

Singleton Laboratories



**The Critical  
Link<sup>3</sup>**

September 29, 1994

TASK ASSIGNMENT No. TV-FH-SL-001-045  
G/C WORK ORDER No. 07-9826-053  
TVA TAO No. GP-493-398629  
KINGSTON FOSSIL PLANT  
DREDGE CELLS/CLOSURE  
SOIL INVESTIGATION

SL Report 015-672-142A

**PREPARED FOR:**  
**Gilbert/Commonwealth, Inc.**  
633 Chestnut Street-Suite 400  
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As Requested By: D. Erali

**SINGLETON LABORATORIES**  
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TVA-00001314

KINGSTON FOSSIL PLANT  
SUMMARY OF LABORATORY TEST DATA  
UNDISTURBED SAMPLES

Boring Sample	Depth ft	Soil Symbol	Grain-Size Analysis				Sp G	Nat. Moist		D <sub>10</sub> mm	Atterberg Limit		Dry Density pcf	Void Ratio	Triaxial Q		Saturated Triaxial R			
			Gravel	Sand	Silt	Clay		%	% Sat		Liquid Limit	Plastic Index			deg	tsf	deg	tsf	deg	tsf
JS-1	1	8.0-10.0 CL	0	18	47	35	2.60	19.3	98.1	--	30	9	107.3	0.511	0.00	0.00	6.1	0.69	22.6	0.40
JS-1	2	22.0-24.0 CL	0	15	58	27	2.53	28.8	100.0	--	27	7	94.2	0.679	12.7	0.00				
JS-2	1	13.0-15.0 CL	4	17	28	51	2.66	64.2	100.0	--	43	20	72.6	1.288						
JS-3	1	15.0-17.0 ML	0	2	70	28	2.32	34.5	93.5	--	NP	NP	77.9	0.855						
JS-3	2	33.0-35.0 CL	6	30	18	46	2.63	22.8	88.4	--	41	18	97.8	0.676						
JS-4	1	8.0-10.0 CL-ML	0	28	48	24	2.59	17.8	82.1	--	23	6	103.6	0.561						
JS-4	2	22.0-24.0 SM	0	63	27	10	2.57	19.9	100.0	.0046	NP	NP	106.8	0.498						
JS-4	3	24.0-26.0 SM	0	72	17	11	2.66	11.5	72.8	.0046	NP	NP	116.9	0.418						
JS-4	4	30.0-32.0 ML	0	50	34	16	2.66	20.6	95.6	--	NP	NP	105.6	0.573						
JS-5	1	13.0-15.0 MH/CH	14	12	22	52	2.69	25.2	100.0	--	58	27	101.0	0.661						
JS-6	1	13.0-15.0 ML	6	37	42	15	2.21	22.3	84.6	--	NP	NP	87.1	0.582						
JS-6	2	15.0-17.0 ML	0	38	50	12	2.22	26.3	86.8	--	NP	NP	82.8	0.673	0.0	1.85	4.4	3.85	9.2	2.91
JS-6	3	30.0-32.0 ML	0	1	75	24	2.30	25.8	86.4	--	NP	NP	84.9	0.687						
JS-7	1	5.0-7.0 ML	0	4	68	28	2.25	42.0	100.0	--	NP	NP	74.4	0.884						
JS-7	2	7.0-9.0 ML	0	2	71	27	2.28	34.5	98.6	--	NP	NP	79.1	0.796						
JS-7	3	9.0-11.0 ML	0	4	96	0	2.31	33.2	81.6	--	NP	NP	81.6	0.767						
JS-7	4	11.0-13.0 ML	0	2	72	26	2.22	35.2	100.0	--	NP	NP	79.9	0.731						
US-8	1	8.0-10.0 ML	7	35	37	21	2.29	14.1	62.9	--	NP	NP	94.4	0.512						
US-8	2	40.0-42.0 ML	0	3	69	28	2.29	21.3	89.8	--	NP	NP	92.6	0.544						
US-8	3	42.0-44.0 ML	0	10	72	18	2.62	24.9	80.1	--	NP	NP	90.0	0.816						
US-8	4	58.0-60.0 ML	0	42	40	18	2.72	13.6	82.9	--	NP	NP	117.4	0.445	11.0	1.16	14.7	1.24	29.8	0.60
US-8	5	71.0-73.0 SM	0	50	36	14	2.64	18.6	100.0	--	NP	NP	112.9	0.460						
US-9	1	20.0-22.0 ML	0	5	73	22	2.39	19.7	61.5	--	NP	NP	84.6	0.766						
US-9	2	32.0-34.0 ML	0	23	59	18	2.37	30.3	100.0	--	NP	NP	90.7	0.633	37.4	0.00	15.9	0.95	29.1	0.49
US-9	3	45.0-47.0 ML	0	6	69	26	2.27	31.2	81.4	--	NP	NP	75.7	0.871						
US-9	4	57.0-59.0 ML	0	5	67	28	2.56	29.7	85.2	--	NP	NP	85.2	0.873	22.3	1.30	35.8	0.32	37.5	0.00
US-9	5	78.0-80.0 SM	0	58	24	18	2.71	17.2	93.4	.0027	NP	NP	112.6	0.500						
US-9	6	85.0-87.0 SM	0	72	20	8	2.67	22.0	96.2	.0082	NP	NP	103.5	0.611						

