APPENDIX A: 2009 CORING PHOTOGRAPHS AND FIELD LOGS

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New Bedford Harbor
12/16/09
ME07
1.52ft

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: ME07
Core Sample ID: S-09D-C0008
Date: 12/14/09
Time On Station: 15:04
Latitude N: 41°40.650'
Longitude W: 70 54.984'
GPS Accuracy: 10 ft.
Predicted Tide (ft): —
Time of Collection: 15:07
Collection Mechanism: push core
Logged by: KGM
Time Depart Station: 15:13

Water Depth (A): 4.8
Length of Push Core Assembly (B): 12.0
Water Surface to Top of Handle (C): 5.5
Length of Core (from bottom) (D): 1.52
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F): −1.7 (sheet pile #89 Area M) @15:15

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

KGM 12/14/09

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) ~~2.8~~ 0.7
(H) Elev. of the bottom of the core (NGVD): G - (B-C) 12/2/09 ~~6.8~~ -5.8
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) 12.0 − 5.5 = 0.5 KGM ~~-5.88~~ -4.88
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D 1.52 − 0.6 = 0.92 ~~-5.28~~ -4.28
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A −4.1

(Note if $\neq I_2$ within ± 1.0 feet, discard and resample)

Sediment description, core split on 12/14/2009 @15:15

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.5	OL	Silt w/ organics and fine sand	Black (2.5Y 2.5/1)	Loose		Slight petrol	
0.6	OL	Silt w/ organics and fine sand	Black - V. dk gray (2.5Y 2.5/1 E 2.5Y 3/1)	Loose		Slight petrol - transition layer	
1.1	ML/CL	Silty clay - clayey silt w/ occasional organic/woody debris + shell frag.		Moderately consolidated		none	
1.52	ML/CL	Silty clay or interlayers of clayey silt		well consolidated, firm.		none	

Comments:

Two samples — Time
0 − 0.5 — 12/14 15:30
0.6 − 1.1 — 12/14 15:30

New Bedford Harbor
12/16/09
MD10
0.95ft

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring		Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA		Vessel:
Client: USACE-NAE		Chief Scientist:

Station ID:	NB10	Water Depth (A):	4.55
Core Sample ID:	S-090-C0009		
Date:	12/14/09	Length of Push Core Assembly (B):	11.8
Time On Station:	15:17		
Latitude N:	41° 40.637'	Water Surface to Top of Handle (C):	6.0
Longitude W:	70° 55' 54.990' KGM 12/14/09		
GPS Accuracy:	10ft	Length of Core (from bottom) (D):	0.95
Predicted Tide (ft):	— KGM wrong time 12/14/09		
Time of Collection:	push core 15:22	Surveyed Elevation (NGVD 29) (E):	
Collection Mechanism:	push core		
Logged by:	KGM	Water Surface from Surveyed Elevation (F):	-1.6 (sheetpik #89 Adam @ 15:25)
Time Depart Station:	15:25		

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation KGM 12/14/09

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	~~2.9~~ 0.8
(H) Elev. of the bottom of the core (NGVD): G - (B-C) 11.8 - 6.0 = 5.8	-5.0
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) 0.95 - 0.1 = 0.85	-4.15
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-4.05
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-3.75

(Note if $\neq I_2$ within ± 1.0 feet, discard and resample)

Internal description, core split @ 1540

Elevation (NGVD) (i.e. Biomass + H)	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
	ML	Sandy silt w/ some gravel	V. dk grey (2.5Y 3/1)	Loose-moderately consolidated	gravel ~1"	Slight petrol	
0.1							
	ML	Silt	V. dk grey (2.5Y 3/1)	moderately consolidated		NA	
0.2							
	ML/CL	Clayey silt - silty clay		well consolidated		NA	
			V. dark grey (2.5Y 3/1)				
0.95							

Comments:

One sample collected. Time 0-0.5 12/14/09 @ 1545

New Bedford Harbor
12/16/09
MF12
1.25 ft

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring	Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA	Vessel:
Client: USACE-NAE	Chief Scientist:

Station ID:	MF12	Water Depth (A):	5.4
Core Sample ID:	S-09D-C010		
Date:	12/14/09	Length of Push Core Assembly (B):	11.7
Time On Station:	15:39		
Latitude N:	41°40.629	Water Surface to Top of Handle (C):	4.75
Longitude W:	70°54.979		
GPS Accuracy:	10 ft.	Length of Core (from bottom) (D):	1.25
Predicted Tide (ft):	—		
Time of Collection:	15:42	Surveyed Elevation (NGVD 29) (E):	
Collection Mechanism:	Push Core		
Logged by:	KGM	Water Surface from Surveyed Elevation (F):	-1.2 (Sheet pile 89 Area M) @ 15:43
Time Depart Station:	15:45		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation KGM 12/14/09

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	~~3.3~~ 1.2
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-5.75
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 11.7 - 4.75 = 6.95	-4.5
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D 1.25	-4.5
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-4.2

(Note if ≠ I_2 within + 1.0 feet, discard and resample)

Internal description, core split @ 16:00 on 12/14/09

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.4		Organic sandy silt w/shell frags	Black (2.5Y 2.5/1)	Loose	coarse sand	NA	- NOT an "OL" classification
0.8		~~Silt-sand~~ sandy silt w/gravel	BRW 12/14 Black - v dk gray (2.5Y 2.5/1 → 2.5Y 7/1)	moderately consolidated	-2ϕ gravel	NA	
1.25	ML/CL	clayey silt - silty clay	v. dk grey (2.5Y 3/1)	well consolidated, firm		NA	

Comments:

One sample: 0 - 0.5

Time: 12/14; 1615

New Bedford Harbor
12/16/09
M113
1.45 ft

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring	Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA	Vessel:
Client: USACE-NAE	Chief Scientist:

Station ID:	MI13	Water Depth (A):	4.3
Core Sample ID:	S-Ø9D-CØ11	Length of Push Core Assembly (B):	12.3
Date:	12/14/09	Water Surface to Top of Handle (C):	6.45
Time On Station:	15:49	Length of Core (from bottom) (D):	1.45
Latitude N:	41° 40.625'	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70° 54.9621	Water Surface from Surveyed Elevation (F):	-1.Ø (sheet pile #89 Area M)
GPS Accuracy:	10ft.		
Predicted Tide (ft):	—		
Time of Collection:	15:52		
Collection Mechanism:	push core		
Logged by:	KGM		
Time Depart Station:	15:55		

All Measurements are + 0.1 feet @15:54

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	KGM 12/14/09 ~~3.4~~ 1.4
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-4.45
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 12.3-6.45=5.85 ~~1.45-0.1=1.35~~	KGM 12/21/09 ~~3.1~~ -3.Ø
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-3.Ø
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-2.9

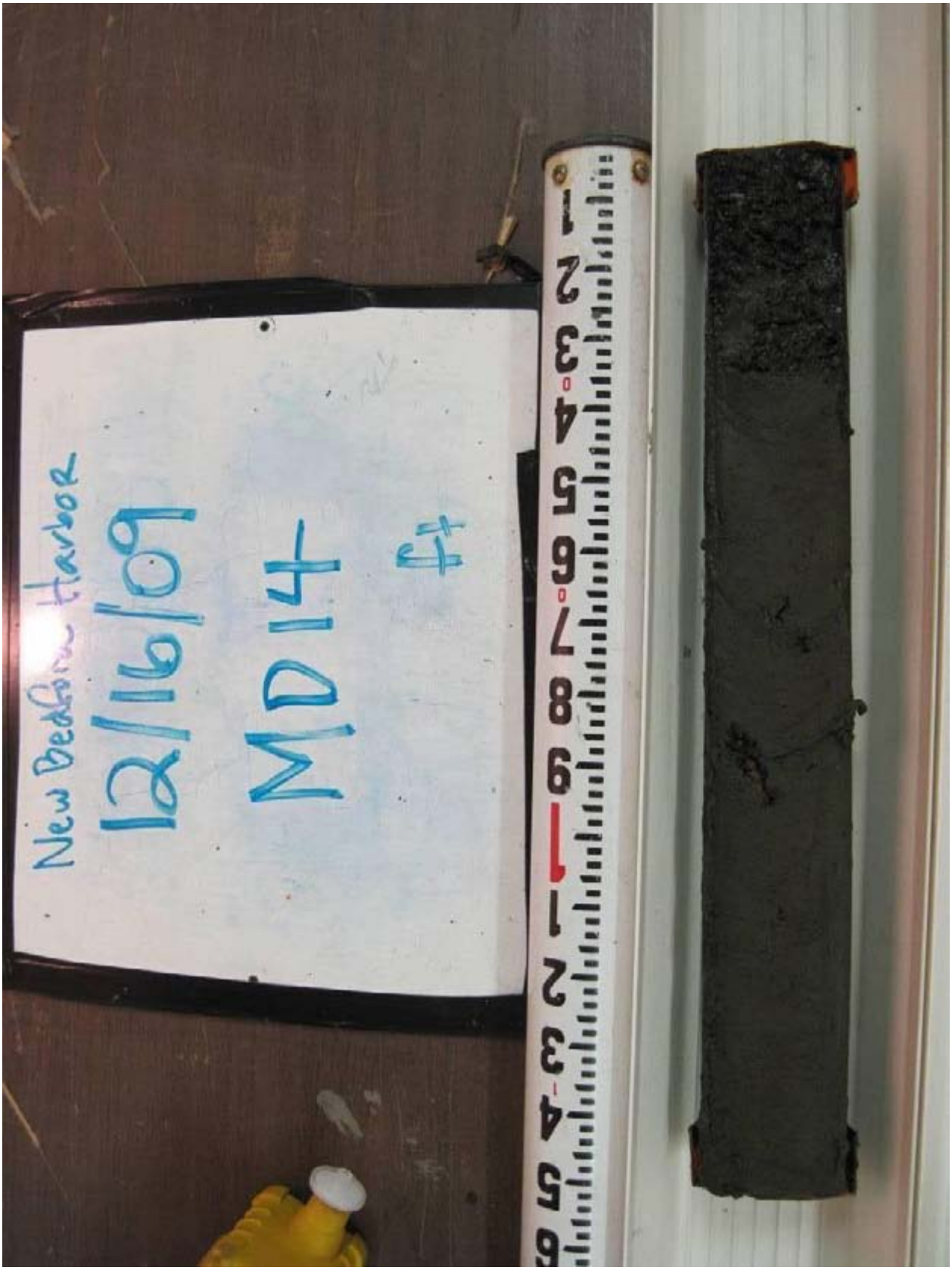
(Note if ≠ I_2 within + 1.0 feet, discard and resample)

Internal description, core split 12/16/09 @ 1625

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.1	OL	Sandy silt w/ organics	Black (2.5Y 2.5/1)	Loose	med. sand	Slight Petrol	- Slight sheen & odor
0.32		Silty sand w/ small gravel	v. dk grey (2.5Y 3/1)	Loose	gravel (-1 Ø)	NA	
0.94	ML	Silt w/ low % sand & gravel	v. dk grey (2.5Y 3/1)	Moderately-well consolidated		NA	
1.45	ML/ ~~MH~~ DRW 12/16	Silt-clay silt w/ oyster shell frags	v. dk grey (2.5Y 3/1)	Moderately-well consolidated		NA	

Comments:

One sample: 0-0.5 Time 12/16/09 @ 1640


New Bedford Harbor
12/16/09
MD14
ft

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring — Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA — Vessel:
Client: USACE-NAE — Chief Scientist:

Station ID: MD14
Core Sample ID: S-090-C012
Date: 12/14/09
Time On Station: 16:07
Latitude N: 41°40.621'
Longitude W: 70°54.990'
GPS Accuracy: 17ft.
Predicted Tide (ft): —
Time of Collection: 16:11
Collection Mechanism: push core
Logged by: KGM
Time Depart Station: 16:13

Water Depth (A): 5.35
Length of Push Core Assembly (B): 12.25
Water Surface to Top of Handle (C): 5.05
Length of Core (from bottom) (D): 1.50
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F): −0.9 (sheetpile #69 Area A) @16:13
All Measurements are ± 0.1 feet
= +3.5 at sheetpile #69 (Area J)

Calculations for Determination of Z* Elevation

KGM 12/14/09

(G) Elevation (Elev.) of Water Surface (NVGD: E-F: ~~3.5~~ 1.5
(H) Elev. of the bottom of the core (NGVD): G - (B-C): −5.7
12.25 − 5.05 = 7.2
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition): − 4.2
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D: −4.2
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A: −3.85

(Note if ≠ I_2 within ± 1.0 feet, discard and resample)

Internal description, core split @ 12/16/09 16:35

Elevation (NGVD) (i.e. Bottom = H)	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.34		SAND w/silt & gravel; Silty SAND	V. dk grey (2.5Y 3/1)	Moderately consolidated	gravel (~2ϕ)	NA	
1.50	ML/CL	Silty clay-clayey silt w/ woody debris (@0.7')	V. dk grey (2.5Y 3/1)	well consolidated & homogenous		NA	

Comments: Two samples. Time:
0-0.5 12/14 16:45
0.5-1.0 12/14 16:45

12-08-09
GD18

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring		**Project #:** W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA		**Vessel:**
Client: USACE-NAE		**Chief Scientist:**

Station ID:	GD18	Water Depth (A):	
Core Sample ID:	S-09S-C012	Length of Push Core Assembly (B):	
Date:	12/8/09	Water Surface to Top of Handle (C):	
Time On Station:		Length of Core (from bottom) (D):	1.30
Latitude N:		Surveyed Elevation (NGVD 29) (E):	
Longitude W:		Water Surface from Surveyed Elevation (F):	
GPS Accuracy:			
Predicted Tide (ft):			
Time of Collection:			
Collection Mechanism:			
Logged by:	DAW		
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z^*) Elev. of visual transition (NGVD): H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
		Gravel, sand silt w/ high % organics	v. dk grey				
0.68							
		Silty clay w/ poorly sorted sand & gravel & organics	dark grey				
0.90							
		Clay	dark grey				

Comments:

2 samples

0 - 0.6 time 10:00

0.7 - 1.3 10:06

12-08-09
GD22

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring		Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA		Vessel:
Client: USACE-NAE		Chief Scientist:

Station ID: GD22
Core Sample ID: S-GD22-C0013
Date: 12/8/2009
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.6
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD): H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H)	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.1	OL	Organic silt	Black				
0.8		SAND, medium primarily, but fine-coarse also	dk Brown				silt lense @ 0.25' (0.24-0.26)
1.26		Sandy clay like agency	Olive grey				
1.4		Sludge-like clayey sand	Black		medium sand	Slight Petrol odor	
1.6		SAND w/ clay & gravel	light brown				

Comments:

One sample Time:
0-0.5 1200

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	GD22	Water Depth (A):	4.6
Core Sample ID:	S-09S-C013		
Date:	09/15/09	Length of Push Core Assembly (B):	13.0
Time On Station:	13:51		
Latitude N:	41°40.588	Water Surface to Top of Handle (C):	5.8
Longitude W:	70°54.989		
GPS Accuracy:	13	Length of Core (from bottom) (D):	1.6
Predicted Tide (ft):			
Time of Collection:	14:00	Surveyed Elevation (NGVD 29) (E):	
Collection Mechanism:	Push Core		
Logged by:	D. Bailey	Water Surface from Surveyed Elevation (F):	
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	0.4
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-6.8
13.0 - 5.8 = 7.2	
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-6.0
1.6 - 0.8 = 0.8	
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-5.2
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-4.2

(Note if ≠ I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Sandy Silt w/ Clay	Dray Gray/ Black	loose			
0.8		Clay	Olive Gray Clay	Firm			
1.45		Clay	Dark Grayish/ Brown Clay				Homogenous
1.6							

Definitive Horizon

Comments:

Progress core
GE24
EXPO

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	GE24	Water Depth (A):	5.2
Core Sample ID:	GE-06-C014	Length of Push Core Assembly (B):	12.0
Date:	09/15/09	Water Surface to Top of Handle (C):	5.4
Time On Station:	14:11	Length of Core (from bottom) (D):	1.4
Latitude N:	41° 40.580	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70° 54.985	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	13		
Predicted Tide (ft):			
Time of Collection:	14:17		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	14:21		

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	0.7
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-5.9
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 12.0 - 5.4 = 6.6	- 5.8
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D 1.4 - 1.3 = 0.1	- 4.5
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	- 4.5
(Note if $\neq I_2$ within + 1.0 feet, discard and resample)	✓

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Clayey Silt	Dark Grey to Black	Loose			Homogenous
0.45	-	-	-	-	-	-	-
		Clay	~~Olive~~ Dark Grey	Firm			Homogenous
1.3	-	-	-	-	-	-	-
		Clay	Olive Grey	Firm			
1.4							

Comments:

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:
Core Sample ID: GE24
Date: 9/30/09 1520
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by:
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.4'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
	OL/CL	OL/CL Clay w/ High Organic content	dark olive grey	med. Consolidated			Sample: 0-0.5'
1.3'							
1.32'		Clayey SAND	olive grey		med. Sand		
	CH	Clay	olive grey	Firm, plastic, well sorted			
1.40'							

Comments:

Progress core
C1 21
Kimwipes

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	GL21	Water Depth (A):	3.5
Core Sample ID:	S-09S-C015		
Date:	09/16/09	Length of Push Core Assembly (B):	12
Time On Station:	09:45		
Latitude N:	41°40.592	Water Surface to Top of Handle (C):	6.7
Longitude W:	70°54.945		
GPS Accuracy:	14	Length of Core (from bottom) (D):	1.34
Predicted Tide (ft):			
Time of Collection:	09:55	Surveyed Elevation (NGVD 29) (E):	
Collection Mechanism:	Push Core		
Logged by:	D. Bailey	Water Surface from Surveyed Elevation (F):	
Time Depart Station:			

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	0.2
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-5.1
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) 12 - 6.7 = 5.3	-4.36
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D 1.34 - 0.6 = 0.74	-3.76
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-3.3
(Note if $\neq I_2$ within ± 1.0 feet, discard and resample)	✓

Elevation (NGVD) (i.e. Bottom = H)	Lithology Method: USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silty Clay	Dark Grey/ Black	Firm			
0.6		Clay	Olive Grey	Firm			Plant Detritus + Shell Hash
1.34							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:
Core Sample ID: GL21
Date: 9/30/09 1510
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by:
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.34'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

