gray clay with black silt		
-54.1	<del></del>				
			Gray clay		
-56.3					
-56.4	!		Black silt		
20.4					
•			Brown clayey mud		
NOT TO SCALE!	•				
-57.2	·				

CORE #: 11 DIAMETER: 2 7/8" MEASUREMENTS IN: FEET

SITE: NEW LONDON	_ STATION:	NL19 TYPE: VIBRATOR
DATE SAMPLED:	4/3/84 DA	TE EXAMINED: <u>4/10/84</u>
• •		E LENGTH: 12.5
INDEX		DESCRIPTION
	-40.0 MLW	•
-40.2		Coarse sand
-40.7		Black sandy silt
-40.7		
		Gray clay with occasional pockets of black silt
-43.5		
		Gray clay with pockets of black silt & shell material
-48.2	,	
		Gray clay
-48.4		
		Marbled gray clay with brown sandy silt & black oily silt
NOT TO SCALE!	:	
-52.5		

CORE #: _22__ DIAMETER: _2_7/8" MEASUREMENTS IN: FEET _

SITE: NEW LONDON	STATION:	NL20 TYPE: VIBRATOR
. DATE SAMPLED:	4/3/84 DA	TE EXAMINED: 4/10/84
CORE LENGTH: 1	5' SAMPL	E LENGTH: 14.0
INDEX		DESCRIPTION
,	-43.5 MLW	1
-43.8		Silty sand
-44.1		Gray clay
-44.2		Silty sand
-46.1		Gray clay
-46.4		Clayey gray sand
-48.7		Gray clay
-49.1		Mixed black silt & gray clay with shell hash
-51.7		Mixed black & brown dry sandy silt
-52.1		Gray clay
-52.5		Gray sandy clay
-53.0		Black sandy silt
-55.4		Black sandy clay
-55.9		Gray clay
NOT TO SCALE!		Gray clay with pockets of black silt
-57.5	<u> </u>	

CORE #: 17 DIAMETER: 2 7/8" MEASUREMENTS IN: FEET

		·
SITE: NEW LONDON	STATION:	NL21 TYPE: VIBRATOR
DATE SAMPLED:	4/3/84 DA	TE EXAMINED: 4/10/84
CORE LENGTH:	15' SAMPL	E LENGTH: 12.0
INDEX		DESCRIPTION
	-41.0 MLW	
-41.3		Gray silty sand with shell hash
		Gray clay
-41.8		
-42.2		Brown sand & gravel
		Gray clay
-42.7		Black oily silt &
-43.1		3-4cm stones
-43.8		Brown clay
-46.8		Gray clay
-47.4		Dry sandy gray silt & wood chips
-49.6		Brown silt with oily black silt
-49.0		
• •		Dry gray clay with pockets of shell hash
NOT TO SCALE!		
F2 0		·

CORE #: 18 DIAMETER: 2 7/8" MEASUREMENTS IN: FEET

SITE: NEW LONDON	_ STATION:_	NL22 TYPE: VIBRATOR	
		ATE EXAMINED: 4/10/84	
CORE LENGTH:	15' SAMP	PLE LENGTH: 9.0	
INDEX		DESCRIPTION	
	-42.2 MLW	· · · · · · · · · · · · · · · · · · ·	
-43.4		Loose watery gray silt	
•		Large deposit of shell	•
-44.0		Gray clay	
-45.1			
-45.6		Watery brown mud	
		Watery black silt & pebbles	
-46.6			
		Gray clay	
-49.9			
-50.0		Dry black silt	
		Gray clay	
NOT TO SCALE!			
-51.2			

CORE #: 21 DIAMETER: 2 7/8" MEASUREMENTS IN: FEET

SITE:.	NEW LONDO	STATION	NL23	TYPE: VIBRATOR
DATE	SAMPLED:	4/3/84	DATE EXA	MINED: 4/10/84
CORE	LENGTH:_	SAN	MPLE LENG	TH: <u>13.0</u>
	INDEX	•	:	DESCRIPTION
	-45.1	-45.0 ML	Gray S	ilty sand
<u>.</u>	-47.2		Gray c	lay with occasional stones
			Gray s chips	ilty sand & wood
	-47.7 — -48.0 —		Dry bl	ack oily silt
	-48.3			sandy silt oily black silt
	-48.5 —		l l	3-4cm stones
	-49.1		Sandy	dry brown clay
	-51.1		Gray c	lay ( )
·			Gray cof bla	lay with pockets ack silt
	-52.5			
			Dry br	own clay with hash
·	-54.2			
· .	÷			
			Gray o	clay
NOT TO SO	CALE!			·
	-58.0			

CORE #: 24 DIAMETER: 2 7/8" MEASUREMENTS IN: FEET

SITE:	NEW LONDON	_ STATION:_	NL24 TYPE: VIBRATOR
. DATE	SAMPLED:	4/3/84 D	ATE EXAMINED: 4/10/84
CORE	LENGTH:	15' SAMF	PLE LENGTH: 9.0
	INDEX		DESCRIPTION
			<u>v</u>
	44.0		Black silty sand with 3-4cm stones
	-44.8		Black sandy silt
	-45.4		
	-46.6		Gray sandy clay
	-46.8		Brown clay
	-47.0		Black silt
	-47.4		Gray clay
	-4/.4		
	·		
			Gray clay with thin layers of brown clay & black silt
NOT TO SC	CALE!		
	-53.1		

CORE #: 23 DIAMETER: 2 7/8" MEASUREMENTS IN: FEET

SITE: NEW LONDON	_ STATION:	NL25 TYPE: VIBRATOR
		TE EXAMINED: 4/9/84
	·	E LENGTH: 15.0
INDEX		DESCRIPTION
-47.0	-46.1 MLW	Watery black sandy silt with gravel
-48.7		Marbled gray clay with black oily silt
-49.6		Gray sandy silt
-51,2		Marbled gray clay with black silt, shell & gravel
		Brown clayey silt with black silt & wood chips
-54.8		Brown clayey silt
-56.3		Gray clay
-57,9		Marbled brown silt with black silt
<b>-</b> 59 <b>.</b> 0		Gray clay
NOT TO SCALE!		Marbled brown silt & black silt with shell hash

CORE #: 12 7 PAMETER 2 7/8" MEASUREMENTS IN: FEET