TASK ASSIGNMENT No. TV-FH-SL001-045  
G/C WORK ORDER No. 07-9822-026 AND TVA TAO No. GP-493-398629  
KINGSTON FOSSIL PLANT - DREDGE CELLS/CLOSURE  
SOIL INVESTIGATION

Singleton Laboratories Report 015-672-142A

APPENDIX B

FIELD LOGS

# SINGLETON LABORATORIES

## SOIL PROFILE LEGEND AND SYMBOLS

Depth 1"=5'	El	SPT (N)	Log*	W	LL	PI	Gr	Description or Test Results
Boring Depth and Scale	Elevation	Blows Per Foot (SS Boring)	Lab Soil Type	Moisture Content	Liquid Limit	Plasticity Index	Soil Group Number	

### Legend

Cl, etc	Soil Type (Unified Classification)
Mat'l	Notation of Soil Not Sampled (SS, PAH, HAH Logs)
(Core) Type	Bedrock (Note core if cored)
	Initial Water Table Reading
	24 h Water Table Reading
	Explanation of US Sampling Limits if Applicable

### Boring Symbols

- SS - 2-in. od Split Spoon Boring
- SPT - Standard Penetration Test  
Blows Per Foot With 2-in.  
Split Spoon
- CPT - Cone Penetration Test
- US - Undisturbed Sample Boring
- PAH - Power Auger Hole
- HAH - Hand Auger Hole
- TP - Test Pit or Trench
- V - Vane Shear
- P - Piezometer

Under Description or Test Results		
Test	Engineering Test Results	
Q, R, <u>R</u> , S	Friction Angle (degrees)	Cohesion (tsf)
UC	Unconfined Compressive Strength (tsf)	Sensitivity Ratio
C	Compression Index	Preconsolidation Pressure (tsf)
k	Coefficient of Permeability (cm/sec)	

Example:

Q 12.0 0.62 R 19.6 0.21 S 34.0 0  
UC 4.0 2.6 C 0.72 2.0 k 5.6

### Soil Test Symbols

- Q - Unconsolidated-Undrained Triaxial  
Compression
- R - Consolidated-Undrained Triaxial  
Compression (Saturated)
- R - Effective Consolidated-Undrained  
Triaxial Compression
- R nat - Consolidated-Undrained Triaxial  
Compression (Natural Moisture)
- S - Consolidated-Drained Direct Shear
- UC - Unconfined Compression
- C - Consolidation
- k - Permeability

## SINGLETON LABORATORIES

FIELD LOG ABBREVIATIONS

<u>Typical Name</u>	<u>Abbreviation</u>	<u>Lithology and Mineralogy</u>	<u>Abbreviation</u>
Sandy gravel	sd gv	Bedrock	br
Silty gravel	si gv	Chert	cht
Clayey gravel	cl gv	Dolomite	dol
Sand	sd	Limestone	ls
Silty sand	si sd	Manganese	mn
Clayey sand	cl sd	Micaceous	mic
Sandy silt	sd si	Pyrite	py
Clayey silt	cl si	Quartz	qtz
Fat silt	ft si	Sandstone	ss
Sandy clay	sd cl	Shale	sh
Silty clay	si cl	Bentonite	bent
Medium clay	md cl	Hematite	hem
Fat clay	ft cl		
Cobble	cob		
Bloulder	bldr	<u>Color</u>	
Riprap	rr		
Topsoil	ts	Black	blk
		Blue	blu
		Brown	brn
<u>Name Modifiers</u>		Cream	crm
Clean	cln	Dark	dk
Coarse	crs	Gray	gy
Dirty	dtv	Green	grn
Fine	fn	Light	lt
Organic	org	Maroon	mrn
Poorly graded	pgd	Mottled	mott
Well graded	wgd	Olive	olv
Degraded	degd	Pink	pk
		Purple	pur
<u>Gravel Shape</u>		Red	r
Angular	ang	Rust	rst
Platy	plty	Tan	tn
Round/Rounded	rd	White	wht
Subangular	sb ang	Yellow	yel
Subrounded	sb rd		

<u>Structure</u>	<u>Abbreviation</u>	<u>Consistency</u>	<u>Abbreviation</u>
Blocky	blky	Dense	dns
Fissured	fis	Firm	f
Homogeneous	homo	Hard	hd
Laminated	lam	Loose	lse
Saprolitic	sapr	Soft	s
Shaly	shly	Stiff	stf
Slickensided	slsid	Very Stiff	v stf
Stratified	strat		