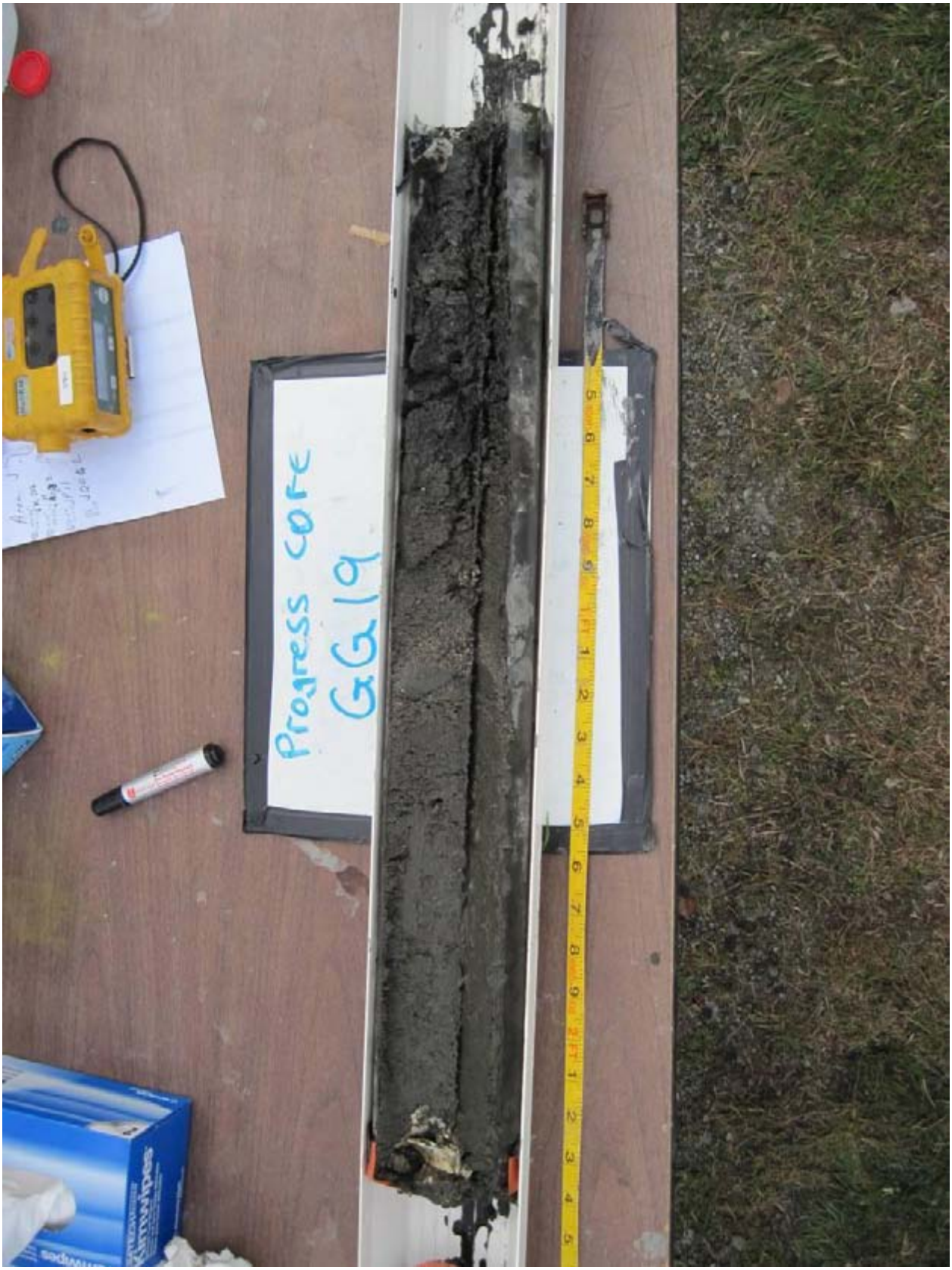
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.5'	OL	Organic Clay	black to V. dark Brown	Loose			Sample: 0-0.5'
1.34'	CL	Clay matrix w/ shell frags; (some large, whole oyster shells)	olive grey	firm, mod-well consolidated Clay matrix			

Comments:


Progress core
GG19

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP	**Project Name:** NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
	Location: New Bedford, MA	**Vessel:**
	Client: USACE-NAE	**Chief Scientist:**

Station ID:	GG19	Water Depth (A):	2.9
Core Sample ID:	S-095-C016	Length of Push Core Assembly (B):	13
Date:	09/16/09	Water Surface to Top of Handle (C):	7.5
Time On Station:	10:08	Length of Core (from bottom) (D):	2.32
Latitude N:	41° 40.600	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	76° 54.974	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	14		
Predicted Tide (ft):			
Time of Collection:	10:15		
Collection Mechanism:	Push Core		
Logged by:	D. Briley		
Time Depart Station:	10:23		

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	0.0
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-5.5
13 − 7.5 = 5.5	
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition)	-4.18
2.32 − 1.0 = 1.32	
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-3.18
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-2.9

(Note if $\neq I_2$ within ± 1.0 feet, discard and resample) ✓

Elevation (NGVD) (ft. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silty Clay	Black	Firm/ Moderately Packed	Fine		
1.0		Sand/ Clayey Sand	Olive Brown	Firm	Fine/ Medium		Well-sorted
1.4		Clay	Olive Gray	Firm	Fine		Plant Detritus + Shell Hash
2.32							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:
Core Sample ID: BG19
Date: 9/30/09, 1442
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by:
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.32'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.7'	OL	Organic Clay. w/ fine sand	dark grey - dark olive grey	Loose			Sample: 0-0.5'
1.0'		Organic Clay w/ sand	olive grey	Loose - moderately consolidated			
1.2'		Clayey SAND	Brownish-grey	firm			
1.8'		Clay w/ High % org. debris and SAND	olive grey	moderately consolidated			
2.32		Clay SHELL Frag		well sorted, firm.			

Comments:

Progress core
GL26
Kimwipes

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	GL26	Water Depth (A):	1.9
Core Sample ID:	S-GLS-C0[illegible]7	Length of Push Core Assembly (B):	12
Date:	09/16/09	Water Surface to Top of Handle (C):	8.3
Time On Station:	10:27	Length of Core (from bottom) (D):	1.5
Latitude N:	41°40.571	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°54.946	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	12		
Predicted Tide (ft):			
Time of Collection:	10:27		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:			

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.3
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-4
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) 12 - 8.3 = 3.7 1.5 - 1.0 = 0.5	-3.5
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-2.5
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-2.2

(Note if $\neq I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silty Clay	Dark Gray				Homogenous
1.0		Sand	Grayish Brown	Firm			Well-sorted -Possible thin layer?
1.45							
		Clay	Olive Gray	Firm			
1.5							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring		Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA		Vessel:
Client: USACE-NAE		Chief Scientist:

Station ID:
Core Sample ID: GL26
Date: 9/30/09, 1455
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by:
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.5'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.9'	OL		black to dark grey	Loose			Sample: 0-0.5'
1.1'		Clayey SAND	olive grey				
1.5'	CL	Clay	olive grey	well sorted, firm			

Comments:

12-08-09
GH24

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP	**Project Name:** NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
	Location: New Bedford, MA	**Vessel:**
	Client: USACE-NAE	**Chief Scientist:**

Station ID:	GH24	Water Depth (A):	2.7
Core Sample ID:	S-09S-C018	Length of Push Core Assembly (B):	13
Date:	09/16/09	Water Surface to Top of Handle (C):	7.1
Time On Station:	10:40	Length of Core (from bottom) (D):	2.55
Latitude N:	41°40.580	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	~~70°~~54.968	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	12		
Predicted Tide (ft):			
Time of Collection:	10:44		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.6
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-6.5
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 13 - 7.1 = 5.9	-5.15
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D 2.55/2 = 1.35	-3.95
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-3.3

(Note if $\neq I_2$ within + 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silty Clay	Black		Fine		
0.4		Clay	Dark Grey	Firm			With Organic detritus + shell hash
1.2		Clay	Olive Grey	Firm			With Organic detritus + Shell hash
2.55							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: GH24
Core Sample ID: S-GHS-C0818
Date: 12/8/2009
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DAW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.55
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.58	OL	silt w/ organics and fine sand lenses	Black				
1.0	ML	clayey silt w/sand & gravel and shell frags (oyster)	v. dk gray	fairly sorted			
		clay w/ organic detritus	dk gray	homogenous			

Comments:

two samples
0 - 0.6 time 10:25
0.6 - 1.2 10:25

12/09/09
GQ16

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	S-090-C0001	Water Depth (A):	3.2
Core Sample ID:	GQ16	Length of Push Core Assembly (B):	13.2
Date:	10/15/09	Water Surface to Top of Handle (C):	7.8
Time On Station:	09:23	Length of Core (from bottom) (D):	2.20
Latitude N:	41°40.612	Surveyed Elevation (NGVD 29) (E):	—
Longitude W:	70°54.918	Water Surface from Surveyed Elevation (F):	—
GPS Accuracy:			
Predicted Tide (ft):			
Time of Collection:	09:32		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	09:35		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	0.0
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-5.4
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 2.20 - 0.74 = 1.46	~~-0.86~~ -3.54
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-3.2
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-3.2

(Note if $\neq I_2$ within + 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
		Silty Clay	Very Dark Gray				-Homogenous -Organic detritus
0.74							
		Clay w/shell hash	Olive Gray				-Homogenous -Organic Detritus
2.20							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA	**Vessel:**
Client: USACE-NAE	**Chief Scientist:**

Station ID	GQ16	Water Depth (A)	
Core Sample ID	S-Ø90-CØØ1	Length of Push Core Assembly (B)	
Date	12/10/2009	Water Surface to Top of Handle (C)	
Time On Station		Length of Core (from bottom) (D)	2.20
Latitude N		Surveyed Elevation (NGVD 29) (E)	
Longitude W		Water Surface from Surveyed Elevation (F)	
GPS Accuracy			
Predicted Tide (ft)			
Time of Collection			
Collection Mechanism			
Logged by	DRW		
Time Depart Station			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD) E-F

(H) Elev. of the bottom of the core (NGVD) G - (B-C)

(z*) Elev. of visual transition (NGVD(H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD) H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD) G - A

(Note if ≠ I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.74	OL	organic silt	Black - ¥ dark grey			Petrol	slight sheen
2.20	ML/CL	Silty clay w/ fine-med sand and shell frags	dark olive grey	uniform/ homogeneous		H_2S	

Comments:

2 samples
0.2 - 0.7
0.8 - 1.3

time
0902
0902

~~1 QC sample MSMSD~~
~~0.8 - 1.3 0902~~
No QC collected - DRW

Station: GL15
11/17/09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring		Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA		Vessel:
Client: USACE-NAE		Chief Scientist:

Station ID:	S-090-C002	Water Depth (A):	2.25
Core Sample ID:	GL15	Length of Push Core Assembly (B):	7.7
Date:	10/15/09	Water Surface to Top of Handle (C):	3.4
Time On Station:	09:42	Length of Core (from bottom) (D):	1.8
Latitude N:	41°40.616	Surveyed Elevation (NGVD 29) (E):	-
Longitude W:	70°54.948	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:			
Predicted Tide (ft):			
Time of Collection:	09:50		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	09:53		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.1
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-4.4
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-3.6
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-2.6
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-2.35

(Note if $\neq I_2$ within + 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e. Bottom = H	Unified - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
		Sandy Clay	Dark Brownish Gray		Fine Sand		Horogenous - Organic detritus
1.0	- - -	-	- -	-	- -	-	- - - -
		Clay w/shell hash	Olive Gray	Well Consolidated			Homogenous
1.8							

Comments:

SEDIMENT FIELD SAMPLING LOG

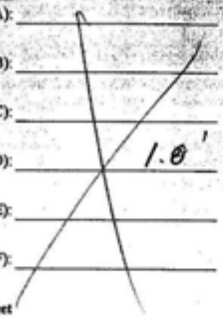
Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: GL15
Core Sample ID: S-090-C0002
Date: 11/17/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DWMSH
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.0'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet



Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

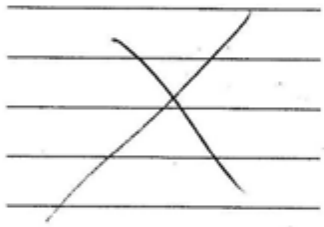
(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)



Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.35	OL	Organic silt w/ fine sand	black,	Loose			
1.0	"	SAND w/ low % SILTS & CLAY	V dk. grey	firm			
1.8	ML	Clayey Silt w/ Large Shell frags.	dark Olive grey	firm			

Comments: one analyticed sample @ 0-0.5'

Station:GD16
1/18/09

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	S-090-C003	Water Depth (A):	3.5
Core Sample ID:	GD16	Length of Push Core Assembly (B):	7.8
Date:	10/15/09	Water Surface to Top of Handle (C):	2.6
Time On Station:	09:56	Length of Core (from bottom) (D):	1.60
Latitude N:	41°40.612	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°54.991	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:			
Predicted Tide (ft):			
Time of Collection:	10:04		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	10:10		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.3
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-5.5
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 1.6-0.5 = 1.1	-4.4
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-3.9
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-3.9

(Note if $\neq I_2$ within + 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e. Bottom + H	Lithology - Unified USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
		Sandy Clay	Very Dark Grey	Sand well sorted	Fine Grain Sand		Homogenous
0.50		Sandy Clay w/shell hash	Brown Olive Grey				Transition layer, possible mixture
1.1		Clay with organic debris	Olive Grey/ Grey				1.4-1.5 wood debris
1.6							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring — Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA — Vessel:
Client: USACE-NAE — Chief Scientist:

Station ID: GD16
Core Sample ID: S-090-C003
Date: 11/18/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: KGM
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.6ϕ
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Lithode USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
ϕ.ϕ							
	OL	Silt w/ organics	Black	loose			-lots of organics
0.25							
	ML	Silty Sand w/shell hash -some clay	Very Dark Gray				-Sand is well sorted, grain size varied from fine to large
0.92							
		Clayey Silt	Olive Gray				With organics and fine sand
1.6ϕ							

Comments:
Sampled @ 0-0.5 w/MS/MSD, 0.5-1.0

V

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: GQ19
Core Sample ID: SD90-015
Date: 10/21/09
Time On Station: 09:00
Latitude N: 41° 40.600
Longitude W: 70° 54.918
GPS Accuracy: 12 ft.
Predicted Tide (ft):
Time of Collection: 09:05
Collection Mechanism: push core
Logged by: KGM
Time Depart Station: 09:08

Water Depth (A): 5.2
Length of Push Core Assembly (B): 14.2
Water Surface to Top of Handle (C): 6.75
Length of Core (from bottom) (D): 1.94
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F): 2.3

(H) Elev. of the bottom of the core (NGVD): G - (B-C): -5.15

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition): -3.81
1.94 - 0.6 = 1.34

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D: -3.21

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A: -2.9

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = 0)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0		sandy clay w/ organics	dark gray	medium			organics
0.6		clay	olive grey w/ shell hash	firm			sandy well sorted in clay sheel hash
1.94							

Comments: heavy sheen on water at location: ~ 100' away from active dredging

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: GQ19
Core Sample ID: S-090-C015
Date: 12/10/2009
Time On Station:
Latitude N: •
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.90
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Unified USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.28	OL	organic silt w/ fine sand	Black			petrol	
1.90	ML/CL	clayey silt w/sand – silty clay w/sand – sand-silt-clay variations in bedding texture, may not be any significant stratal layers	olive gray			slight H_2S	

Comments:

Two samples, time
0 - 0.5' 0919
0.5 - 1.0' 0919

* potentially archive sample, pending Analysis analysis results from 0-0.5 interval?

Station: GU21
11/17/09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: GU21
Core Sample ID: SD90-[illegible]016
Date: 10/21/09
Time On Station: 09:14
Latitude N: 41°40.591
Longitude W: 70° 54.896
GPS Accuracy: 13 ft.
Predicted Tide (ft):
Time of Collection: 09:21
Collection Mechanism: push core
Logged by: KGM
Time Depart Station: 09:24

Water Depth (A): 5.4
Length of Push Core Assembly (B): 14.2
Water Surface to Top of Handle (C): 5.06
Length of Core (from bottom) (D): ~~2.95~~ 2.85
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F: 2.6

(H) Elev. of the bottom of the core (NGVD): G - (B-C): -6.55

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition): -4.15

2.85 - 0.45 = 2.4

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D: -3.7

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A: -2.8

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Stations + H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0		sandy clay	dark brown grey	medium			shell hash
0.45		clay	dark olive grey	firm			
1.2		clay	olive grey	firm			lots of shell hash
2.0							
2.3							
2.85							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: GU21
Core Sample ID: S-090-C016
Date: 11/17/2009
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: ORN
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.85'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H)	Lithology - Modified USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.55	OL	Organic silt w/ fine sand	V. dk grey - black	Loose			
2.40	ML	Clayey silt w/org.	V. dk grey	firm			
		Clay silt w/sand, sand is med - coarse	V. dk grey	firm			

Comments: Two analytical samples:
0 - 0.5' → Congeners and Homologs
0.5 - 1.0' → congeners only

12/10/09
GS25
Kimwipes

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring — Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA — Vessel:
Client: USACE-NAE — Chief Scientist:

Station ID:	GS25	Water Depth (A):	6.5 // ~~6.7~~
Core Sample ID:	SD90-0017	Length of Push Core Assembly (B):	14.2
Date:	10/21/09	Water Surface to Top of Handle (C):	~~5.95~~ 5.0 // ~~5.91~~ 4.9
Time On Station:	09:29	Length of Core (from bottom) (D):	~~2.5~~ // 1.98
Latitude N:	41°40.575	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°54.908	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	13 ft		
Predicted Tide (ft):			
Time of Collection:	09:38 // 09:51		
Collection Mechanism:	push core		
Logged by:	KBM		
Time Depart Station:	09:56		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	2.8 // ~~2.9~~
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-6.4
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-5.17
1.98 - 0.75 = 1.23	
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-4.42
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-3.7

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Biology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0		silty clay	brown grey	medium			shell hash
0.75		clay	brown grey	firm			shell hash
1.98							

Comments:
1st attempt no good
2nd attempt saved - ~~1~~ ft short
3rd attempt - barrel popped off - described
4th attempt - lost
heavy sheen on water at target location (next to dredge)

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring — Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA — Vessel:
Client: USACE-NAE — Chief Scientist:

Station ID: GS25
Core Sample ID: S-090-C017
Date: 12/10/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.0
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F
(H) Elev. of the bottom of the core (NGVD): G - (B-C)
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A
(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.6	OL	Silty clay w/fine sand and low % organics	Olive grey			H_2S and Slight petrol	Slight sheen in A overlying water that seeped out of split core
2.0	MH/CL	Silty clay matrix w/sand and high % of whole Oystershells and shell frags	Olive grey				

Comments: ~~TWO~~ ONE samples and One QC sample MS MSD
0-0.5 Time 0940 0-0.5MSMSD 0940
0.6-1.1 0940 * potentially archive this sample w/ analysis pending the results of 0-0.5 sample.

New Bedford Harbor
12/17/09
GM19
1.95 ft.