<u>Origin</u>		<u>Moisture</u>	
Alluvial	all	Dry	d
Colluvial	coll	Moist	mst
Loess	lss	V Moist	v mst
Residual	resd	Wet	w

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### General Modifiers

Alternate/Alternating	alt	Layers	lyrs
Angle	ˆ	Low	l
Augering	augg	Material	mtl
Bottom Ash	ba	Medium	md
Coal	col	Mud	mud
Contaminated	cont	Original	orig
Dip	dp	Partings	prtgs
Disturbed	dstrb	Plastic	plste
Debris	dbr	River	rvr
Discontinued	disc	Roots	rts
Drive	dr	Rough	rou
Dust	dst	Slow	sl
Elevation	el	Small	sm
Feet	ft	Spoil	sp
Fill	fl	Terraced	ter
Fiber	fbr	Thick	thk
Fly Ash	fa	Thin	thn
High/highly	h	Trace	tr
Horizontal	hor	Variable	var
Hydraulic	hyd	Vegetation	veg
Inch	in	Vertical	vert
Inclusion	inc	Weathered	wth
Incomplete Recovery	IR	With	w/
Interface	infa	Wood	wd

# SINGLETON LABORATORIES

SOIL PROFILE: UNDISTURBED

SHEET 1 OF 1

PROJECT: KINGSTON FP  
 BORING: US-1 STATION:  
 DATE DRILLED: 8/8/94

FEATURE: DREDGE CELLS  
 RANGE:  
 PREPARED BY: mhd

SURFACE EL: 752.0  
 CHECKED BY: TAL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
5	750							
10	745							TN SI CL. MST. F
15	740							
20	735							
25	730							LT BRN SI CL MIX w/TS. S. MST
30	725							
35	720							NO RECOVERY
35								DISCONTINUED AT 34.0'
1'-5"			*					LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: UNDISTURBED

SHEET 1 OF 1

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: US-2      STATION:

RANGE:

SURFACE EL: 764.0

DATE DRILLED: 8/9/94

PREPARED BY: mhd

CHECKED BY: TAC

DEPTH ft.	EL	SPT (N)	* LOG	N	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
5	760							
10	755							
15	750							R-BRN SI CL, MST, H
								----- DISCONTINUED AT 15.0'
20	745							
25	740							
30	735							
35	730							
1' -5'								* LAB CLASSIF.



# SINGLETON LABORATORIES

SOIL PROFILE: UNDISTURBED

SHEET 1 OF 2

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: US-3      STATION:

RANGE:

SURFACE EL: 773.0

DATE DRILLED: 8/11/94

PREPARED BY: mhd

CHECKED BY: TAL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
5	770							
10	765							
15	760							GY CL SI (FA), MST, S
20	755							
25	750							
30	745							
35	740							R SI CL, MST, H
1'-5'								* LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: UNDISTURBED

SHEET 2 OF 2

PROJECT: KINGSTON FP  
 BORING: US-3 STATION:  
 DATE DRILLED: 8/11/94

FEATURE: DREDGE CELLS  
 RANGE:  
 PREPARED BY: mhd

SURFACE EL: 773.0  
 CHECKED BY: JAL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
								NO RECOVERY
	735							NO RECOVERY
40								DISCONTINUED AT 39.0' WATER LEVEL, 1-HR = 25'
	730							
45								
	725							
50								
	720							
55								
	715							
60								
	710							
65								
	705							
70								
1' -5'								* LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: UNDISTURBED

SHEET 1 OF 1

PROJECT: KINGSTON FP  
 BORING: US-4      STATION:  
 DATE DRILLED: 8/12/94

FEATURE: DREDGE CELLS  
 RANGE:  
 PREPARED BY: mhd

SURFACE EL: 752.0  
 CHECKED BY: TAL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
	750							
5								
	745							
10								BRN SI CL, MST, F
	740							
15								
	735							
20								
	730							TN SI SD, MST, S
25								TN SI SD, MST, S
	725							
30								TN & GY SI SD, MST, S
	720							DISCONTINUED AT 32.0'
35								
1'-5'								* LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: UNDISTURBED

SHEET 1 OF 1

PROJECT: KINGSTON FP  
 BORING: US-5 STATION:  
 DATE DRILLED: 8/11/94

FEATURE: DREDGE CELLS  
 RANGE:  
 PREPARED BY: mhd

SURFACE EL: 764.0  
 CHECKED BY: *7AL*

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
5	760							
10	755							
15	750							R SI CL MIX w/10% CHT, MST, H
								----- DISCONTINUED AT 15.0'
20	745							
25	740							
30	735							
35	730							
1'-5'								* LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: UNDISTURBED

SHEET 1 OF 1

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: US-6 STATION:

RANGE:

SURFACE EL: 773.0

DATE DRILLED: 8/15/94

PREPARED BY: mhd

CHECKED BY: *TAL*

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
5	770							
10	765							
15	760							GY SI SD (FA)
15								GY SI SD (FA)
20	755							
25	750							
30	745							
30								GY SI SD (FA)
35	740							DISCONTINUED AT 32.0'
1' - 5'			*					LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: UNDISTURBED

SHEET 1 OF 1

PROJECT: KINGSTON FP  
 BORING: US-7 STATION:  
 DATE DRILLED: 8/19/94

FEATURE: DREDGE CELLS  
 RANGE:  
 PREPARED BY: mhd

SURFACE EL: 769.9  
 CHECKED BY: *TAL*

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
5	765							GY SI SD (FA)
								GY SI SD (FA)
10	760							GY SI SD (FA)
								GY SI SD (FA)
15	755							DISCONTINUED AT 13.0'
20	750							
25	745							
30	740							
35	735							
1' = 5'		* LAB CLASSIF.						

# SINGLETON LABORATORIES

SOIL PROFILE: UNDISTURBED

SHEET 1 OF 3

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: US-8      STATION:

RANGE:

SURFACE EL: 782.0

DATE DRILLED: 8/16/94

PREPARED BY: mhd

CHECKED BY: TA ✓

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
	780							
5								
	775							
10								6Y SI SD (FA)
	770							
15								
	765							
20								
	760							
25								NO RECOVERY
	755							
30								NO RECOVERY
	750							
35								
1' = 5'			* LAB CLASSIF.					

# SINGLETON LABORATORIES

SOIL PROFILE: UNDISTURBED

SHEET 2 OF 3

PROJECT: KINGSTON FP  
 BORING: US-8 STATION:  
 DATE DRILLED: 8/16/94

FEATURE: DREDGE CELLS  
 RANGE:  
 PREPARED BY: mhd

SURFACE EL: 782.0  
 CHECKED BY: *TA*

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
								NO RECOVERY
	745							
40								GY SI SD (FA)
	740							GY SI SD (FA)
45								
	735							
50								
	730							
55								
	725							
60								GY & TN SI CL, MST, F
	720							
65								
	715							
70								
1'-5'								* LAB CLASSIF.



# SINGLETON LABORATORIES

SOIL PROFILE: UNDISTURBED

SHEET 3 OF 3

PROJECT: KINGSTON FP  
 BORING: US-8 STATION:  
 DATE DRILLED: 8/16/94

FEATURE: DREDGE CELLS  
 RANGE:  
 PREPARED BY: mhd

SURFACE EL: 782.0  
 CHECKED BY: JA

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
	710							GY SI CL. MST. S
								----- DISCONTINUED AT 73.0'
75								
	705							
80								
	700							
85								
	695							
90								
	690							
95								
	685							
100								
	680							
105								
1'-5'								* LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: UNDISTURBED

SHEET 1 OF 3

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: US-9 STATION:

RANGE:

SURFACE EL: 795.0

DATE DRILLED: 8/15/94

PREPARED BY: mhd

CHECKED BY: TAC

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
	795							
5	790							
10	785							
15	780							
20	775							6Y SI SD (FA)
25	770							
30	765							
35	760							6Y SI SD (FA)
1'-5'								* LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: UNDISTURBED

SHEET 2 OF 3

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: US-9      STATION:

RANGE:

SURFACE EL: 795.0

DATE DRILLED: 8/15/94

PREPARED BY: mhd

CHECKED BY: TA

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
	760							
40	755							
45	750							6Y SI SD (FA)
50	745							
55	740							
60	735							6Y SI SD (FA)
65	730							
70	725							
1'-5'								* LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: UNDISTURBED

SHEET 3 OF 3

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: US-9 STATION:

RANGE:

SURFACE EL: 795.0

DATE DRILLED: 8/15/94

PREPARED BY: mhd

CHECKED BY: *TAL*

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	DESCRIPTION (ENGINEERING TEST RESULTS)
	725							
75	720							
80	715							GY SI CL, V MST, S
85	710							GY SI SD, V MST, S NO RECOVERY; REFUSAL
90	705							DISCONTINUED AT 90.0'
95	700							
100	695							
105	690							
1'-5'								* LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 1 OF 2

PROJECT: KINGSTON FP  
 BORING: SS-1 STATION:  
 DATE DRILLED: 7/28/94

FEATURE: DREDGE CELLS  
 RANGE:  
 PREPARED BY: mhd

SURFACE EL: 752.0  
 CHECKED BY: JA

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	750							
5			CL	12.4	31	12	5	TN & GY SI CL, D
	745							
10			CL	19.2	26	8	9	LT BRN SI CL w/TR GY TS, MST
	740							
15			CL	17.0	26	8	6	BRN SI CL, D
	735							
20			CL	27.1	26	8	9	BRN & GY SI CL, V MST
	730							
25			CL	24.1	26	8	9	BRN & GY SI CL, V MST
	725							
30			SM	19.5	NP	NP	10	GY SI SC TR GV, MST (FA)
	720							
35								