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring — Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA — Vessel:
Client: USACE-NAE — Chief Scientist:

Station ID:	CM19	Water Depth (A):	5.4
Core Sample ID:	S-09D-C013	Length of Push Core Assembly (B):	12.3
Date:	12/15/09	Water Surface to Top of Handle (C):	5.05
Time On Station:	09:07	Length of Core (from bottom) (D):	1.65
Latitude N:	41° 40.600'	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70° 54.940'	Water Surface from Surveyed Elevation (F):	-0.35 (Sheet pile #89 Ateam)
GPS Accuracy:	14ft.		
Predicted Tide (ft):	—		
Time of Collection:	09:14		
Collection Mechanism:	Push core		
Logged by:	KGM		
Time Depart Station:	09:16		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	KGM 12/15/09 ~~4.05~~ 2.05
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-5.2
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) 12.3-5.05 = 7.25	-4.01
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D 1.65-0.46 = 1.19	-3.55
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-3.35

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Sediment description, core split on 12/17/2009 @ 0925

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.46	"OL" (ML/SP)	SANDY silt/ silty sand	Black (5Y 2.5/1)	Loose	med-sand	light petrol	
0.76	CL/ML	Clayey silt w/ Sand & oyster shell frags	dark Olive grey (5Y 3/2)	Loose - moderately consolidated	coarse sand & oystershell frags	H_2S	transition layer
1.65	CL/ML	Clayey silt. w/ high % fine-med sand and oyster shell frags	dark Olive grey (5Y 3/2)	well consolidated - oyster shell frags - some gravel (~1ϕ)		H_2S	organic detritus

Comments:

Two Samples

	Time:
0 - 0.5	12/17 0935
0.6 - 1.1	12/17 0935

New Bedford Harbor
12/17/09
GR22
1.4 ft

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	GR22	Water Depth (A):	4.9
Core Sample ID:	~~12~~ S-Ø9D-CØ14	Length of Push Core Assembly (B):	12.2
Date:	12/15/09	Water Surface to Top of Handle (C):	5.7
Time On Station:	09:19	Length of Core (from bottom) (D):	1.4
Latitude N:	41° 40.587'	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70° 54.913'	Water Surface from Surveyed Elevation (F):	ØS (sheetpile #89 Area M)
GPS Accuracy:	14 ft.		
Predicted Tide (ft):	—		
Time of Collection:	09:22		
Collection Mechanism:	Push Core		
Logged by:	KGM		
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	KGM 12/15/09 ~~3.9~~ 1.9
(H) Elev. of the bottom of the core (NGVD): G - (B-C) 12.2 - 5.7 = 6.5	- 4.6
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 1.4 - 0.1 = 1.3	- 3.3
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	- 3.2
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	- 3.Ø

(Note if ≠ I_2 within + 1.0 feet, discard and resample)

Internal description, core split 12/17/09 @ 0945

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.1	OL	organic silt w/ fine sand	Black (5Y 2.5/1)	Loose	fine sand	slight petrol	
0.3	ML/CL	silty clay w/ fine sand	dark olive grey (5Y 3/2)	Loose	medium - fine sand	H_2S	
1.4	ML/CL	silty clay w/ sand, organic detritus, and oyster shells (whole)	dark olive grey (5Y 3/2)	moderately - well consolidated	medium - fine sand - oyster shell frags & whole shells.	H_2S	

Comments:

Two Samples:	Time:
0 - 0.5	12/17 0955
0.6 - 1.1	12/17 0955

New Bedford Harbor
12/17/09
G023
1 of 1

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: GD23
Core Sample ID: S-09D-C0015
Date: 12/15/09
Time On Station: 09:32
Latitude N: 41°40.583'
Longitude W: 70°54.930'
GPS Accuracy: 12ft
Predicted Tide (ft): —
Time of Collection: 09:43
Collection Mechanism: push core
Logged by: KGM
Time Depart Station: 09:50

Water Depth (A): 4.8
Length of Push Core Assembly (B): 12.2
Water Surface to Top of Handle (C): 5.9
Length of Core (from bottom) (D): 1.05
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F): -0.85 (sheetpile #89 Ateam)

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

KGM 12/15/09

(G) Elevation (Elev.) of Water Surface (NVGD: E-F): ~~3.55~~ 1.55
(H) Elev. of the bottom of the core (NGVD): G - (B-C): -4.75
12.2 - 5.9 = 6.3
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition): -3.7
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D: -3.7
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A: -3.25

(Note if $\neq I_2$ within ± 1.0 feet, discard and resample)

Internal description, core split 12/17 @ 10:20

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
	ML/CL w/ SAND	- silty clay - clayey silt with medium sand and little gravel. - Oyster shells are prevalent throughout core.	Dark olive grey (5Y 3/2)	- moderately well consolidated	- gravel (-1 ϕ) - oyster shells (~5cm)	H_2S	
1.05							

Comments:
One sample collected:
0 - 0.5
Time:
12/17, 10:30

New Bedford Harbor
12/17/09
G921
1.3ft

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: GG21
Core Sample ID: S-09D-C016
Date: 12/15/09
Time On Station: 09:55
Latitude N: 41° 40.592'
Longitude W: 70° 54.973'
GPS Accuracy: 14ft.
Predicted Tide (ft): —
Time of Collection: 09:58
Collection Mechanism: push core
Logged by: KGM
Time Depart Station: 10:01

Water Depth (A): 4.1
Length of Push Core Assembly (B): 12.2
Water Surface to Top of Handle (C): 6.6
Length of Core (from bottom) (D): 1.3
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F): -1.1 (sheetpile #89 Ateam)

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

KGM 12/15/09

(G) Elevation (Elev.) of Water Surface (NVGD: E-F): ~~3.3~~ 1.3
(H) Elev. of the bottom of the core (NGVD): G - (B-C): -4.3
12.2 - 6.6 = 5.6
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition): -3.4
1.3 - 0.4 = 0.9
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D: -3.0
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A: -2.8

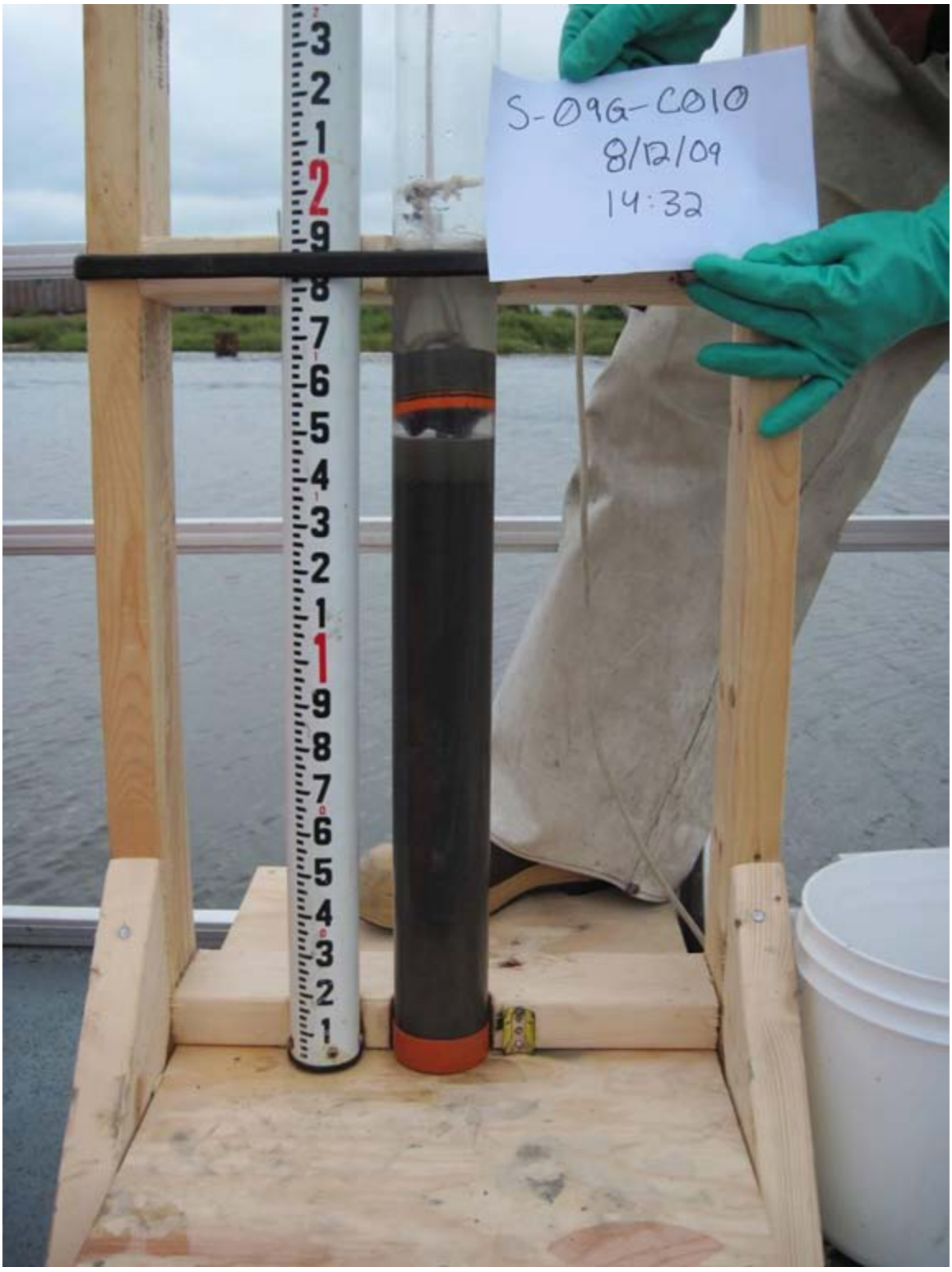
(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Internal Description, core split on 12/17/2009 @ 1035

Elevation (NGVD) (i.e. Bottom = H)	Geology - include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.4	OL	sandy silt w/ organics	Black – V dk grey (5Y 2.5/1) – (5Y 3/1)	loose	coarse sand	light petrol	v slight sheen
0.8	ML	Sandy silt	V dk grey (5Y 3/1)	Loose – moderately consolidated	coarse sand to small gravel (-1 ϕ)	H_2S	– Transition layer between OL and ML/CL – sand lense @ 0.76'
1.3	CL/ML	Clayey silt w/ Organic detritus	dk olive grey (5Y 3/2)	~~moderately well~~ dgw 12/17 well consolidated (firm)		H_2S	– homogenous texture and composition, firm

Comments:

Two Samples and one QC sample
0 - 0.5 Time: 1045
0.8 - 1.3 Time: 1050
0 - 0.5 MS/MSD Time: 1045
} 12/17/09


S-09G-C010
8/12/09
14:32

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	JK4	Water Depth (A):	~~7.1 ft~~ 6.8 ft
Core Sample ID:	S-09G-C010	Length of Push Core Assembly (B):	13.9
Date:	8/12/09	Water Surface to Top of Handle (C):	5.4 ft
Time On Station:	14:24	Length of Core (from bottom) (D):	1.4 ft
Latitude N:	~~40°50.5.40~~ 40°40.505	Surveyed Elevation (NGVD 29) (E):	5.0 ft
Longitude W:	70°54.906	Water Surface from Surveyed Elevation (F):	2.8 ft
GPS Accuracy:	9 ft		
Predicted Tide (ft):			
Time of Collection:	14:28		
Collection Mechanism:	Push Core		
Logged by:	Dave Bailey		
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	2.2 ft
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-6.3
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-5.4
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-4.9
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-4.6

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = 0)	Biology - Include CSCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0							
	OV	Silt	Dark	loose	fine		
0.5							
		Clay, Sand, Shell Hash (well mixed)	Olive Gray	Firm	~~Fine~~ medium		
1.4 ft							

Comments:

S-09G-C011
8/12/09
14:53

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	J06	Water Depth (A):	6.6ft
Core Sample ID:	S-09G-C011	Length of Push Core Assembly (B):	13.9ft
Date:	8/12/09	Water Surface to Top of Handle (C):	4.3ft
Time On Station:	14:45	Length of Core (from bottom) (D):	3.0ft
Latitude N:	41° 40. 498	Surveyed Elevation (NGVD 29) (E):	5.0 ft
Longitude W:	70° 54. 888	Water Surface from Surveyed Elevation (F):	3.0ft
GPS Accuracy:	10 ft		
Predicted Tide (ft):			
Time of Collection:	14:48		
Collection Mechanism:	Push Core		
Logged by:	Dave Bailey		
Time Depart Station:	14:54		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	2.0ft
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-7.6
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-5.1
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-4.6
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-4.6

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0							
0.5	SP	Silt	Black	Loose	Fine		-Light sheen
1.6		Sand Silt Shell Hash Well Mixed	Blackish Grey	Firm	Fine		
3.0ft		Sandy Clay	Olive Grey	Firm	Fine/ medium		

0.5

1.6

Comments: Oyster in barrel

S-09G-C012
8/12/09
15:15

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA	**Vessel:**
Client: USACE-NAE	**Chief Scientist:**

Station ID:	JQ10	Water Depth (A):	6.9 ft
Core Sample ID:	S-09G-C012	Length of Push Core Assembly (B):	13.9 ft
Date:		Water Surface to Top of Handle (C):	4.0 ft
Time On Station:	15:07	Length of Core (from bottom) (D):	2.8 ft
Latitude N:	41°40.479	Surveyed Elevation (NGVD 29) (E):	5.0 ft
Longitude W:	70°54.877	Water Surface from Surveyed Elevation (F):	3.4 ft
GPS Accuracy:	11 ft		
Predicted Tide (ft):			
Time of Collection:	15:11		
Collection Mechanism:	Push Core		
Logged by:	Dave Bailey		
Time Depart Station:	15:17		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	1.6 ft
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-8.3
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-6.5
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-5.5
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-5.3

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0	OL	Silt	Black	loose	fine		
1.0		Silt Shell Hash Clay (well mixed)	Dark Gray	Firm	fine		
1.7 ft		Silty Clay	Brownish Gray	Firm	fine		
2.8 ft							

Comments:

Light sheen when dumped

S-096-C013
8/12/09
15:35

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	JK11	Water Depth (A):	6.7ft
Core Sample ID:	S-096-C013	Length of Push Core Assembly (B):	13.9ft
Date:	8/12/09	Water Surface to Top of Handle (C):	4.4ft
Time On Station:	15:23	Length of Core (from bottom) (D):	~~2.4ft~~ 2.4ft
Latitude N:	41° 40.477	Surveyed Elevation (NGVD 29) (E):	5.0ft
Longitude W:	70° 54.909	Water Surface from Surveyed Elevation (F):	3.8ft
GPS Accuracy:	13 ft		
Predicted Tide (ft):			
Time of Collection:	15:27		
Collection Mechanism:	Push Core		
Logged by:	Dave Bailey		
Time Depart Station:	15:35		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	1.2
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-8.3
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-6.9
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-5.9
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-5.5

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Above = +)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Constituents
0.0		Silt	Black	Loose	Fine		
1.0		Shell Hash Sand Clay Organic Detritus (Well Mixed)	Olive Gray	Firm	Fine/ medium		
2.4ft							

Comments:

S-096-C014
8/12/09
16:03

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: JL18
Core Sample ID: S-096-014
Date: 8/12/09
Time On Station: 15:41
Latitude N: 41 40.447
Longitude W: 70 59.903
GPS Accuracy: 11 ft
Predicted Tide (ft):
Time of Collection: 15:43
Collection Mechanism: Push Core
Logged by: Dave Bailey
Time Depart Station: 15:56

Water Depth (A): ~~7.2 ft~~ 7.1ft
Length of Push Core Assembly (B): 13.9 ft
Water Surface to Top of Handle (C): 4.7ft
Length of Core (from bottom) (D): 2.2ft
Surveyed Elevation (NGVD 29) (E): 5.0ft
Water Surface from Surveyed Elevation (F): 4.0ft

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F: 1.0ft
(H) Elev. of the bottom of the core (NGVD): G - (B-C): -8.2
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition): -6.6
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D: ~~-6.2~~ -6.0
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A: -6.1

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silty/ Sandy Mixture	Black	Loose	Fine		
0.6 ~~0.5~~							0.6
		Clay	Olive Grey	Firm	Fine		Streaky to 1.1
2.2							1.0

Comments:

SEDIMENT FIELD SAMPLING LOG

	Project Name: NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
	Location: New Bedford, MA	**Vessel:**
	Client: USACE-NAE	**Chief Scientist:**

Station ID:	JL18	Water Depth (A):	7.1 ft
Core Sample ID:	S-096-04 (Rep)	Length of Push Core Assembly (B):	13.9 ft
Date:	8/12/09	Water Surface to Top of Handle (C):	4.0 ft
Time On Station:	15:41	Length of Core (from bottom) (D):	2.8ft
Latitude N:	41°40.447	Surveyed Elevation (NGVD 29) (E):	5.0 ft
Longitude W:	70°59.903	Water Surface from Surveyed Elevation (F):	4.1ft
GPS Accuracy:	11ft		
Predicted Tide (ft):			
Time of Collection:	16:00		
Collection Mechanism:	Push Core		
Logged by:	Dave Bailey		
Time Depart Station:	16:05		

All Measurements are + 0.1 feet

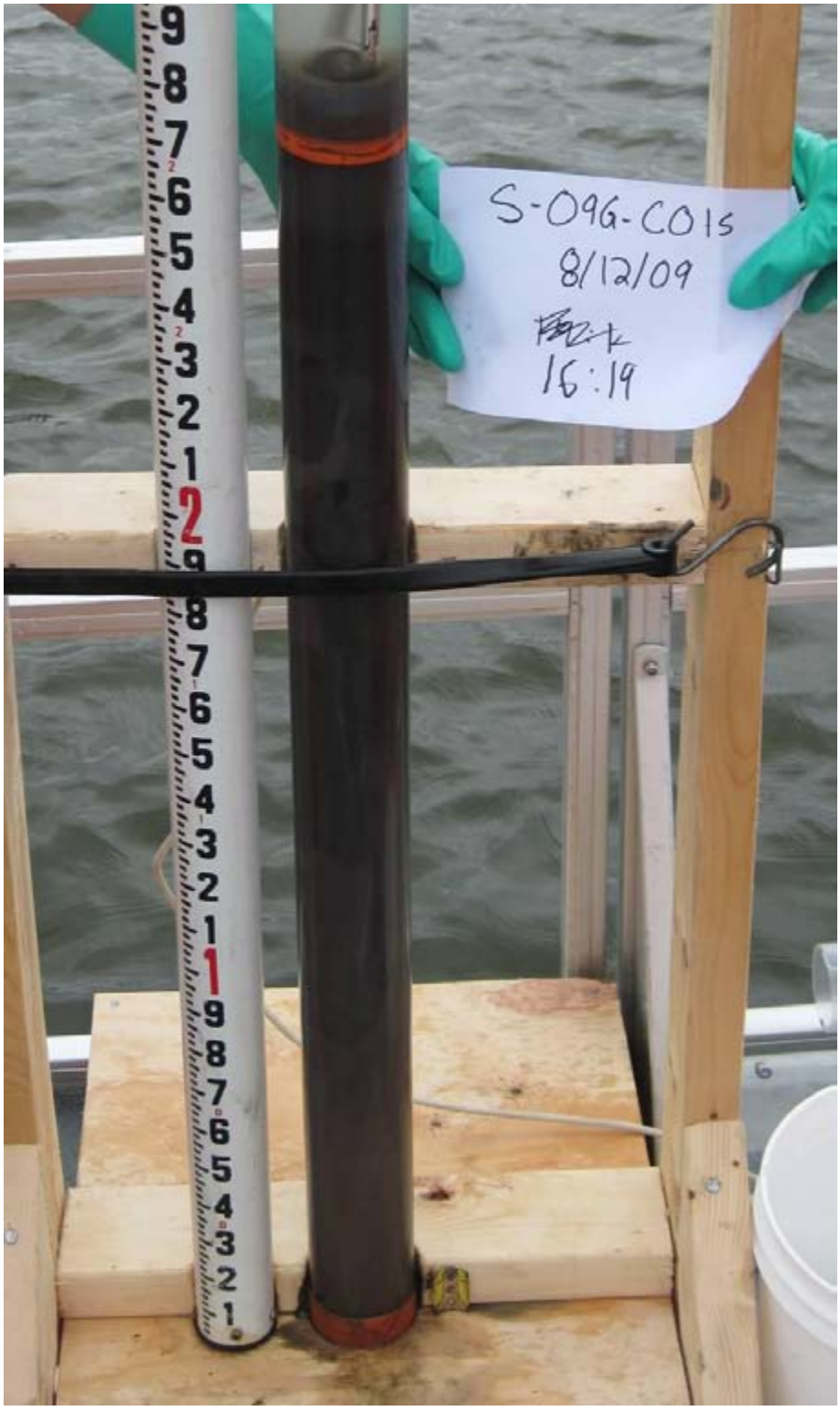
Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	0.9
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-9.0
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-6.9
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-6.2
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-6.2

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0							
		Silt	Black	Loose	Fine		
0.7	bl						
		Clay Shell Hash	Light Olive Gray	Firm	Fine		
0.9							
		Clay Organic Detritus	Olive Gray	Firm	Fine		
2.8							

Comments:


S-096-C015
8/12/09
16:19

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	JP20	Water Depth (A):	6.5 ft
Core Sample ID:	S-NBH-C015	Length of Push Core Assembly (B):	13.9 ft
Date:	8/12/09	Water Surface to Top of Handle (C):	~~4.9 ft~~ 4.9 ft
Time On Station:	16:08	Length of Core (from bottom) (D):	2.5
Latitude N:	41 40.439	Surveyed Elevation (NGVD 29) (E):	5.00 ft
Longitude W:	70° 54.883	Water Surface from Surveyed Elevation (F):	4.4 ft
GPS Accuracy:	14ft		
Predicted Tide (ft):			
Time of Collection:	16:15		
Collection Mechanism:	Push Core		
Logged by:	Dave Bailey		
Time Depart Station:	16:19		

All Measurements are + 0.1 feet

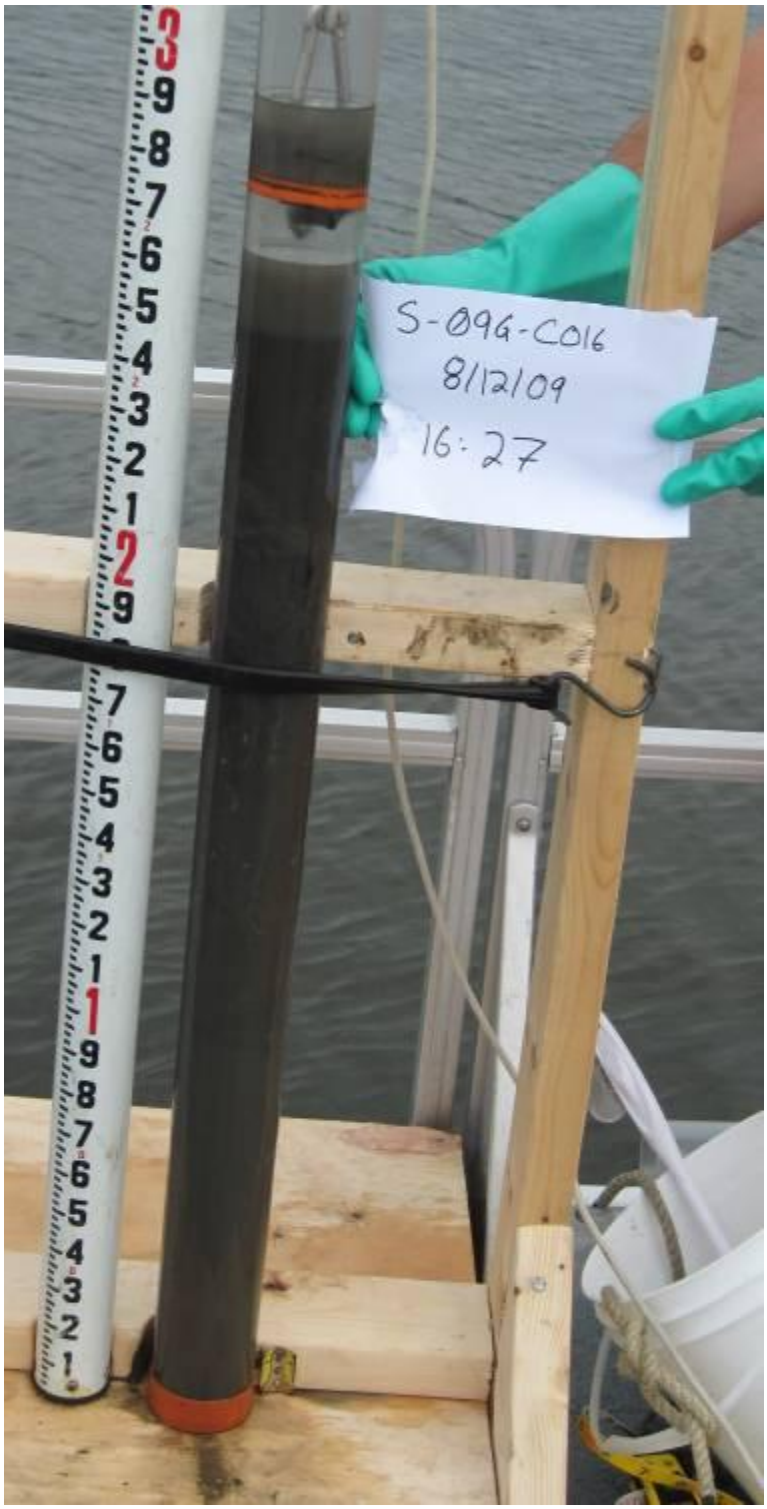
Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	0.6 ft
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-8.4
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-6.5
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-5.9
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-5.9

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0	SP	Silty	Black	~~F~~ loose	fine		
0.6		Clay w/streaks of silt	Light olive Gray	Firm	fine		
1.5		Clay w/organics	Light olive Gray	Firm	fine		
2.5							

Comments:
- Heavy Sheen > when dumped
- Heavy Odor


S-096-C016
8/12/09
16:27

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA
Vessel:
Client: USACE-NAE
Chief Scientist:

Station ID:	JP23	Water Depth (A):	5.2 ft
Core Sample ID:	S-096-C01C	Length of Push Core Assembly (B):	~~13.9 ft~~ 13.9ft
Date:	8/12/09	Water Surface to Top of Handle (C):	6.0 ft
Time On Station:	16:27	Length of Core (from bottom) (D):	2.5 ft
Latitude N:	41°40.428	Surveyed Elevation (NGVD 29) (E):	5.0 ft
Longitude W:	70°64.881	Water Surface from Surveyed Elevation (F):	4.6 ft
GPS Accuracy:	12 ft		
Predicted Tide (ft):			
Time of Collection:	16:25		
Collection Mechanism:	Push Core		
Logged by:	Dave Bailey		
Time Depart Station:	16:38		

All Measurements are + 0.1 feet

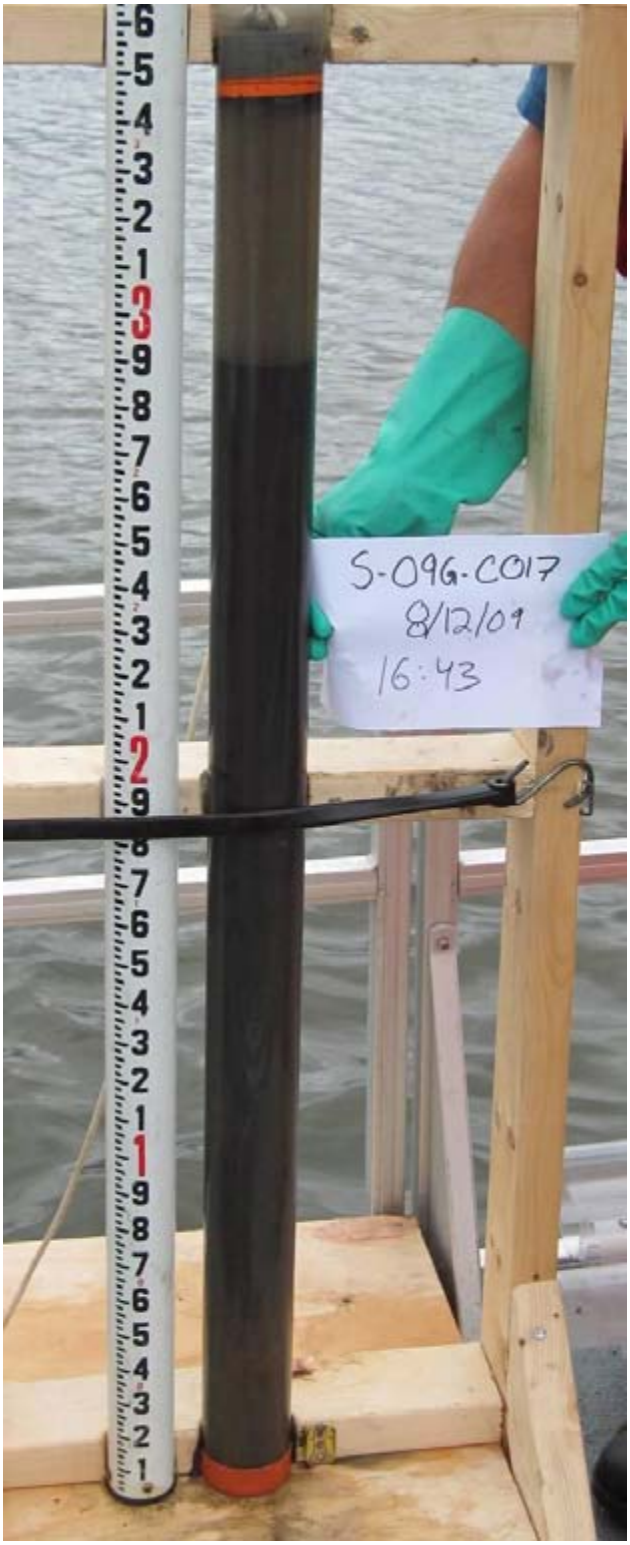
Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	0.4
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-7.5
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-5.4
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-5.0
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-4.8

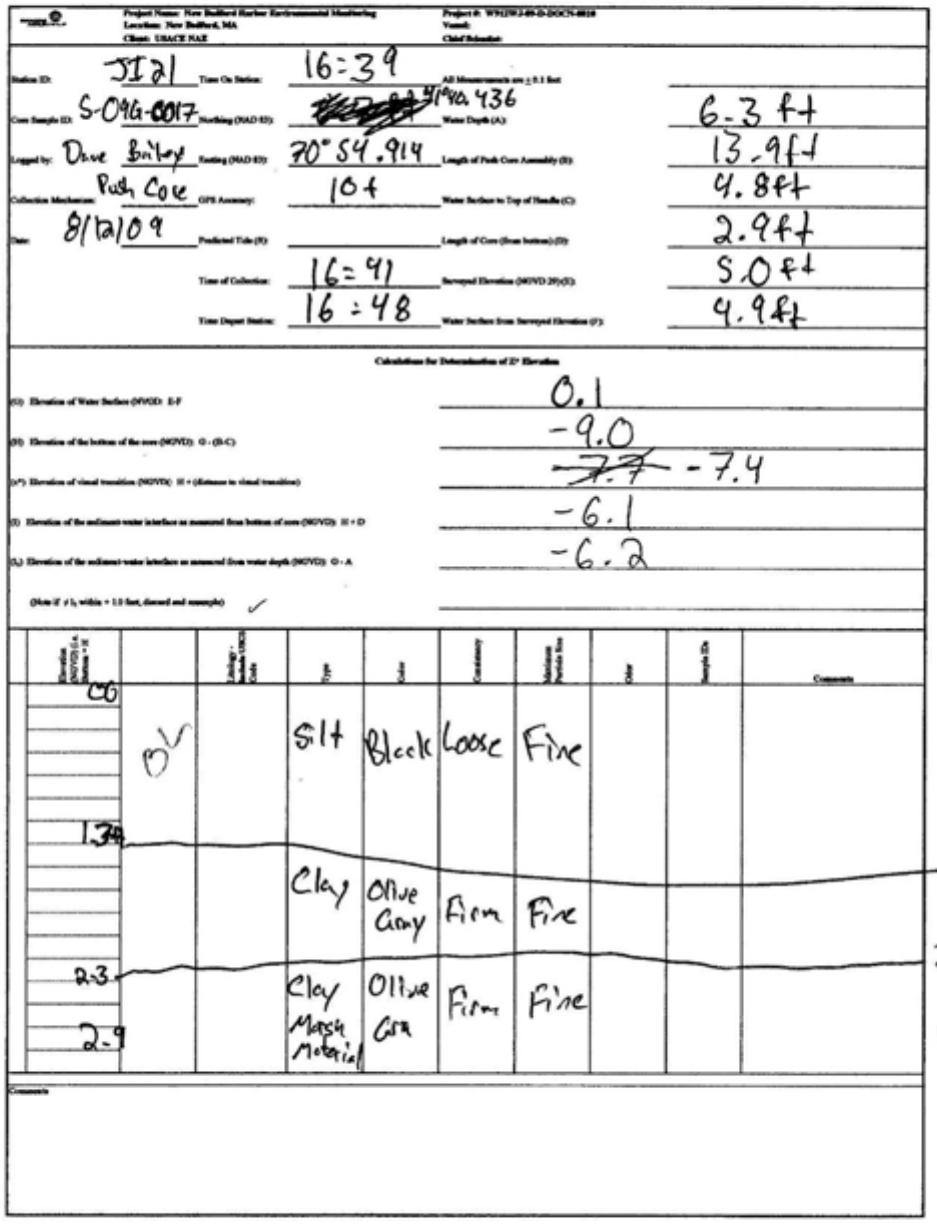
(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0							
	NV	Silt	Black	Loose	fine		
0.4							
		Clay Shell Hash	~~Light Olive Gray~~ Brownish Black	Firm	fine		
0.9							
		Clay	~~Light~~ Olive Gray	Firm	fine		
1.9							
		Clay	Light olive Gray	Firm	fine		
2.5							

Comments:


S-09G-C017
8/12/09
16:43

Attachment 1
Sediment Sampling Log



Project Name: New Bedford Harbor Environmental Monitoring
Location: New Bedford, MA
Client: USACE NAE

Project #: W912WJ-09-D-DOCN-0010
Vessel:
Chief Scientist:

Station ID:	JI21	Time On Station:	16:39	All Measurements are ± 0.1 feet	
Core Sample ID:	S-09G-0017	Northing (NAD 83):	~~[illegible]~~ 41°40.436	Water Depth (A):	6.3 ft
Logged by:	Dave Briley	Easting (NAD 83):	70° 54.914	Length of Push Core Assembly (B):	13.9ft
Collection Mechanism:	Push Core	GPS Accuracy:	10 f	Water Surface to Top of Handle (C):	4.8ft
Date:	8/12/09	Predicted Tide (E):		Length of Core (from bottom) (D):	2.9ft
		Time of Collection:	16:41	Surveyed Elevation (NGVD 29) (E):	5.0 ft
		Time Depart Station:	16:48	Water Surface from Surveyed Elevation (F):	4.9ft

Calculations for Determination of Z* Elevation

(G) Elevation of Water Surface (NVGD): E-F	0.1
(H) Elevation of the bottom of the core (NGVD): G - (B-C)	-9.0
(x*) Elevation of visual transition (NGVD): H + (distance to visual transition)	~~-7.7~~ -7.4
(I) Elevation of the sediment-water interface as measured from bottom of core (NGVD): H + D	-6.1
(I_s) Elevation of the sediment-water interface as measured from water depth (NGVD): G - A	-6.2
(Note if ≠ I_s within ± 1.0 feet, discard and resample) ✓	

Elevation (NGVD) (i.e. Bottom = H)		Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Sample ID	Comments
0.0	BV		Silt	Black	Loose	Fine			
1.3ft			Clay	Olive Gray	Firm	Fine			1.3ft
2.3			Clay Marsh Material	Olive Gra	Firm	Fine			2.3
2.9									2.9

Comments

Progress core
JK24
N-DEX

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	JK24	Water Depth (A):	5.7
Core Sample ID:	S-095-C001	Length of Push Core Assembly (B):	13
Date:	09/15/09	Water Surface to Top of Handle (C):	4.6
Time On Station:	09:44	Length of Core (from bottom) (D):	2.9
Latitude N:	41°40.423	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°54.908	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	11		
Predicted Tide (ft):			
Time of Collection:	10:00		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	10:10		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.2
(H) Elev. of the bottom of the core (NGVD): G - (B-C) 13 - 4.6 = 8.4	-8.6
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) ~~2.9~~ 2.9 - 1.0 = 1.9	-6.7
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-5.7
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-5.9

(Note if $\neq I_2$ within + 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e Bottom = 0	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silt	black	loose	fine		
1.0							
		Clay	Grey	Firm - compact	fine		- Containing some organics
2.9							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:
Core Sample ID: JK24
Date: 9/30/09 1419
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by:
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.90'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (Lit. Bottom = H)	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.8'	OL	CLAY SILTY Clay w/organic detritus	Black to V. dk Grey	Loosely Consolidated			Sample: 0-0.5'
1.3'	CL	Clay w/ Some % Fine Sand	Olive grey	moderately consolidated			
1.55	CL w/ Shells	OYSTER SHELL HASH/Frags	Olive Grey				Sample: 1.2-1.7'
	CL	Clay w/ Org-detrit	Olive Grey	Firm; well Consolidated			

Comments:

12-08-09
JN21

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	JN21	Water Depth (A):	5.4
Core Sample ID:	S-09S-C002	Length of Push Core Assembly (B):	14
Date:	09/15/09	Water Surface to Top of Handle (C):	6
Time On Station:	10:15	Length of Core (from bottom) (D):	2.44
Latitude N:	41040.435	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70 54.891	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	17		
Predicted Tide (ft):			
Time of Collection:	10:19		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	10:24		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.4
(H) Elev. of the bottom of the core (NGVD): G - (B-C) 14 - 6 = 8	-8.4
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) 2.44 - 0.6 = 1.84	-6.56
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-5.96
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-5.8
(Note if $\neq I_2$ within + 1.0 feet, discard and resample)	✓

Elevation (NGVD) (i.e. Bottom = 0)	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silt	Dark-Gray	Moderately Consolidated	Fine		
0.6		Clay	Grey	Firm	Fine		- Detritus containing some organics
2.44							

Comments:

SEDIMENT FIELD SAMPLING LOG

	Project Name: NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
	Location: New Bedford, MA	**Vessel:**
	Client: USACE-NAE	**Chief Scientist:**

Station ID: JN21
Core Sample ID: S-095-C002
Date: 2/8/2009
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.44
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (I ± Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.6	OL	organic silt	V dk grey	Loose			
2.44	ML	organic clayey silt w/ some sand.	dark grey	moderately consolidated			

Comments: Two samples
0-0.5' Time: 12:30
0.5-1.0' 12:30

12-08-09
JK19

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	JK19	Water Depth (A):	4.9
Core Sample ID:	S-095-C003	Length of Push Core Assembly (B):	14
Date:	09/16/09	Water Surface to Top of Handle (C):	6.1
Time On Station:	10:30	Length of Core (from bottom) (D):	2.6
Latitude N:	41°40.443	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°54.909	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	15		
Predicted Tide (ft):			
Time of Collection:	10:35		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:			

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) -0.5

(H) Elev. of the bottom of the core (NGVD): G - (B-C) -8.4
14 - 6.1 = 7.9

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) -6.8
2.6 - 1.0 = 1.6

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D -5.8

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A -5.4

(Note if $\neq I_2$ within ± 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silt	Black to Dark Brown	Loose	Fine	H_2S	Containing Shell Hash and organic detritus
0.5		Clay	Dark Gray/ Black	Firm			some Shell Hash
		Silty/Clay					
1.0		Clay	Olive Gray	Firm			With organic detritus
2.6							

Comments:
-Slight sheen on top of core.