1' = 5'

\* LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 2 OF 2

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: SS-1 STATION:

RANGE:

SURFACE EL: 752.0

DATE DRILLED: 7/28/94

PREPARED BY: mhd

CHECKED BY: TAl

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
			SM	27.6	NP	NP	10	6Y SI SD, V MST (FA)
40	715							REFUSAL
								GROUND WATER LEVEL = 8'9"
45	710							
	705							
50	700							
55	695							
60	690							
65	685							
70								
1' = 5'		* LAB CLASSIF.						

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 1 OF 2

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: SS-2      STATION:

RANGE:

SURFACE EL: 764.0

DATE DRILLED: 7/27/94

PREPARED BY: mhd

CHECKED BY: TAL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
5	760	14	MH- CH	21.9	59	28	2	BRN SI CL w/GV, TR TS, D
10	755	10	MH- CH	22.8	59	28	2	R-BRN SI CL, TR GV, D
15	750	8	MH- CH	28.0	59	28	2	R-BRN SI CL, TR GV, MST
20	745	13	SM	25.6	NP	NP	10	GY SI SD w/TR GV (FA), V MST
25	740	-	SM	19.0	NP	NP	10	GY SI SD w/GV (FA), N
30	735	-	SM	28.1	NP	NP	3	BRN SD WI CL (FA), W
35	730	-						

1" = 5'      \* LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

PROJECT: KINGSTON FP  
 BORING: SS-2 STATION:  
 DATE DRILLED: 7/27/94

FEATURE: DREDGE CELLS  
 RANGE:  
 PREPARED BY: mhd

SHEET 2 OF 2  
 SURFACE EL: 764.0  
 CHECKED BY: TAL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
			CL	33.6	26	8	9	BRN SI CL w/GY SI (FA), V MST
40	725							
		3	CL	20.1	26	8	9	ORNG & GY SI CL, V MST
45	720							
		28	ML	14.0	NP	NP	8	GY SD mix w/PKTS GY CL, MST
50	715							
		50+	ML	15.8	NP	NP	8	GY SD mix w/PKTS GY CL, MST
55	710							REFUSAL GROUND WATER LEVEL = 5'8"
60	705							
65	700							
70	695							

1'-5'

\* LAB CLASSIF.



# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 1 OF 2

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: SS-3 STATION:

RANGE:

SURFACE EL: 773.0

DATE DRILLED: 7/28/94

PREPARED BY: mhd

CHECKED BY: TAL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	770							
5		25	ML	23.3	NP	NP	12	GY CL SI (FA), MST
	765							
10		5	SM	23.0	NP	NP	10	GY SD CL, TR GV (FA), V MST
	760							
15		4	SM	28.6	NP	NP	10	GY SD CL, TR GV (FA), V MST
	755							
20		1	SM	28.6	NP	NP	10	GY SD SI CL, TR GV (FA), W
	750							
25		2	SM	27.1	NP	NP	10	GY SD SI CL, TR GV (FA), W
	745							
30		1	SM	27.0	NP	NP	10	GY SD SI CL, TR GV (FA), W
	740							
35								
1'-5'			* LAB CLASSIF.					

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 2 OF 2

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: SS-3      STATION:

RANGE:

SURFACE EL: 773.0

DATE DRILLED: 7/28/94

PREPARED BY: mhd

CHECKED BY: JAL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
		2	ML	28.8	NP	NP	12	GY SD SI CL, TR GV (FA), W
	735							
40		2	SM	22.0	NP	NP	10	GY SD SI CL, TR GV (FA), W
	730							
45		-	ML	33.9	NP	NP	12	GY CL SI, TR GV (FA), W
	725							
50		-	ML	15.7	NP	NP	8	GY CL SI w/GV (FA), V MST
	720							
55		50+	ML	5.8	NP	NP	12	GY CL SI, TR GV
	715							
60								REFUSAL GROUND WATER LEVEL = 9'8"
	710							
65								
	705							
70								
1' = 5'		* LAB CLASSIF.						

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 1 OF 2

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: SS-4      STATION:

RANGE:

SURFACE EL: 752.0

DATE DRILLED: 7/26/94

PREPARED BY: mhd

CHECKED BY: TA

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	750							
5		10	CL	14.2	26	8	6	LT BRN SI CL w/TS, D
	745							
10		3	CL- ML	23.8	26	4	1	BRN & GY SI CL w/TS, MST
	740							
15		8	CL	22.3	31	12	5	TN & GY SI CL (FA), V MST
	735							
20		4	SM	20.9	NP	NP	3	TN SI SD, MST
	730							
25		-	SM	34.8	NP	NP	3	TN SI SD, MST
	725							
30		7	SM	21.4	NP	NP	3	TN SI SD, MST
	720							
35								

1" = 5'

\* LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 2 OF 2

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: SS-4 STATION:

RANGE:

SURFACE EL: 752.0

DATE DRILLED: 7/26/94

PREPARED BY: mhd

CHECKED BY: TAL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	715	36	SM	20.4	NP	NP	3	TN SI SD, MST
40								REFUSAL
	710							GROUND WATER LEVEL = 9'0"
45								
	705							
50								
	700							
55								
	695							
60								
	690							
65								
	685							
70								
1' = 5'		* LAB CLASSIF.						