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA	**Vessel:**
Client: USACE-NAE	**Chief Scientist:**

Station ID:	JK19	Water Depth (A):	
Core Sample ID:	S-Ø95-CØØ3		
Date:	12/8/09	Length of Push Core Assembly (B):	
Time On Station:			
Latitude N:		Water Surface to Top of Handle (C):	
Longitude W:			
GPS Accuracy:		Length of Core (from bottom) (D):	2.60
Predicted Tide (ft):			
Time of Collection:		Surveyed Elevation (NGVD 29) (E):	
Collection Mechanism:			
Logged by:	DRW	Water Surface from Surveyed Elevation (F):	
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) in Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.56	ML ~~OL~~	Silt w/ organics	black - Vdk gray			H_2S odor	
2.60	ML/CL	Silty clay w/poorly sorted sand (fine-coarse) and organic debris				H_2S odor	

Comments: Two samples

0 - 0.6' Time: 12:12

0.6 - 1.2' 12:12

12-08-09
JQ18

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring		Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA		Vessel:
Client: USACE-NAE		Chief Scientist:

Station ID:	JQ18	Water Depth (A):	3.0
Core Sample ID:	S-CAS-C004	Length of Push Core Assembly (B):	12
Date:	09/15/09	Water Surface to Top of Handle (C):	7.2
Time On Station:	10:48	Length of Core (from bottom) (D):	0.8
Latitude N:	41°40.447	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°54.876	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	15		
Predicted Tide (ft):			
Time of Collection:	10:53		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	11:02		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.6
(H) Elev. of the bottom of the core (NGVD): G - (B-C) 12 - 7.2 = 4.8	-5.4
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 0.8 - 0.1 = 0.7	-4.7
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-4.6
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-3.6
(Note if $\neq I_2$ within + 1.0 feet, discard and resample)	✓

Elevation (NGVD) (i.e. Station + H)	Leakage - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silt	Dark Gray/ Black	Very loose			
0.1		Fine Sand + Gravel Mixture (Poorly sorted)	Color varies from Gray to brown	Firm			Contains Shell Hash and Organics
0.8							

Comments:

SEDIMENT FIELD SAMPLING LOG

	Project Name: NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
	Location: New Bedford, MA	**Vessel:**
	Client: USACE-NAE	**Chief Scientist:**

Station ID:	JQ18	Water Depth (A):	
Core Sample ID:	S-095-C004	Length of Push Core Assembly (B):	
Date:	12/8/2009	Water Surface to Top of Handle (C):	
Time On Station:		Length of Core (from bottom) (D):	0.80
Latitude N:		Surveyed Elevation (NGVD 29) (E):	
Longitude W:		Water Surface from Surveyed Elevation (F):	
GPS Accuracy:			
Predicted Tide (ft):			
Time of Collection:			
Collection Mechanism:			
Logged by:			
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom +/-H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.2	SM	sandy silt	v. dk gray		fine sand		
		SAND & Gravel, and one Cobble (3.5" wide)	dark gray - gray		Cobble		
0.8							

Comments:

One sample

0 - 0.2' Time: 1305

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: JP11
Core Sample ID: S-09S-C005
Date: 09/13/09
Time On Station: 11:10
Latitude N: 41°40.476
Longitude W: 70°54.881
GPS Accuracy: 8ft
Predicted Tide (ft):
Time of Collection: 11:23
Collection Mechanism:
Logged by:
Time Depart Station:

Water Depth (A): 4.3
Length of Push Core Assembly (B): 13
Water Surface to Top of Handle (C): 5.7
Length of Core (from bottom) (D): 1.8
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) = -0.5

(H) Elev. of the bottom of the core (NGVD): G - (B-C) = -7.8

13 - 5.7 = 7.3'

(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) = -6.7

1.8 - 6.7 = 1.1

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D = -6

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A = -4.8

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Between + H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Sandy Silt	Dark Brown/ Dark Grey	Loose			
0.7		Clay	Olive Gray	Firm			-Contains organic detritus and shell hash
1.8							

Comments:

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: JP11 [illegible]
Core Sample ID:
Date: 9/30/09 1347
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by:
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D):
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.55	Clayey silt w/sand or silty clay w/sand		Dark grey				Sample 0'-0.5'
1.80	Clay matrix w/high % of shells/shell hash		olive grey				Sample 1.0'-1.2'

Comments:

12-08-09
JK09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring | Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA | Vessel:
Client: USACE-NAE | Chief Scientist:

Station ID:	JK9	Water Depth (A):	4.7
Core Sample ID:	S-095-C006	Length of Push Core Assembly (B):	13
Date:	09/15/09	Water Surface to Top of Handle (C):	5.9
Time On Station:	11:38	Length of Core (from bottom) (D):	1.45
Latitude N:	41°40.485	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°54.900	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	8ft		
Predicted Tide (ft):			
Time of Collection:	11:42		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	11:50		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) -0.6

(H) Elev. of the bottom of the core (NGVD): G - (B-C) -7.7
13 - 5.9 = 7.1

(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) -6.65
1.45 - 0.8 = 1.05

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D -6.25

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A -5.3

(Note if $\neq I_2$ within + 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e. Bottom + H)	Lithology - Unified USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Clayey Silt	Dark Grey	Loose			-Some shell hash (Fine
0.4	-	-	-	-	-	-	-
		Clay	Olive Grey	Firm			-Shell hash, organic detritus
1.45							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: JK09
Core Sample ID: S-095-C006
Date: 12/8/2009
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DAW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.45
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD): H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Below = H)	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
	OH/ML	silt w/organics & little shell frags	V.dk grey	Homogenous		H_2S odor	
0.55		matrix is clay/silt w/oyster shells	V. dk grey	Homogenous matrix			
1.0		Clay/silt w/some fine sand and veg mat w/ oyster shells	V. dk grey				
1.45							

Comments: One sample collected
0 - 0.5 time 0932 S-095-C006-0-0.5

12-08-09
JN07

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: JN7
Core Sample ID: S-095-C007
Date: ~~9/28/09~~ 09/15/09
Time On Station: 12:01
Latitude N: 41° 40.492
Longitude W: 70° 54.892
GPS Accuracy: 12ft
Predicted Tide (ft):
Time of Collection: 12:10
Collection Mechanism: Push Core
Logged by: D. Bailey
Time Depart Station: 12:20

Water Depth (A): 3.9
Length of Push Core Assembly (B): 12.0
Water Surface to Top of Handle (C): 6.3
Length of Core (from bottom) (D): 1.5
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F: -0.5

(H) Elev. of the bottom of the core (NGVD): G - (B-C): -6.2

(z*) Elev. of visual transition (NGVD): H + (distance to visual transition): 12 - 6.3 = 5.7; -5.4

1.5 - 0.7 = 0.8

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D: -4.7'

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A: -4.4

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = 0)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silt	Black to Dark Gray	loose	fine	H_2S	
-0.3		Clayey Silt	Dark Gray	Firm			
-0.7		Clay	Olive Gray	Firm			Organic Detritus
-1.5							

Comments:
-Slight sheen on the top of core

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: JN07
Core Sample ID: S-095-C007
Date: 12/8/2009
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.5
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Stations + H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.9	OL	Organic silt with poorly sorted sand & gravel	black				
1.5		clayey silt w fine sand, organic debris & shell frags	dark grey				

Comments:

2 samples:
0.4 - 0.9' time 11:25
1.0 - 1.5' 11:25

12-08-09
JQ06

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	JQ6	Water Depth (A):	4.3
Core Sample ID:	S-09S-C008	Length of Push Core Assembly (B):	12
Date:	09/15/09	Water Surface to Top of Handle (C):	5.8
Time On Station:	12:24	Length of Core (from bottom) (D):	1.4
Latitude N:	41°40.497	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°54.875	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	12ft		
Predicted Tide (ft):			
Time of Collection:	12:27		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	12:33		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.3
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-6.5
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 12-5.8 = 6.2 1.4 - 0.8 = 0.6	-5.9
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-5.1
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-4.6

(Note if $\neq I_2$ within + 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e. Bottom = 0)	Geologic - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silt	Black	loose	Fine		
0.4		Clay w/ debris + shell hash	Dark Olive Gray	Firm			Heterogenous Mixture
0.8		Clay	Olive Gray	Firm			Homogenous
1.4							

Comments:

SEDIMENT FIELD SAMPLING LOG

	Project Name: NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
	Location: New Bedford, MA	**Vessel:**
	Client: USACE-NAE	**Chief Scientist:**

Station ID: JQ06
Core Sample ID: S-095-C-0908
Date: 12/9/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DJW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.4
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD): H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
	NL	Organic silt w/ low % fine sand	V dk olive gray				
0.8							
		Clayey silt w/ organic & shell frags	V dk olive gray				
1.4							

Comments:

2 samples
0.3 - 0.8 time: 1008
0.8 - 1.4 1008

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: JQ2
Core Sample ID: S-095-C009
Date: 09/15/09
Time On Station: 12:38
Latitude N: 41°40.513
Longitude W: 70°54.875
GPS Accuracy: 14
Predicted Tide (ft):
Time of Collection: 12:41
Collection Mechanism: Push Core
Logged by: D. Bailey
Time Depart Station:

Water Depth (A): 5.2
Length of Push Core Assembly (B): 13.0
Water Surface to Top of Handle (C): 5.4
Length of Core (from bottom) (D): 2.2
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) — −0.4

(H) Elev. of the bottom of the core (NGVD): G - (B-C) — −8.0

13.0 − 5.4 = 7.6

(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) — −6.6

2.2 − 1.8 = 1.4

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D — −5.8

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A — −5.6

(Note if $\neq I_2$ within + 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silt	Dark Gray to Black	loose			-Shell hash (very fine
0.4		Clayey Silt	Dark Gray	Firm			Well Mixed
0.8		Silt	Olive Gray	Firm			Homogenous
2.1		Pete @ very bottom	Brown/ Orange Brown				
2.2							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: JQ2
Core Sample ID:
Date: 9/30/09 13:33
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by:
Time Depart Station:

Water Depth (A): 5.2
Length of Push Core Assembly (B): 13.0
Water Surface to Top of Handle (C): 5.4
Length of Core (from bottom) (D): 2.2
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F: -0.4

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.50	Silt, w/ fine sand & shell fragments		dark grey				Sample: 0-0.5'
1.95	Clay w/ organic debris		olive grey				
	Clay matrix w/ sand & large org/plant debris						

Comments:

Progress core
TM2

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP	**Project Name:** NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
	Location: New Bedford, MA	**Vessel:**
	Client: USACE-NAE	**Chief Scientist:**

Station ID:	JM2	Water Depth (A):	4.8
Core Sample ID:	S-095-C010	Length of Push Core Assembly (B):	12
Date:	09/15/09	Water Surface to Top of Handle (C):	5.0
Time On Station:	12:55	Length of Core (from bottom) (D):	1.5
Latitude N:	41°40.514	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°54.897	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	13		
Predicted Tide (ft):			
Time of Collection:	12:58		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.3
(H) Elev. of the bottom of the core (NGVD): G - (B-C) 12 - 5 = 7.0	-7.3
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 1.5 - 0.7 = 0.8	-6.5
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-5.8
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-5.1
(Note if $\neq I_2$ within + 1.0 feet, discard and resample)	✓

Elevation (NGVD) (Lt. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silt/ Clayey silt	Black/ Dark Gay	loose		H_2S	
-0.7		Clay	Olive Gray	Firm			
-1.5							

Comments: H_2S Odor, Slight sheen on top

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: JM2
Core Sample ID:
Date: 9/30/09, 1358
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by:
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D):
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Below = -)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0. OL	Clay w/ some fine shell hash		dark grey & slight sheen	m/Loosely consolidated			Sample: 0-0.5'
0.58							
	Clay w/ shell fragments		dk grey				Sample: 0.9-1.2'
1.50 Bottom							

Comments:

12-08-09
JK03

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP	**Project Name:** NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
	Location: New Bedford, MA	**Vessel:**
	Client: USACE-NAE	**Chief Scientist:**

Station ID:	JK3	Water Depth (A):	4.7
Core Sample ID:	S-09S-C011	Length of Push Core Assembly (B):	13.0
Date:	09/15/09	Water Surface to Top of Handle (C):	5.6
Time On Station:	13:11	Length of Core (from bottom) (D):	1.8
Latitude N:	41°40.510	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°54.908	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	13ft		
Predicted Tide (ft):			
Time of Collection:	13		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.1
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-7.5
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 13.0 - 5.4 = 7.4	-6.5
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D 1.8 - 0.8 = 1.0'	-5.7
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-4.8
(Note if $\neq I_2$ within + 1.0 feet, discard and resample)	✓

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silt	Dark Gray/ Black	Loose			
~~0.0~~ 8.9		Clay w/shell hash	Dark Gray / Dark Olive Gray	Firm			
0.8		Clay	Olive Gray	Firm			
1.8							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring — Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA — Vessel:
Client: USACE-NAE — Chief Scientist:

Station ID: JK03
Core Sample ID: S-09S-C011
Date: 12/8/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DAW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.80
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Other	Comments
	OV	organic silt w/ fine sand	Black	non-gritty			Layer has compacted 0.2' due to freeze/thaw
0.48		Silty clay matrix w/ sand lenses and occasional oyster shell frags	dk grey-grey				
1.8							

Comments: Two samples
0-0.5 Time: 11:09
0.6-1.1 11:09

Station: JB03
11/17/09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring		Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA		Vessel:
Client: USACE-NAE		Chief Scientist:

Station ID:	S-090-004	Water Depth (A):	6.5
Core Sample ID:	3B03	Length of Push Core Assembly (B):	12.8
Date:	10/15/09	Water Surface to Top of Handle (C):	4.7
Time On Station:	10:36	Length of Core (from bottom) (D):	1.98
Latitude N:	41°40.510	Surveyed Elevation (NGVD 29) (E):	-
Longitude W:	70°54.948	Water Surface from Surveyed Elevation (F):	-
GPS Accuracy:			
Predicted Tide (ft):			
Time of Collection:	10:45		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	10:49		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.8
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-8.9
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-7.52
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	1.98-0.6 = 1.38 -6.92
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-7.3

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Linkage - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0		Sandy Clay	Dark Gray	loose to moderate consolidation			-Shell fragments
0.6 ~~0.8~~	- -	- -	- -	- -	- -	- -	- - - - -
		Clay	Olive Gray	well consolidated			-Organic Detritus
1.98							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: JB03
Core Sample ID: S-090-C004
Date: 11/17/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DWMSH
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.98
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.44		Organic silt,	V dk grey	Loose, homogeneous			visible sheen, high water content
1.98		Clayey silt w/ fine sand	V. dk Olive grey	mod. consistency		H_2S	

Comments: Two analytical samples collected:
0-0.5 and 0.6-1.1

12-08-09
JE06

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring	Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA	Vessel:
Client: USACE-NAE	Chief Scientist:

Station ID:	S-090-005	Water Depth (A):	5.5
Core Sample ID:	SE06	Length of Push Core Assembly (B):	14.2
Date:	10/15/09	Water Surface to Top of Handle (C):	6.7
Time On Station:	10:51	Length of Core (from bottom) (D):	1.70
Latitude N:	41°40.497	Surveyed Elevation (NGVD 29) (E):	-
Longitude W:	70°54.937	Water Surface from Surveyed Elevation (F):	-
GPS Accuracy:			
Predicted Tide (ft):			
Time of Collection:	10:58		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	11:03		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-1.0
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-8.5
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-7.1
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	1.7-0.3=1.4 -6.8
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-6.5

(Note if $\neq I_2$ within + 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0		Sandy Clay	Dark Grey	loosly consolidated			-Shell hash
0.3		Clay w/ organic debris	Olive Grey	Well consolidated			-Some shell hash
1.70							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA	**Vessel:**
Client: USACE-NAE	**Chief Scientist:**

Station ID:	JE06	Water Depth (A):	
Core Sample ID:	S-090-C005	Length of Push Core Assembly (B):	
Date:	12/8/09	Water Surface to Top of Handle (C):	
Time On Station:		Length of Core (from bottom) (D):	1.7
Latitude N:		Surveyed Elevation (NGVD 29) (E):	
Longitude W:		Water Surface from Surveyed Elevation (F):	
GPS Accuracy:			
Predicted Tide (ft):			
Time of Collection:			
Collection Mechanism:			
Logged by:	DRW		
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.1	OL	Organic silt w/ fine sand	v dk olive grey	loose			- Sheen observed on top SEDS
		Organic clay silt w/ fibrous org. & shell frags	dark olive grey			strong H_2S ↓	

Comments:

Two samples:	time
0 - 0.5	12:50
0.5 - 1.0	12:50

12-08-09
JG09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	S-090-C006	Water Depth (A):	4.7
Core Sample ID:	JG09	Length of Push Core Assembly (B):	12.8
Date:	10/15/09	Water Surface to Top of Handle (C):	6.3
Time On Station:	11:05	Length of Core (from bottom) (D):	1.64
Latitude N:	41°40.487	Surveyed Elevation (NGVD 29) (E):	–
Longitude W:	70°54.926	Water Surface from Surveyed Elevation (F):	–
GPS Accuracy:			
Predicted Tide (ft):			
Time of Collection:	11:10		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	11:18		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-1.0
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-7.5
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-6.26
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	1.64-0.4=1.24 -5.86
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-5.7
(Note if $\neq I_2$ within + 1.0 feet, discard and resample)	✓

Elevation (NGVD) (i.e. Station + H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
		Sand/ Silt/ Clay	Dark Grey	Unconsolidated/ loosely consolidated			-Shell fragments + mesh
0.4		Silty Clay	Grey				-Slightly disturbed, possible burrow -Shell fragments
1.1		Clay	Olive Grey	Well consolidated			-Organic detritus
1.64							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA	**Vessel:**
Client: USACE-NAE	**Chief Scientist:**

Station ID:	JG09	Water Depth (A):	
Core Sample ID:	S-090-C006	Length of Push Core Assembly (B):	
Date:	12/8/2009	Water Surface to Top of Handle (C):	
Time On Station:		Length of Core (from bottom) (D):	1.60
Latitude N:		Surveyed Elevation (NGVD 29) (E):	
Longitude W:		Water Surface from Surveyed Elevation (F):	
GPS Accuracy:			
Predicted Tide (ft):			
Time of Collection:			
Collection Mechanism:			
Logged by:	DRW		
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if ≠ I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.3	ML	Silt w/ organics and fine sand	v. dk grey				
1.60		Silty clay w/ fine sand and shell frags	dk grey	homogenous			Shells @ 1.4'

Comments:

2 samples time
0 - 0.5' 1042
0.5 - 1.0' 1042
one QC sample collected from 0.5 - 1.0' - MSMSD

12-08-09
JO13

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring		Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA		Vessel:
Client: USACE-NAE		Chief Scientist:

Station ID:	S-090-C007	Water Depth (A):	2.5
Core Sample ID:	5013	Length of Push Core Assembly (B):	7.2
Date:	10/15/09	Water Surface to Top of Handle (C):	3.1
Time On Station:	11:25	Length of Core (from bottom) (D):	1.12
Latitude N:	41° 40.467	Surveyed Elevation (NGVD 29) (E):	–
Longitude W:	70°54.885	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:			
Predicted Tide (ft):			
Time of Collection:	11:30		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	11:38		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.8
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-4.9
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 1.12-0.3=0.82	-4.08
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-3.78
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-3.3
(Note if ≠ I_2 within + 1.0 feet, discard and resample) ✓	

Elevation (NGVD) (i.e. Bottom = -ve)	Lithology - Modified USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0		Silty Clay w/ organics	Very Dark Grey	loose consolidation			
0.3		Clay	Olive Gray				- Dark gray streaking - Transition layer, may be mixed
0.9		Clay	Olive Gray	Well consolidated			
1.12							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: J013
Core Sample ID: J-090-C007
Date: 12/8/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.10
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD): H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Stations + H)	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.25	OL	organic silt w/ trace sand	black	loose			
0.70	ML	clayey silt w/ sand sand is fine-med grained	V. dark grey				
1.10		Black clay silt w/ organics and oyster shells	V. dk grey.				

Comments:
2 Samples:
* 0-0.5 time 0949
* 0.5-1.1 1949

12-08-09
JC15

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: S-090-C008
Core Sample ID: SQ15
Date:
Time On Station: 11:41
Latitude N: 41040.460
Longitude W: 70°54.879
GPS Accuracy:
Predicted Tide (ft):
Time of Collection: 11:57
Collection Mechanism: Push Core
Logged by: D. Bailey
Time Depart Station: 12:01

Water Depth (A): 1.9
Length of Push Core Assembly (B): 7.2
Water Surface to Top of Handle (C): 3.7
Length of Core (from bottom) (D): 1.40
Surveyed Elevation (NGVD 29) (E): —
Water Surface from Surveyed Elevation (F): —

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F: -1.0

(H) Elev. of the bottom of the core (NGVD): G - (B-C): -4.5

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition): -3.5

1.4 - .4 = 1

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D: -3.1

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A: -2.9

(Note if $\neq I_2$ within + 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e. Stations + H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Sand/ Organic Clay	Dark Gray/ Dark Brown	loose/ Moderate consolidation	—	—	—
0.4	—	Clay	Dark Gray	Well consolidated			Homogenous
1.08	—	—	—	—	—	—	—
		Clay	Olive Gray	Well consolidated			
1.4							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA	**Vessel:**
Client: USACE-NAE	**Chief Scientist:**

Station ID:	JQ15	Water Depth (A):	
Core Sample ID:	S-090-C008	Length of Push Core Assembly (B):	
Date:	12/8/2009	Water Surface to Top of Handle (C):	
Time On Station:		Length of Core (from bottom) (D):	1.4
Latitude N:		Surveyed Elevation (NGVD 29) (E):	
Longitude W:		Water Surface from Surveyed Elevation (F):	
GPS Accuracy:			
Predicted Tide (ft):			
Time of Collection:			
Collection Mechanism:			
Logged by:	DRW		
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if ≠ I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.5	OL	Silt w/ organics	V. dk Brown - Black			Petrol odor H_2S odor, slight sheen.	
0.75	ML	Silt w/ organics & high % of sand & gravel	V dk. grey		gravel - 1¼		sand & gravel is poorly sorted
0.9		silt w/ organics	dark grey				
1.1		Clayey silt	grey				
1.4		organic silt, fiberous	dk brown				

Comments: 2 samples 0-0.5' Time 11:40
0.9-1.4' 11:40

Station:JB13
11/17/09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring		Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA		Vessel:
Client: USACE-NAE		Chief Scientist:

Station ID:	S-090-C009	Water Depth (A):	6.3
Core Sample ID:	JB13	Length of Push Core Assembly (B):	13.2
Date:	10/15/09	Water Surface to Top of Handle (C):	5.6
Time On Station:	12:08	Length of Core (from bottom) (D):	1.1
Latitude N:	41040.489	Surveyed Elevation (NGVD 29) (E):	-
Longitude W:	70°54.954	Water Surface from Surveyed Elevation (F):	-
GPS Accuracy:			
Predicted Tide (ft):			
Time of Collection:	12:15		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	12:18		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-1.4
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-9
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-8.3
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-7.9
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-7.7

1.1-0.4 = .7

(Note if $\neq I_2$ within + 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e. Bottom = H)	Linkage - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Clayey Sand	Dark Grey				
0.4		Sand with low % of silt + clay	Light Brown		Fine Sand		- Homogenous - Well sorted fine sand
1.1							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: JB13
Core Sample ID: S-090-C009
Date: 11/17/2009
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DCW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D):
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = 0)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.1	OL	Silt	V. dk grey				Analytical sample 0-0.4'
0.4	SP	SAND w/ silt	V. dk gray				
1.1		SAND med-grained w/gravel	Brown	Firm			analytical sample 0.5-1.0'

Comments: Two analytical samples collected: 0-0.4' and 0.5-1.0'

Station: JG16
11/17/09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring		Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA		Vessel:
Client: USACE-NAE		Chief Scientist:

Station ID:	S-090-C0[illegible]18	Water Depth (A):	5.2
Core Sample ID:	JG16	Length of Push Core Assembly (B):	[illegible]12
Date:	10/15/09	Water Surface to Top of Handle (C):	4.5
Time On Station:	12:21	Length of Core (from bottom) (D):	2.18
Latitude N:	41°40.456	Surveyed Elevation (NGVD 29) (E):	—
Longitude W:	70°54.926	Water Surface from Surveyed Elevation (F):	—
GPS Accuracy:			
Predicted Tide (ft):			
Time of Collection:	12:33		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	12:40		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	[illegible]-1.2
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	[illegible]-8.7
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	[illegible]-7.12
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	2.18 - 0.6 = 1.58 [illegible]-6.52
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-6.4
(Note if $\neq I_2$ within + 1.0 feet, discard and resample)	✓

Elevation (NGVD) (i.e. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Clay w/Silt + Sand	Gray	Moderate			- Organic detritus - Shell hash
0.6	-	-	-	-	-	-	-
		Clay	Olive Gray	Well consolidated			Homogenous
2.18							

Comments:

- Heavy sheen on water

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: JG16
Core Sample ID: S-090-CORE
Date: 11/17/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: KGM
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D):
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H	Linkage - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		clayey silt with fine sand	very dark at top dark olive grey				oyster shell hash
0.5							
1.1							
2.18							

Comments: sample taken between 0.0'- 0.5' (and homolog taken) and 0.6 - 1.1 feet

New Bedford Harbor
12/17/09
2009
2.6 ft.
EXPO

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring | Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA | Vessel:
Client: USACE-NAE | Chief Scientist:

Station ID: JQ09
Core Sample ID: S-01D-C017
Date: 12/15/09
Time On Station: 10:05
Latitude N: 41° 40.485'
Longitude W: 70° 54.875'
GPS Accuracy: 13ft.
Predicted Tide (ft): —
Time of Collection: 10:10
Collection Mechanism: Push Core
Logged by: KGM
Time Depart Station: 10:16

Water Depth (A): 6.2
Length of Push Core Assembly (B): 13.1
Water Surface to Top of Handle (C): 4.55
Length of Core (from bottom) (D): 2.6
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F): +0.9 (Sheetpile #45 Area)
(H) Elev. of the bottom of the core (NGVD): G - (B-C): -7.65
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition): 13.1 - 4.55 = 8.55 ~~2.6 - 0.4 = 2.2~~ KGM 12/21/09 ~~-5.45~~ -5.05
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D: -5.05
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A: -5.3

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Enhanced description, core split on 12/17/09 @ 1115

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.4	ML/CL	Silty clay-clayey silt	V dk grey (5Y 3/1)	loose		H_2S	-No sheen noticed, despite field collection comments.
1.0	ML/OL	Silty clay-clayey silt	dk olive grey (5Y 3/2)	loose - moderate consolidated		H_2S	
2.6	ML/CL	Silty clay-clayey silt	~~black~~ olive grey (5Y 3/2)	well consolidated		H_2S	

Comments: Spotty sheen on top noticed during collection.
- Two samples collected
  - 0 - 0.5' Time: 11:20, 12/17
  - 0.5 - 1.0' 11:20, 12/17

New Bedford Harbor
12/17/09
JR14
1.55 ft.

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: JR14
Core Sample ID: S-09D-C018
Date: 12/15/09
Time On Station: 10:19
Latitude N: 41°40.464'
Longitude W: 70°54.870'
GPS Accuracy: 10 ft.
Predicted Tide (ft): —
Time of Collection: 10:26
Collection Mechanism: push core
Logged by: K&M
Time Depart Station: 10:31

Water Depth (A): 4.9
Length of Push Core Assembly (B): 13.35
Water Surface to Top of Handle (C): 6.75
Length of Core (from bottom) (D): 1.55
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) +0.7 (Sheetpile #48 ~~Area J~~)

(H) Elev. of the bottom of the core (NGVD): G - (B-C) -5.9

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 13.35 - 6.75 = 6.6 ~~-4.75~~ -4.35 K&M 12/21/09

~~1.55 - 0.4 = 1.16~~

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D -4.35

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A -4.2

(Note if ≠ I_2 within ± 1.0 feet, discard and resample)

Internal Description, Core split on 12/17/09 @ 1155

Elevation (NGVD) (i.e. Bottom = H	Unified - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.4	ML	Sandy silt	Dk grey (5Y 3/1)	Loose	- coarse sand	H_2S	No visible sheen, despite field collection comment.
1.55	SW-ML	- silty sand - sand is poorly sorted - oyster shell frags.	dark olive grey (5Y 3/2)	well consolidated	- Gravel (-1 ϕ)	H_2S	

Comments:
- Spotty sheen on top noticed during collection
- Two samples collected

	Time
0-0.5	12/17 12:00
0.5-1.0	12/17 12:00

New Bedford Harbor
12/17/09
JO14
1-2ft

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: J014
Core Sample ID: S-09D-C019
Date: 12/15/09
Time On Station: 10:34
Latitude N: 41° 40.464'
Longitude W: 70° 54.887'
GPS Accuracy: 14 ft
Predicted Tide (ft): —
Time of Collection: 10:37
Collection Mechanism: push core
Logged by: KEM
Time Depart Station: 10:40

Water Depth (A): 6.2
Length of Push Core Assembly (B): 11.8
Water Surface to Top of Handle (C): 4.2
Length of Core (from bottom) (D): 1.2
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) +0.6

(H) Elev. of the bottom of the core (NGVD): G - (B-C) −7.0

11.8 − 4.2 = 7.6

(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) −6.6

1.2 − 0.8 = 0.4

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D −5.8

(I_3) Elev. of the sed-water interface as measured from water depth (NGVD): G - A −5.6

(Note if $\neq I_3$ within + 1.0 feet, discard and resample)

Interval description, core split 12/17/09 @ 1210

Elevation (NGVD) (i.e. Notes + H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Constituents
0.3	OL	organic silt w/ fine sand	Black - (5Y 2.5/1)	Loose		light petrol & H_2S	
0.8	OL	Organic silt & fine sand	V. dk gry (5Y 3/1)	Loose		H_2S	
1.2	ML	Silt - Clayey silt w/ low % organics & fine sands	V dk gry (5Y 3/1)	Moderately consolidated		H_2S	

Comments:
- Spotty sheen, slight odor on surface during collection
- Two samples collected for analysis
  0 - 0.5
  0.8 - 1.2
  > 12/17 @ 1220

New Bedford Harbor
12/17/09
JN16
2.95ft

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: JN16
Core Sample ID: S-09D-C020
Date: 12/15/09
Time On Station: 10:42
Latitude N: 41° 40.456'
Longitude W: 70° 54.892'
GPS Accuracy: 15 ft.
Predicted Tide (ft): —
Time of Collection: 10:49
Collection Mechanism: Pushcore
Logged by: K6M
Time Depart Station: 10:53

Water Depth (A): 6.7
Length of Push Core Assembly (B): 12.7
Water Surface to Top of Handle (C): 3.6
Length of Core (from bottom) (D): ~~2.03~~ 2.05 K6M 12/15/09
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) +0.5

(H) Elev. of the bottom of the core (NGVD): G - (B-C) -8.6
12.7 - 3.6

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) ~~-7.15~~ -6.55 K6M 12/21/09
~~2.05-0.6=1.45~~

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D -6.55

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A -6.2

(Note if $\neq I_2$ within ± 1.0 feet, discard and resample)

Textural description, core split 1230 on 12/17/09

Elevation (NGVD) (i.e. Bottom + H	Unified - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.6	ML	Silt w/ sand & shell frags	V. dk grey (5Y 3/1)	Loose		H_2S	-NO sheen visible on cores despite field notes comment, sheen was visible on overlaying water
1.15	ML	Silt w/ higher % sand & gravel (shell frags)	↓	moderately consolidated	gravel (-1 ϕ)	H_2S	
~~2.05~~	ML/CL	Silty clay - clayey silt w/ organic debris	↓	well consolidated		H_2S	-homogeneous texture, content, consistency.

Comments:
- Spotty sheen on surface, slight odor during collection
- Two samples collected for analysis: Time
  0-0.5 1245 12/17
  0.5-1.0 1245 12/17

New Bedford Harbor
12/17/09
JP22
1.8 ft.

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring | Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA | Vessel:
Client: USACE-NAE | Chief Scientist:

Station ID: JP22
Core Sample ID: S-09D-C021
Date: 12/15/09
Time On Station: 11:02
Latitude N: 41° 40.431
Longitude W: 70° 54.882
GPS Accuracy: 11 ft.
Predicted Tide (ft): —
Time of Collection: 11:08
Collection Mechanism: push core
Logged by: KGM
Time Depart Station: 11:12

Water Depth (A): 5.1
Length of Push Core Assembly (B): 13.2
Water Surface to Top of Handle (C): 6.2
Length of Core (from bottom) (D): 1.8
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F): +0.2
(H) Elev. of the bottom of the core (NGVD): G - (B-C): -6.8
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition): 13.2 - 6.2 = 7.0 → -5.28
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D: 1.8 - 0.24 = 1.56 → -5.0
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A: -4.9

(Note if $\neq I_2$ within ± 1.0 feet, discard and resample)

Internal description, core split 12/17/09 @ 1235

Elevation (NGVD) (i.e. Bottom = H)	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.1	OL	organic silt w/ sand	Black (5Y 2.5/1)	Loose		Slight petrol	Sheen visible when homogenizing 0-0.5 subsample interval.
0.24	OL/ML	Silt w/ shell frags	v. dark grey (5Y 3/1)	Loose		H_2S	
1.0	ML/CL	Silt w/ organic detritus & shell frags.	dark olive grey	moderately consolidated		H_2S	
1.8	ML/CL	Silt w/ organic detritus & oyster shell frags.	dark olive grey	well consolidated		H_2S	

Comments: - spotty sheen on surface of core noted during collection
- Two samples collected for analysis, and One QC sample (MS/MSD)
0-0.5 } 12/17 1300 0.5-1.0' → 12/17 @ 1305
0-0.5 MS MSD }

New Bedford Harbor
12/17/09
JD22
1.6 ft.

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring | Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA | Vessel:
Client: USACE-NAE | Chief Scientist:

Station ID: JD22
Core Sample ID: S-09D-CO22
Date: 12/15/09
Time On Station: 11:17
Latitude N: 41° 40.431'
Longitude W: 70 54.941'
GPS Accuracy: 12 ft.
Predicted Tide (ft): —
Time of Collection: 11:20
Collection Mechanism: push core
Logged by: KGM
Time Depart Station: 11:26

Water Depth (A): 6.6
Length of Push Core Assembly (B): 12.2
Water Surface to Top of Handle (C): 3.5
Length of Core (from bottom) (D): 1.6
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F: 0.0
(H) Elev. of the bottom of the core (NGVD): G - (B-C): -8.7
12.2 - 3.5 = 8.7
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition): ~~-7.36~~ -7.1 KGM 12/21/09
~~-6.26 + 1.34~~
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D: -7.1
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A: -6.6

(Note if $\neq I_2$ within ± 1.0 feet, discard and resample)

Internal description, core split 12/17/09 @ 13:10

Elevation (NGVD) (G & Bottom = H)	Lithology - Included USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.26	ML (OL)	Silt w/ organics	V. dk grey (5Y 3/1)	Loose		H_2S	Homogenous in texture
0.94	ML	Sandy Silt w/ shell frags	V. dk. grey (5Y 3/1)	Loose - Moderately consolidated	Coarse sand	H_2S	
1.16	ML/CL	Silt w/ organic detritus	Dark olive grey (5Y 3/2)	well consolidated		H_2S	

Comments: spotty sheen on sediment surface noted during collection
- Two samples collected for analysis:
  0 - 0.5 > 12/17 @ 1325
  1.0 - 1.5

New Bedford Harbor
12/17/09
JB19
1.95 ft.

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: JB19
Core Sample ID: S-09D-CP23
Date: 12/13/09
Time On Station: 11:29
Latitude N: 41°40.444
Longitude W: 70°54.953
GPS Accuracy: 14 ft.
Predicted Tide (ft): —
Time of Collection: 11:35
Collection Mechanism: push core
Logged by: KGM
Time Depart Station: 11:41

Water Depth (A): 6.6
Length of Push Core Assembly (B): 13.7
Water Surface to Top of Handle (C): 5.05
Length of Core (from bottom) (D): 1.95
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) -0.2

(H) Elev. of the bottom of the core (NGVD): G - (B-C) -8.85

(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) 13.7 - 5.05 = 8.65 -7.25

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D 1.95 - 0.35 = 1.6 -6.9

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A -6.8

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Internal description, core split on 12/17/09 @ 13:15

Elevation (NGVD) (i.e. Minus = H)	Lithology: Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.35	OL (ML)	Silt w/ Organics	Black (5Y 2.5/1)	Loose		Slight petrol	- Organics are Peripheral, not fibrous.
1.24	ML	Silt w/ Organics	V. dk grey (5Y 3/1) drying	Loose - Moderately Consolidated		H_2S	
1.95	ML/CL	~~Silty clay~~, clayey Silt w/ Organic Particles	V dk. grey (5Y 3/1)	well consolidated		- strong chemical odor	- PID recorded "HIGH" VOC readings. - Homogenous texture, consistency

Comments:
- Two samples collected for analysis
  0-0.5 > 12/17 @ 1330
  0.5-1.0

New Bedford Harbor
12/17/09
JB16
1.3 ft.

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	JB16	Water Depth (A):	6.1
Core Sample ID:	S-09D-C0024		
Date:	12/15/09	Length of Push Core Assembly (B):	13.75
Time On Station:	11:42		
Latitude N:	41° 40. 456	Water Surface to Top of Handle (C):	6.0
Longitude W:	70° 54. 953		
GPS Accuracy:	15ft	Length of Core (from bottom) (D):	1.3
Predicted Tide (ft):	—		
Time of Collection:	11:45	Surveyed Elevation (NGVD 29) (E):	
Collection Mechanism:	pushcore		
Logged by:	KGM	Water Surface from Surveyed Elevation (F):	
Time Depart Station:	11:51		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) = -0.3

(H) Elev. of the bottom of the core (NGVD): G - (B-C)
13.75 - 6.0 = 7.75
= -8.05

(z*) Elev. of visual transition (NGVD): H + (distance to visual transition)
~~LO + 1.3 - 0.2 = 1.1~~
KGM 12/21/09
~~-6.95~~ -6.75

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D = -6.75

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A = -6.4

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Internal description Core split 12/17/09 @ 1435

Elevation (NGVD) (i.e. Bottom = H)	Unified - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.2	ML/CL	SILT-Clayey, silt	(2.5Y 3/1) V. dk grey	Loose			
1.08	ML/CL	Clayey-Silt w/ organic detritus	V. dark grey (2.5Y 3/1)	well Consolidated			
1.3	OH	organic material/ detritus (Peat like)	V. dk (10YR 3/2) brown — dk yellowish brown (10YR 4/4)				

Comments: spotty sheen on surface
- ~~two~~ samples collected for analysis
0-0.5 > 12/17 @ 1455
0.5-1.0

New Bedford Harbor
12/17/09
SF13
2.2 ft.
EXPO

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: JF13
Core Sample ID: S-09D-C025
Date: 12/15/09
Time On Station: 11:55
Latitude N: 41° 40.468'
Longitude W: 70° 54.931'
GPS Accuracy: 11 ft.
Predicted Tide (ft): —
Time of Collection: 12:00
Collection Mechanism: push core
Logged by: KGM
Time Depart Station: 12:05

Water Depth (A): ~~0.~~ 5.4 KGM 12/15/09
Length of Push Core Assembly (B): 13.2
Water Surface to Top of Handle (C): 5.3
Length of Core (from bottom) (D): 2.2
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F: -0.3
(H) Elev. of the bottom of the core (NGVD): G - (B-C): -8.2
13.2 - 5.3 = 7.9
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition): -6.54
2.2 - 0.54 = 1.66
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D: -6.0
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A: -5.7

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Internal description, core split @ 1505 on 12/17/09

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Sediment USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.54	OL	Silt w/organics and low % fine sand	Black (2.5Y 2.5/1)	Loose		Slight petrol	Slight sheen on sediment.
0.96	ML	Silt w/ organic debris	V. dk grey (2.5Y 3/1)	Loose – moderately consolidated		H_2S	possible sheen
2.20	ML/CL	Clayey silt – silty clay w/ organic debris	V. dk grey	well consolidated		H_2S	

Comments: spotty sheen on core surface when collected
- 2 samples collected for analysis
0-0.5
1.0-1.5
> 12/17 @ 1515

New Bedford Harbor
12/17/09
SK12
1.9 ft.

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring — Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA — Vessel:
Client: USACE-NAE — Chief Scientist:

Station ID:	JK12	Water Depth (A):	5.0
Core Sample ID:	S-09D-C0026	Length of Push Core Assembly (B):	12.5
Date:	12/15/09	Water Surface to Top of Handle (C):	5.6
Time On Station:	12:08	Length of Core (from bottom) (D):	1.9
Latitude N:	41°40.472'	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70° 54.910'	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	14ft.		
Predicted Tide (ft):	—		
Time of Collection:	12:12		
Collection Mechanism:	push core		
Logged by:	KGM		
Time Depart Station:	12:16		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) = -0.4

(H) Elev. of the bottom of the core (NGVD): G-(B-C) = -7.3
12.5 - 5.6 = 6.9

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) = -5.66
1.9 - 0.26 = 1.64

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D = -5.4

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A = -5.4

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Internal Description, core split @1524 on 12/17/09

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.26	OL	organic silt	Black (2.5y 2.5/1)	loose		Slight petrol	Slight sheen homogeneous texture & composition
0.86	ML	organic silt w/ fine sand	dk olive grey – v. dk grey (varies) (2.5Y 3/2 - 2.5Y 3/1)	loose		H_2S	Slight sheen
1.22	ML	organic silt w/shell frags	v. dk grey (2.5Y 3/1)	Loose to moderately consolidated		H_2S	Slight sheen
1.9	ML/CL	Clayey silt w/ some loose fine sand & oyster shells	v. dk grey (2.5Y 3/1)	well consolidated		H_2S	No sheen

Comments:
Spotty sheen on surface of core noted during collection
* Two samples collected for analysis
0-0.5
1.0-1.5
> 12/17/09 @ 1527

New Bedford Harbor
12/17/09
SG18
1.65 ft.