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 1 OF 2

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: SS-5      STATION:

RANGE:

SURFACE EL: 764.0

DATE DRILLED: 7/27/94

PREPARED BY: mhd

CHECKED BY: JAL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
5	760	18	MH- CH	19.6	59	28	2	R-BRN SI CL w/TR CTH, D
10	755	14	MH- CH	24.2	59	28	2	BRN SI CL w/GV, D
15	750	54	CL- ML	23.5	26	4	1	BRN SI CL w/PKTS GY CL SI, TR CHT, MST
20	745	20	SM	24.3	NP	NP	10	GY SI SD, TR GV (FA), MST
25	740	3	CL	20.9	26	8	6	LT BRN SD SI CL, TR GV, V MST
30	735	14	CL	23.6	31	12	5	TN & GY SI CL, V MST
35	730							
1'-5'		* LAB CLASSIF.						

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 2 OF 2

PROJECT: KINGSTON FP  
 BORING: SS-5 STATION:  
 DATE DRILLED: 7/27/94

FEATURE: DREDGE CELLS  
 RANGE:  
 PREPARED BY: mhd

SURFACE EL: 764.0  
 CHECKED BY: JAL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
		16	ML	21.5	NP	NP	7	BRN SI CL w/GY FA, V MST
40	725							
		2	SM	24.2	NP	NP	3	ORNG CL SD, V MST
45	720							
		2	CL	21.9	26	8	9	TN CL SI w/PKTS GY FA, V MST
50	715							
		30	SC/ SM	10.8	NP	NP	4	LT BRN SI SD w/GV, V MST
55	710							
		50+	ML	13.9	NP	NP	12	BRN & GY CL SI, FA, MST
60	705							REFUSAL
								GROUND WATER LEVEL = 20'
65	700							
70	695							

1''-5'

\*  
LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 1 OF 2

PROJECT: KINGSTON FP  
BORING: SS-6 STATION:  
DATE DRILLED: 8/1/94

FEATURE: DREDGE CELLS  
RANGE:  
PREPARED BY: mhd

SURFACE EL: 773.0  
CHECKED BY: JAL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	770							
5		24	ML	25.2	NP	NP	12	GY SI (FA), MST
	765							
10		5	SM	19.7	NP	NP	10	GY SI (FA), MST
	760							
15		2	SM	28.8	NP	NP	11	GY SI SD (FA), MST
	755							
20		-	ML	25.8	NP	NP	12	GY SI (FA), MST
	750							
25		3	ML	23.3	NP	NP	8	BRN SI CL w/GY FA, TR GV, V MST
	745							
30		1	ML	32.7	NP	NP	12	GY SI (FA), W
	740							
35								
1' -5'			* LAB CLASSIF.					

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 2 OF 2

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: SS-6 STATION:

RANGE:

SURFACE EL: 773.0

DATE DRILLED: 8/1/94

PREPARED BY: mhd

CHECKED BY: TAL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
		9	CL	19.6	26	8	9	BRN CL SI mix w/FA
	735							
40		12	SM	19.4	NP	NP	3	BRN SI SD, V MST
	730							
45		1	SM	29.3	NP	NP	3	BRN SI SD, V MST
	725							
50		3	SM	21.8	NP	NP	3	BRN SD CL, V MST
	720							
55		6	ML	22.3	NP	NP	8	GY SI SD w/FA, MST
	715							
60		50+	ML	9.9	NP	NP	12	GY SI, FA, MST
	710							
65								REFUSAL GROUND WATER LEVEL = 16' 7"
	705							
70								
1'-5'			* LAB CLASSIF.					



# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 1 OF 3

PROJECT: KINGSTON FP  
 BORING: SS-8 STATION:  
 DATE DRILLED: 8/2/94

FEATURE: DREDGE CELLS  
 RANGE:  
 PREPARED BY: mhd

SURFACE EL: 782.0  
 CHECKED BY: *TA*

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	780							
5		50+	SM	17.6	NP	NP	10	GY SI (FA), TR GV, D
	775							
10		50+	SM	18.4	NP	NP	10	GY SI (FA), TR GV, D
	770							
15		50+	SM	21.9	NP	NP	10	GY SI (FA), TR GV, D
	765							
20		8	SM	43.9	NP	NP	11	GY SI SD (FA), MST
	760							
25		15	SM	17.9	NP	NP	10	GY SI SD w/GV (FA), MST
	755							
30		-	ML	31.7	NP	NP	12	GY SI (FA), W
	750							
35								
1' -5'								* LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 2 OF 3

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: SS-8

STATION:

RANGE:

SURFACE EL: 782.0

DATE DRILLED: 8/2/94

PREPARED BY: mhd

CHECKED BY: TAL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	745	-	ML	24.4	NP	NP	12	GY SI (FA), MST
40	740	3	ML	23.8	NP	NP	12	GY SI (FA), MST
45	735	9	ML	31.2	NP	NP	12	GY SI (FA), MST
50	730	4	ML	22.3	NP	NP	8	GY CL SI w/LUMPS TN SI CL, MST
55	725	13	ML	18.2	NP	NP	7	MOTT BRN/TN/GY SI CL, MST
60	720	13	ML	18.6	NP	NP	7	MOTT BRN/TN/GY SI CL, MST
65	715	4	SC/ SM	27.7	NP	NP	4	TN SI SD, W
70								

1'-5'      \* LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 3 OF 3

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: SS-8 STATION:

RANGE:

SURFACE EL: 782.0

DATE DRILLED: 8/2/94

PREPARED BY: mhd

CHECKED BY: TAC

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	710	5	SM	24.9	NP	NP	10	GY SD SI (FA), W
75								
	705	7	SC/ SM	22.7	NP	NP	4	TN SI SD, V MST
80								REFUSAL
	700							GROUND WATER LEVEL = 11' 3"
85								
	695							
90								
	690							
95								
	685							
100								
	680							
105								
1'-5'		* LAB CLASSIF.						

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 1 OF 3

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: SS-9      STATION:

RANGE:

SURFACE EL: 795.0

DATE DRILLED: 8/2/94

PREPARED BY: mhd

CHECKED BY: TA<sup>✓</sup>

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	795							
5	790	20	ML	17.8	NP	NP	12	GY SI (FA), MST
10	785	50+	ML	19.5	NP	NP	12	GY SI (FA), MST
15	780	44	ML	20.1	NP	NP	12	GY SI (FA), MST
20	775	46	ML	18.3	NP	NP	12	GY SI (FA), MST
25	770	6	ML	30.2	NP	NP	12	GY SI (FA), MST
30	765	5	ML	35.2	NP	NP	12	GY SI (FA), W
35	760							

1''=5'      \*  
LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 2 OF 3

PROJECT: KINGSTON FP  
 BORING: SS-9 STATION:  
 DATE DRILLED: 8/2/94

FEATURE: DREDGE CELLS  
 RANGE:  
 PREPARED BY: mhd

SURFACE EL: 795.0  
 CHECKED BY: TAL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	760	2	ML	17.3	NP	NP	12	GY SI (FA), W
40	755	1	ML	31.0	NP	NP	12	GY SI (FA), W
45	750	-	ML	23.0	NP	NP	12	GY SI (FA), D
50	745	-	ML	31.7	NP	NP	12	GY SI (FA), TR GV, W
55	740	5	ML	30.0	NP	NP	12	GY SI (FA), TR GV, W
60	735	6	ML	32.6	NP	NP	12	GY SI (FA), TR GV, W
65	730	-	ML	26.9	NP	NP	8	BRN SI CL w/GY SI (FA), MST
70	725							

1' = 5'      \* LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 3 OF 3

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: SS-9 STATION:

RANGE:

SURFACE EL: 795.0

DATE DRILLED: 8/2/94

PREPARED BY: mhd

CHECKED BY: TAC

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	725	13	CL	19.2	26	8	9	BRN, TN & GY SI CL, TR CL, MST
75	720	19	CL	19.5	26	8	6	DRNG-BRN SI CL, MST
80	715	4	SM	20.5	NP	NP	10	GY SD SI, W
85	710	19	SC/ SM	23.1	NP	NP	4	TN SI SD
90	705	B	SC/ SM	23.1	NP	NP	4	GY SI SD
95	700							REFUSAL GROUND WATER LEVEL = 29'
100	695							
105	690							

1'-5'      \*  
LAB CLASSIF.

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 1 OF 3

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: SS-10 STATION:

RANGE:

SURFACE EL: 797.5

DATE DRILLED: 8/8/94

PREPARED BY: mhd

CHECKED BY: TA

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
	795							
5		50+	ML	17.3	NP	NP	12	GY SI (FA), MST
	790							
10		26	ML	24.7	NP	NP	12	GY SI (FA), MST
	785							
15		25	ML	15.0	NP	NP	12	GY SD SI, TR GY, MST
	780							
20		5	ML	22.1	NP	NP	12	GY SI (FA), MST
	775							
25		4	ML	27.4	NP	NP	12	GY SI (FA), MST
	770							
30		14	ML	29.1	NP	NP	12	GY SI (FA), MST
	765							
35								
1'-5'			* LAB CLASSIF.					

# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 2 OF 3

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: SS-10 STATION:

RANGE:

SURFACE EL: 797.5

DATE DRILLED: 8/8/94

PREPARED BY: mhd

CHECKED BY: TA

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
		18	SM	31.2	NP	NP	11	GY SD SI (FA) w/GV, W
	760							
40		9	ML	31.4	NP	NP	12	GY SI (FA), V MST
	755							
45		-	ML	27.0	NP	NP	12	GY SD SI w/GV (FA), V MST
	750							
50		-	ML	27.2	NP	NP	12	GY SD SI w/GV (FA), V MST
	745							
55		6	SM	30.7	NP	NP	11	GY PGD SI SD (FA), V MST
	740							
60		9	SM	16.4	NP	NP	11	GY PGD SI SD (FA), V MST
	735							
65		25	SM	19.4	NP	NP	11	CRS PGD SI SD w/GV (FA)
	730							
70								

1" = 5'

\* LAB CLASSIF.



# SINGLETON LABORATORIES

SOIL PROFILE: SPLIT-SPOON

SHEET 3 OF 3

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: SS-10 STATION:

RANGE:

SURFACE EL: 797.5

DATE DRILLED: 8/8/94

PREPARED BY: mhd

CHECKED BY: 7AL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
		39	ML	19.0	NP	NP	8	BRN SI CL w/PKTS GY SI (FA), V MST
725								
75		17	CL	19.2	26	8	9	BRN & GY SI CL, V MST
720								
80		18	CL	16.9	26	8	6	ORNG-BRN SD SI CL, MST
715								
85		16	ML	18.9	NP	NP	8	GY SI SD, MST
710								
90		50+	ML	3.7	NP	NP	8	GY SI SD w/GV
705								
95								REFUSAL GROUND WATER LEVEL -
700								
100								
	695							
105								

1' -5'

\*  
LAB CLASSIF.

# SINGLETON LABORATORIES

## SOIL PROFILE:

SHEET 1 OF 1

PROJECT: KINGSTON FP  
 BORING: A-1      STATION:  
 DATE DRILLED: 9/17/94

FEATURE: DREDGE CELLS  
 RANGE:  
 PREPARED BY: mhd

SURFACE EL: 768.9  
 CHECKED BY: TAL

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
5	765		M	38.9	NP	NP	1	GY SI SD (FA)
								DISCONTINUED AT 5'
10	760							
15	755							
20	750							
25	745							
30	740							
35	735							
1'-5'		* LAB CLASSIF.						

# SINGLETON LABORATORIES

## SOIL PROFILE:

SHEET 1 OF 1

PROJECT: KINGSTON FP  
 BORING: A-2      STATION:  
 DATE DRILLED: 9/17/94

FEATURE: DREDGE CELLS  
 RANGE:  
 PREPARED BY: mhd

SURFACE EL: 768.9  
 CHECKED BY: *TA*

DEPTH ft.	EL	SPT (N)	* LOG	N	LL	PI	GR	FIELD DESCRIPTION
5	765		ML	34.5	NP	NP	1	GY SI SD, FA
								DISCONTINUED AT 5'
10	760							
15	755							
20	750							
25	745							
30	740							
35	735							
1' = 5'		* LAB CLASSIF.						

# SINGLETON LABORATORIES

## SOIL PROFILE:

SHEET 1 OF 1

PROJECT: KINGSTON FP  
 BORING: A-3      STATION:  
 DATE DRILLED: 9/17/94

FEATURE: DREDGE CELLS  
 RANGE:  
 PREPARED BY: mhd

SURFACE EL: 768.9  
 CHECKED BY: *TAL*

DEPTH ft.	EL	SPT (N)	* LOG	N	LL	PI	GR	FIELD DESCRIPTION
5	765		ML	39.9	NP	NP	2	6Y SI SD, FA
								DISCONTINUED AT 5'
10	760							
15	755							
20	750							
25	745							
30	740							
35	735							
1' - 5'		* LAB CLASSIF.						

# SINGLETON LABORATORIES

## SOIL PROFILE:

SHEET 1 OF 1

PROJECT: KINGSTON FP

FEATURE: DREDGE CELLS

BORING: A-4      STATION:

RANGE:

SURFACE EL: 768.9

DATE DRILLED: 9/17/94

PREPARED BY: mhd

CHECKED BY: TA ✓

DEPTH ft.	EL	SPT (N)	* LOG	W	LL	PI	GR	FIELD DESCRIPTION
5	765		ML	37.1	NP	NP	2	6Y SI SD, FA
								DISCONTINUED AT 5'
10	760							
15	755							
20	750							
25	745							
30	740							
35	735							
1'-5'		* LAB CLASSIF.						