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA	**Vessel:**
Client: USACE-NAE	**Chief Scientist:**

Station ID:	JG18	Water Depth (A):	5.7
Core Sample ID:	S-Ø9D-CØ27		
Date:	12/15/09	Length of Push Core Assembly (B):	12.2
Time On Station:	12:21		
Latitude N:	41° 40.448'	Water Surface to Top of Handle (C):	4.6
Longitude W:	70° 54.925'		
GPS Accuracy:	15ft	Length of Core (from bottom) (D):	1.65
Predicted Tide (ft):	—		
Time of Collection:	12:25	Surveyed Elevation (NGVD 29) (E):	
Collection Mechanism:	push core		
Logged by:	KGM	Water Surface from Surveyed Elevation (F):	
Time Depart Station:	12:28		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	−Ø.4
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	−8.Ø
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 12.2 − 4.6 = 7.6 ~~1.65 − 0.7 = 0.95~~	KGM 12/21/09 ~~−7.Ø~~ −6.35
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	−6.35
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	−6.1

(Note if ≠ I_2 within + 1.0 feet, discard and resample)

Internal description, core split 12/17/2009 @ 1545

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.7	ML	Silt w/organics and fine sand	v. dk grey (2.5Y 3/1)	Loose		H_2S	
1.65	~~ML/CL~~ DRW 12/17 ML	Silt - clayey silt w/ organic detritus and fine med sand	v. dk grey (2.5Y 3/1)	well consolidated		H_2S	

Comments:

- Two samples collected for analysis
  0-0.5
  0.5-1.0
  > 12/17/09 @ 1555

S-09G-C002
8/12/09
10:46

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: LL4
Core Sample ID: S-096-C002
Date: 8/12/09
Time On Station: 10:27
Latitude N: 41° 40.032'
Longitude W: 70° 55.078
GPS Accuracy: 10 ft.
Predicted Tide (ft):
Time of Collection: ~~10:37~~ 10:46
Collection Mechanism: push core
Logged by: K. McCartney
Time Depart Station: 10:57

Water Depth (A): 8.6 ft.
Length of Push Core Assembly (B): ~~15.9 ft.~~ 15.9 ft.
Water Surface to Top of Handle (C): ~~3.7 ft.~~ 3.7 ft
Length of Core (from bottom) (D): 3.4 ft.
Surveyed Elevation (NGVD 29) (E): 4.0 ft.
Water Surface from Surveyed Elevation (F): ~~1.7 ft.~~ 2.3 ft

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F (tide board) ~~2.3 ft.~~ 1.7 ft.
(H) Elev. of the bottom of the core (NGVD): G - (B-C) ~~-9.9 ft.~~ -10.5 ft
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) ~~-8.9 ft.~~ -9.3 ft.
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D ~~-6.5 ft.~~ -7.1 ft.
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A ~~-6.3 ft.~~ -6.9 ft.

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Stations + 0)	Lithology - Included USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0	OL	silt	black	loose	fine		
0.6		silt/ clay sand	gray/ black	loose mix	fine		Blurred Transition
1.2		clay	olive gray	firm	fine		
3.4							

Comments:
heavy sheen seen when core was dumped

S-09G-C0003
8/12/09
11:08

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring | Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA | Vessel:
Client: USACE-NAE | Chief Scientist:

Station ID:	LM9	Water Depth (A):	9.5 ft.
Core Sample ID:	S-096-C003	Length of Push Core Assembly (B):	15.9 ft.
Date:	8/12/09	Water Surface to Top of Handle (C):	2.0 ft.
Time On Station:	11:05	Length of Core (from bottom) (D):	3.9 ft.
Latitude N:	41° 40.012	Surveyed Elevation (NGVD 29) (E):	4.0 ft.
Longitude W:	70° 55.072	Water Surface from Surveyed Elevation (F):	~~2.2 ft.~~ 1.8 ft.
GPS Accuracy:	10 ft.		
Predicted Tide (ft):			
Time of Collection:	11:08		
Collection Mechanism:	Push Core		
Logged by:	K. McCartney		
Time Depart Station:	11:21		

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

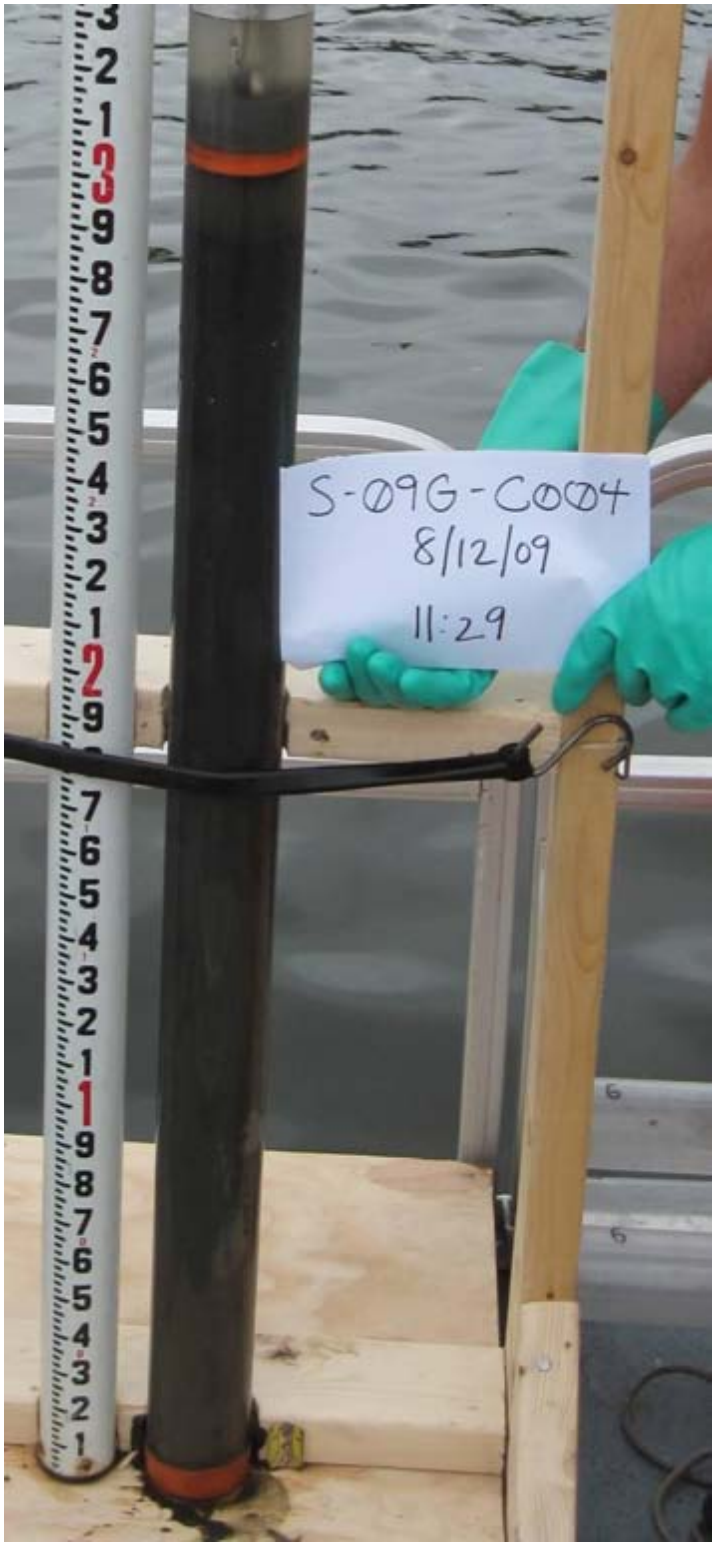
(G) Elevation (Elev.) of Water Surface (NVGD: E-F	~~1.8 ft.~~ 2.2 ft
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	~~+2.1 ft.~~ -11.7 ft.
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	~~-9.5 ft.~~ -9.1 ft.
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	~~-8.2 ft.~~ -7.8 ft.
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	~~-7.7 ft.~~ -7.3 ft

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = 0)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		silt	black	loose	fine		
0.5		silt clay sand	black gray	mix	fine		blurred
1.3		clay sand	gray	firm	fine		
						Strong H_2S / chemical odor when dumped	
3.9							

Comments:

heavy Sheen Seen when core was dumped


S-09G-C004
8/12/09
11:29

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: L06
Core Sample ID: S-096-C009
Date: 8/12/09
Time On Station: 11:26
Latitude N: 41° 40.025'
Longitude W: 70° 55.062'
GPS Accuracy: 1 ft.
Predicted Tide (ft):
Time of Collection: 11:29
Collection Mechanism: push core
Logged by: K. McCartney
Time Depart Station: 11:39

Water Depth (A): 9.5 ft
Length of Push Core Assembly (B): 15.9 ft.
Water Surface to Top of Handle (C): 3.2 ft.
Length of Core (from bottom) (D): 2.9 ft.
Surveyed Elevation (NGVD 29) (E): 4.0 ft.
Water Surface from Surveyed Elevation (F): ~~2.4 ft~~ 1.6

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F ~~1.6 ft.~~ 2.4
(H) Elev. of the bottom of the core (NGVD): G - (B-C) ~~-11.1 ft.~~ -10.3
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) ~~-8.4 ft.~~ -7.6
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D ~~-8.2 ft.~~ -7.4
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A ~~-7.9 ft.~~ -7.1

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. minus = ft)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		silt	black	loose	fine		
0.2		clay	brown gray	firm	fine		
1.5		clay	gray	firm	fine		streaking of darker silt
2.9							

Comments:

S-09G-C005
8/12/09
11:49

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: LR9
Core Sample ID: S-09G-C005
Date: 8/12/09
Time On Station: 11:45
Latitude N: 41° 40.013
Longitude W: 70° 55.045
GPS Accuracy: 11 ft.
Predicted Tide (ft):
Time of Collection: 11:49
Collection Mechanism: Push core
Logged by: K. McCartney
Time Depart Station: 11:59

Water Depth (A): 9.1 ft.
Length of Push Core Assembly (B): 15.9 ft.
Water Surface to Top of Handle (C): 3.9 ft.
Length of Core (from bottom) (D): 2.9 ft.
Surveyed Elevation (NGVD 29) (E): 4.0 ft.
Water Surface from Surveyed Elevation (F): ~~2.6 ft.~~ 1.4

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F ~~1.4 ft.~~ 2.6

(H) Elev. of the bottom of the core (NGVD): G - (B-C) ~~-10.6 ft.~~ -9.4

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) —— -7.7

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D ~~-7.7 ft.~~ -6.5

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A ~~-7.7 ft.~~ -6.5

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0							
0.2		silt	black	loose	fine		
		silty clay	black/dk gray	firmish	fine		streaking
1.2							
		clay	gray	firm	fine		
2.9							

Comments:

very slight- sheen when core was dumped

S-09G-C006
8/12/09
12:08

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: LV9
Core Sample ID: S-09G-C006
Date: 8/12/09
Time On Station: 12:04
Latitude N: 41° 40.013
Longitude W: 70° 55.024
GPS Accuracy: 10 ft.
Predicted Tide (ft):
Time of Collection: 12:08
Collection Mechanism: push core
Logged by: K. McCartney
Time Depart Station: 12:18

Water Depth (A): 8.2 ft.
Length of Push Core Assembly (B): 15.9 ft.
Water Surface to Top of Handle (C): 4.0 ft.
Length of Core (from bottom) (D): 3.4 ft.
Surveyed Elevation (NGVD 29) (E): 4.0 ft.
Water Surface from Surveyed Elevation (F): ~~2.7 ft.~~ 1.3

All Measurements are + 0.1 feet

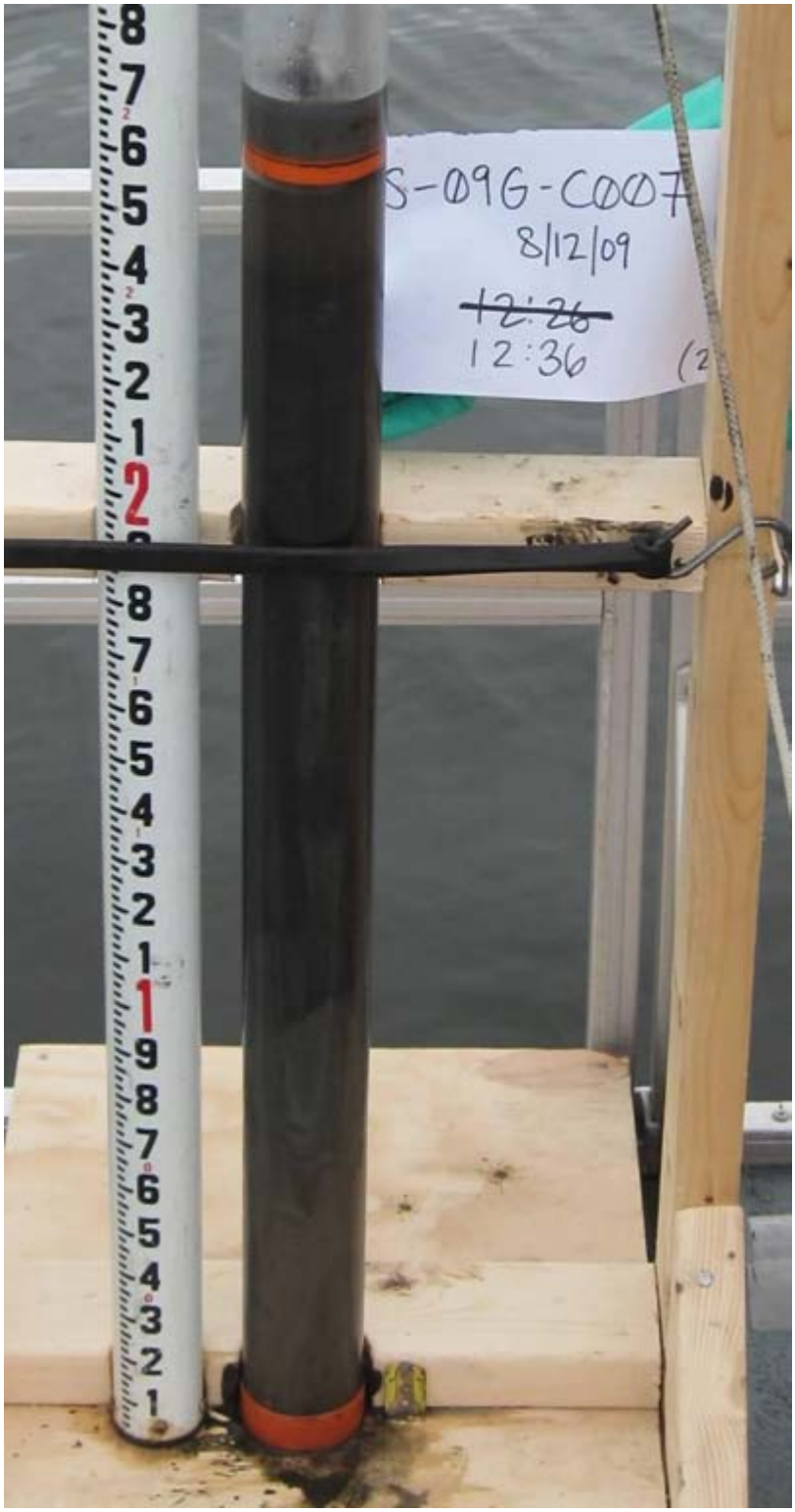
Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F ~~1.3 ft.~~ 2.7 ft
(H) Elev. of the bottom of the core (NGVD): G - (B-C) ~~-10.6 ft.~~ -9.2 ft
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) —— -6.2 ft.
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D ~~-7.2 ft.~~ -5.8 ft.
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A ~~-6.9 ft.~~ -5.5 ft.

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Constituents
0.0	SM	Silt	black	loose	fine		
0.9		silty clay	brownish gray	firm	fine		streaky
2.9		woody organic	orangey brown	loose	medium		marshy organic wood detritus & peaty in clay
3.4							

Comments: bottom 0.5 ft was organic peaty marsh material in clay


S-09G-C007
8/12/09
~~12:26~~
12:36

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: LU3
Core Sample ID: S-096-C007
Date: 8/12/09
Time On Station: 12:24
Latitude N: 41° 40.036
Longitude W: 70° 55.028
GPS Accuracy: 9 ft.
Predicted Tide (ft):
Time of Collection: 12:26
Collection Mechanism: push core
Logged by: K. McCartney
Time Depart Station: ~~12:34~~ 12:47

Water Depth (A): 8.4 ft.
Length of Push Core Assembly (B): 15.9 ft.
Water Surface to Top of Handle (C): 5.0 ft.
Length of Core (from bottom) (D): 2.1 ft.
Surveyed Elevation (NGVD 29) (E): 4.0 ft.
Water Surface from Surveyed Elevation (F): ~~2.7 ft.~~ 1.3 ft

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F ~~1.3 ft.~~ 2.7 ft
(H) Elev. of the bottom of the core (NGVD): G - (B-C) ~~-9.6 ft.~~ -8.2 ft.
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) ~~-7.6 ft.~~ -6.2 ft.
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D ~~-7.5 ft.~~ -6.1 ft.
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A ~~-7.1 ft.~~ -5.7 ft.

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0							
0.1		Silt	black	loose	fine		
		Silt clay sand	blackish gray	firm	fine		streaky
0.7							
		clay sand	olive gray	firm	fine		
2.1							

Comments:
not photograph
(1 of 2 at this location)

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: LV3
Core Sample ID: S-096-C007 REP
Date: ~~8/12/09~~ 8/12/09
Time On Station: 12:24
Latitude N: 41° 40.036
Longitude W: 70° 55.028
GPS Accuracy: 9 ft.
Predicted Tide (ft):
Time of Collection: 12:36
Collection Mechanism: push core
Logged by: K. McCarney
Time Depart Station: 12:47

Water Depth (A): 8.4 ft.
Length of Push Core Assembly (B): 15.9 ft.
Water Surface to Top of Handle (C): 4.9 ft.
Length of Core (from bottom) (D): 2.4 ft.
Surveyed Elevation (NVGD 29) (E): 4.0 ft.
Water Surface from Surveyed Elevation (F): ~~2.8 ft.~~ 1.2 ft

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F ~~1.2 ft.~~ 2.8 ft.

(H) Elev. of the bottom of the core (NGVD): G - (B-C) ~~-9.8 ft.~~ -8.2 ft.

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) ~~-7.5 ft.~~ -5.9 ft.

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D ~~-7.4 ft.~~ -5.8 ft.

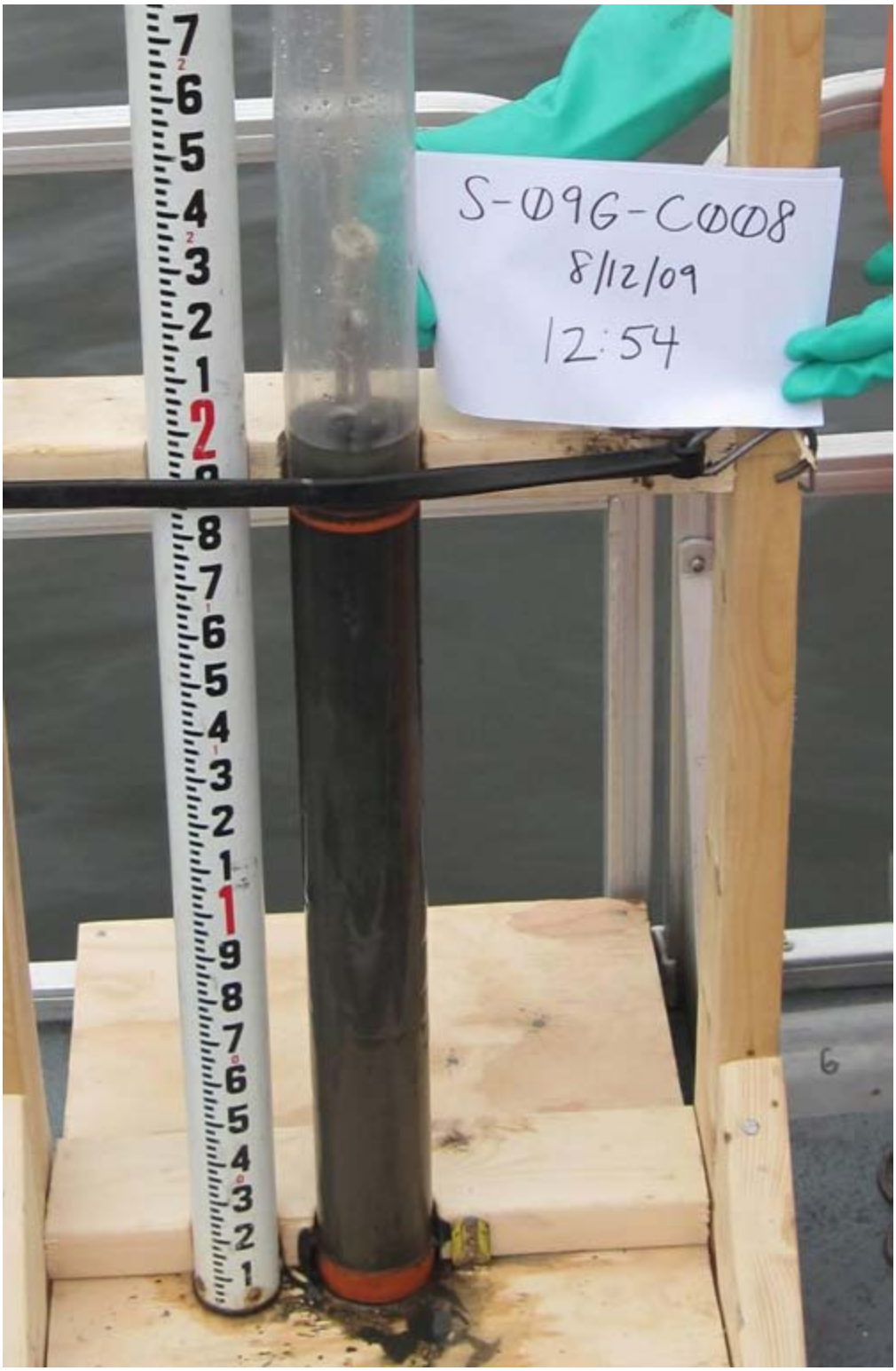
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A ~~-7.2 ft.~~ -5.6 ft.

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Biology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0							
0.1	SV	Silt	black	loose	fine		
		silty clay mix	blackish gray	firm	fine		streaky
1.4							
		clayey sand	olive gray	firm	fine		
2.4							

Comments:

photographed (2 of 2 at this location)


S-09G-C0008
8/12/09
12:54

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: LW1
Core Sample ID: S-096-C008
Date: 8/12/09
Time On Station: 12:51
Latitude N: 41° 40.045'
Longitude W: 70° 55.018'
GPS Accuracy: 8 ft.
Predicted Tide (ft):
Time of Collection: 12:54
Collection Mechanism: push core
Logged by: K. McCartney
Time Depart Station: 13:02

Water Depth (A): 8.3 ft.
Length of Push Core Assembly (B): 15.9 ft.
Water Surface to Top of Handle (C): 5.5 ft.
Length of Core (from bottom) (D): 1.8 ft.
Surveyed Elevation (NGVD 29) (E): 4.0 ft.
Water Surface from Surveyed Elevation (F): ~~2.9~~ 1.1 ft.

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F ~~1.1 ft.~~ 2.9 ft
(H) Elev. of the bottom of the core (NGVD): G - (B-C) ~~-9.3 ft.~~ -7.5 ft.
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) ~~-7.7 ft.~~ -5.9 ft.
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D ~~-7.5 ft.~~ -5.7 ft.
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A ~~-7.2 ft.~~ -5.4 ft.

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silty mix	black	loose	fine sand		streaking
0.2		clay	olive gray	firm	fine sand		
1.8							

Comments:
Slight sheen when dumped

12/10/09
LV07

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP	**Project Name:** NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
	Location: New Bedford, MA	**Vessel:**
	Client: USACE-NAE	**Chief Scientist:**

Station ID:	LV7	Water Depth (A):	4.7
Core Sample ID:	S-09S-C019	Length of Push Core Assembly (B):	13
Date:	09/16/09	Water Surface to Top of Handle (C):	6.3
Time On Station:	11:00	Length of Core (from bottom) (D):	1.60
Latitude N:	41°40.020	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°55.023	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	12		
Predicted Tide (ft):			
Time of Collection:	11:15		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:			

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.8
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-7.5
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 13 - 6.3 = 6.7	-6.3
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D 1.60 - 0.4 = 1.2	-5.9
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-5.5
(Note if $\neq I_2$ within ± 1.0 feet, discard and resample)	✓

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0			Blackish streaking from Core Barrel - Possible layer, but ~~appears~~ looks similar to bottom portion				
0.4		Clay	Olive Gray	Firm	Fine		Homogenous
1.60							

Comments:

SEDIMENT FIELD SAMPLING LOG

	Project Name: NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
	Location: New Bedford, MA	**Vessel:**
	Client: USACE-NAE	**Chief Scientist:**

Station ID:	LV07	Water Depth (A):	
Core Sample ID:	S-09S-C019	Length of Push Core Assembly (B):	
Date:	12/10/2009	Water Surface to Top of Handle (C):	
Time On Station:		Length of Core (from bottom) (D):	1.6
Latitude N:		Surveyed Elevation (NGVD 29) (E):	
Longitude W:		Water Surface from Surveyed Elevation (F):	
GPS Accuracy:			
Predicted Tide (ft):			
Time of Collection:			
Collection Mechanism:			
Logged by:	DRW		
Time Depart Station:			

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD) G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H)	Geologic Symbol USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
	OL	Organic silt w/fine sand	Black			Petrol	
0.36							
		Sandy Silt w/ organic detritus	dk grey To olive grey	homogenous		H_2S	
1.6							

Comments:

Two samples

0 - 0.4' Time 1105

0.5 - 1.0' 1105

Progress Cores
LS3
Kimwipes

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	LS3	Water Depth (A):	5.7
Core Sample ID:	S-045-C020	Length of Push Core Assembly (B):	13
Date:	09/16/09	Water Surface to Top of Handle (C):	4.6
Time On Station:	11:26	Length of Core (from bottom) (D):	2.14
Latitude N:	41°40.037	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°55.039	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	11 ft		
Predicted Tide (ft):			
Time of Collection:	11:31		
Collection Mechanism:	Push Core		
Logged by:	D. Boiley		
Time Depart Station:	11:35		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) — −0.7

(H) Elev. of the bottom of the core (NGVD): G - (B-C) — −7.1

13 − 4.6 = 8.4

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) — −7.36

2.14 − 0.4 = 1.74

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D — −6.96

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A — −6.4

(Note if ≠ I_2 within + 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e. Bottom = H)	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Clayey Sand	Dark Gray				
0.2		Clay	Olive Gray	stretked with		Dark Gray	from above
0.4							
		Clay	Olive Gray	Firm			
2.14							

Comments:

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: LS3
Core Sample ID:
Date: 9/30/09, 1640
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by:
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): ~~2.14'~~ 2.0'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.03'		Clay	Black	firm			Top angled
		Clay w/ trace or V low % sand & gravel.	olive grey	firm	MAX gravel size is -2 ϕ.		Sample: 0-0.5'
2.0'							

Comments:

Kimwipes
Progress
Core
LPOQ

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	LP9	Water Depth (A):	6.1
Core Sample ID:	S-09S-C021	Length of Push Core Assembly (B):	13.0
Date:	09/16/09	Water Surface to Top of Handle (C):	4.1
Time On Station:	11:40	Length of Core (from bottom) (D):	~~2~~2.25 225'
Latitude N:	41°40.012	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°55.056	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	14		
Predicted Tide (ft):			
Time of Collection:	11:46		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.7
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-9.6
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) 13 - 4.1 = 8.9	-7.55
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D 2.25 - 0.2 = 2.05	-7.35
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-6.8
(Note if $\neq I_2$ within + 1.0 feet, discard and resample)	✓

Elevation (NGVD) (i.e. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Clay w/sand	Dark Olive Gray	Firm			
0.2		Clay	Olive Gray	Firm			Organic Detritus + Shell Hash
2.25							

Comments:

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: LP9
Core Sample ID:
Date: 14:06 , 10/01/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by:
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D):
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = 0)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
	OL	Silty Clay w/fine Sand	Black	loose		H_2S odor	
0.6	—	—	—	—	—	—	—
	CL	Clay w/shell hash and some Sand	olive gray	firm			
2.25							

Comments:

12/10/09
LN02
Kimwipes
Kimwipes

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	LF2	Water Depth (A):	6.8
Core Sample ID:	S-095-C028	Length of Push Core Assembly (B):	17.0
Date:	09/16/09	Water Surface to Top of Handle (C):	4.2
Time On Station:	12:04	Length of Core (from bottom) (D):	5.08
Latitude N:	41°40.041	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°55.110	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	12ft		
Predicted Tide (ft):			
Time of Collection:	12:25		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F: -1.2

(H) Elev. of the bottom of the core (NGVD): G - (B-C): -14.0

17 - 4.2 = 12.8

(z*) Elev. of visual transition (NGVD): H + (distance to visual transition): -12.29

5.08 - 3.37 = 1.71

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D: -8.92

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A: -8.0

(Note if $\neq I_2$ within + 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e. Bottom = N)	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Clayey Silt	Black	Loose top 0.4ft Moderate from 0.4-3.37	Fine	H_2S	
3.37		Clay	Olive Gray	Firm			Organic Detritus + Shell Hash
5.03							

Comments: Sheen on water when collecting

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:
Core Sample ID: LF2
Date: 1540, 9/30/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by:
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D):
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
3.9'	OL	Clay w/ High % organic detritus	Black to V. dk. Grey			high odor & Sheen	NO sample collected.
5.08'	CL	Clay w/ shell hash and some sand	Olive grey				

Comments:

Progress core
LF08
INDEX

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: LF8
Core Sample ID: S-095-C023
Date: 09/16/09
Time On Station: 12:40
Latitude N: 41° 40.016
Longitude W: 70° 55.110
GPS Accuracy: 11 ft
Predicted Tide (ft):
Time of Collection: 12:55
Collection Mechanism: Push Core
Logged by: D. Beiky
Time Depart Station:

Water Depth (A): 6.6
Length of Push Core Assembly (B): 15.1
Water Surface to Top of Handle (C): 3.6
Length of Core (from bottom) (D): 4.22
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) = −1.0

(H) Elev. of the bottom of the core (NGVD): G - (B-C) = −12.5

15.1 − 3.6 = 11.5

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) = −10.58

4.22 − 2.3 = 1.92

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D = − 8.28

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A = − 7.6

(Note if $\neq I_2$ within + 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e. Bottom + H)	Lithology - Particle USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Clayey Silt	Black	Moderate	Fine	H_2S	
2-3		Clay	Olive Gray	Firm	Fine		Organic Detritus + Shell Hash
4.22							

Comments:

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: LF8
Core Sample ID:
Date: 9/30/09
Time On Station: 16:20
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by:
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 4.22'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

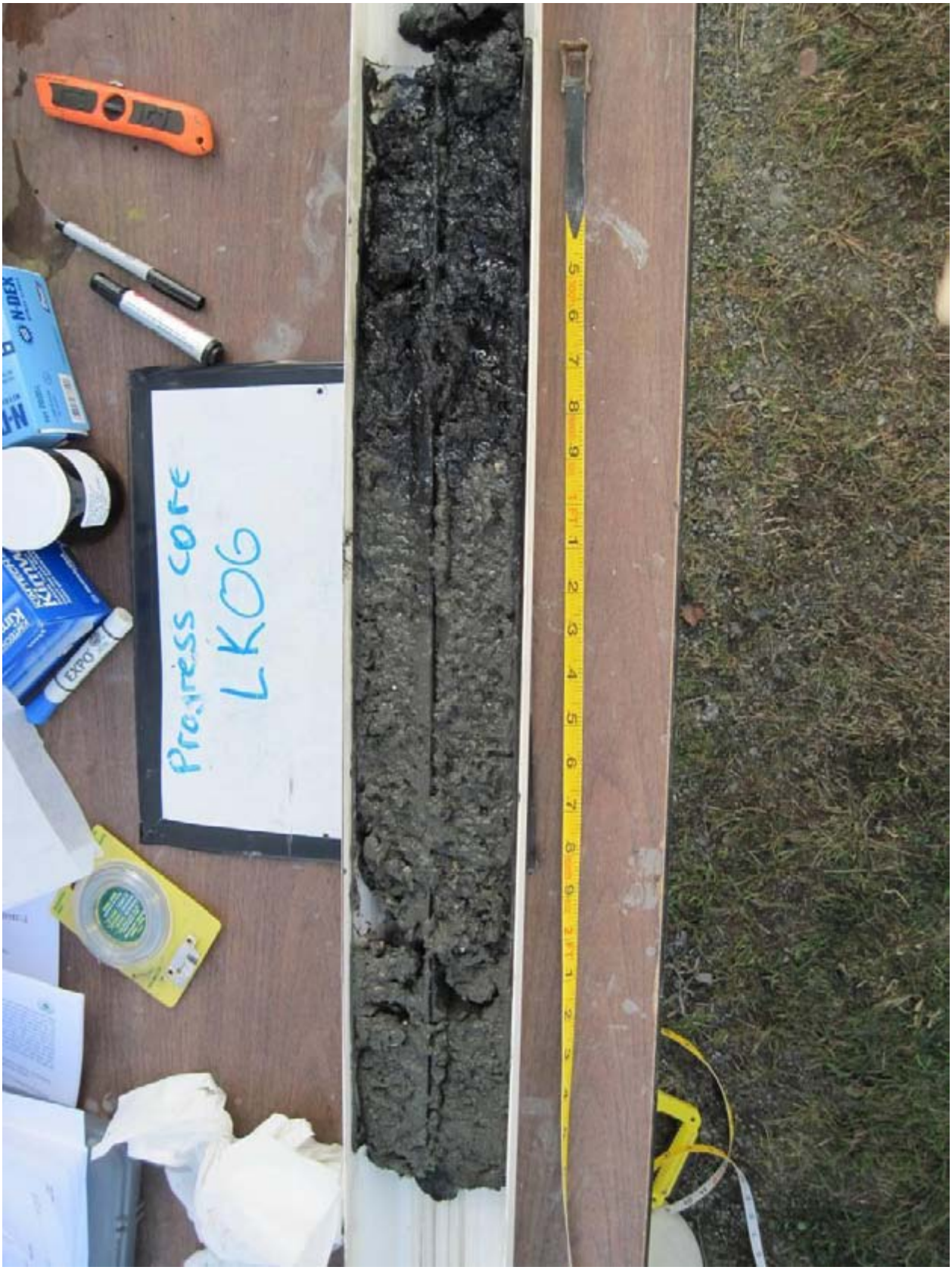
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Geology - Unified USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
	OL	Clay w/ organics &	Black		High	Oil sheen & H2S odor	Sample: 0-0.5'
							Sample: 1.8-2.3'
2.3'							
		Clay w/ high density shell hash	olive grey	firm			
2.9'							
		clay, homogenous; occasional shell layers @ 3.05' & 3.3'	olive grey	firm.			
4.22							leather sole found @ bottom of core.

Comments:


Progress core
LK06

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	LKG	Water Depth (A):	7.0
Core Sample ID:	S-095-C024	Length of Push Core Assembly (B):	13
Date:	09/16/09	Water Surface to Top of Handle (C):	3.2
Time On Station:	13:09	Length of Core (from bottom) (D):	2.39
Latitude N:	41°40.025	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°55.082	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	12ft		
Predicted Tide (ft):			
Time of Collection:	13:15		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.9
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-10.7
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 13 - 3.2 = 9.8	-9.01
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D 2.39 - 0.7 = 1.69'	-8.31
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-7.9
(Note if $\neq I_2$ within + 1.0 feet, discard and resample)	✓

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silty Clay	Black	Loose			
0.7		Clay	Olive Gray	Firm			Organic Detritus + Shell Hash
2.39							

Comments:

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP	**Project Name:** NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
	Location: New Bedford, MA	**Vessel:**
	Client: USACE-NAE	**Chief Scientist:**

Station ID: LK06-5
Core Sample ID:
Date: 9/30/09
Time On Station: 1610
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by:
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.39'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = 0)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.8'	OL	Clay w/ high % organics	Black to V. dk. Grey	Loose		Oil sheen & H_2S odor	Sample: 0-0.5'
2.39'		Clay w/ low % Sand & Shell Frags throughout	olive Grey	firm, mod-well consolidated			

Comments:

12/10/09
LN02
Kimwipes

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP	**Project Name:** NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
	Location: New Bedford, MA	**Vessel:**
	Client: USACE-NAE	**Chief Scientist:**

Station ID:	LN2	Water Depth (A):	5.9
Core Sample ID:	S-095-C025	Length of Push Core Assembly (B):	13.0
Date:	09/16/09	Water Surface to Top of Handle (C):	5.0
Time On Station:	13:28	Length of Core (from bottom) (D):	~~2.83~~ 1.83'
Latitude N:	41° 40.041	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70° 55.066	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	12ft		
Predicted Tide (ft):			
Time of Collection:	13:36		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:			

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) -0.7

(H) Elev. of the bottom of the core (NGVD): G - (B-C) -8.7

13.0 - 5.0 = 8.0

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) -7.27

1.83' - 0.4 = 1.43

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D -6.87

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A -6.6

(Note if $\neq I_2$ within ± 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silty Clay	Dark Gray Black	Loose			Possible Mixture
~~0.3~~ 0.4							Organic Detritus + Shell Hash
		Clay	Olive Gray	Firm			
1.83' ~~2.83~~							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: LN02
Core Sample ID: S-09S-C025
Date: 12/10/2009
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.83
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev) of Water Surface (NVGD: E-F

(H) Elev of the bottom of the core (NGVD): G - (B-C)

(z*) Elev of visual transition (NGVD): H + (distance to visual transition)

(I) Elev of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev of the sed-water interface as measured from water depth (NGVD): G - A

(Note if ≠ I_2 within ± 1.0 feet, discard and resample)

Elevation (NGVD) (+ Above, - Below) H	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.3	OL	organic Silt w/ ~10% fine sand	Black to v. dk grey			Slight petrol odor	
0.9	SW	clayey silt - silt to silt w/ sand (med - fine) and some gravel	v. dk grey		gravel ~1ϕ	H_2S	
1.83		~~Sandy~~ clayey silt w/ fine sand and org. detritus	dk grey			H_2S	

Comments:

Two Samples
0-0.5' Time: 1045
0.5-1.0' 1045 * potentially archive sample w/ analysis pending the results of sample @ 0-0.5

Station: LH11
11/17/09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring		Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA		Vessel:
Client: USACE-NAE		Chief Scientist:

Station ID:	S-090-C011	Water Depth (A):	7.2
Core Sample ID:	LH11	Length of Push Core Assembly (B):	15.3
Date:	10/15/09	Water Surface to Top of Handle (C):	4.5
Time On Station:	12:49	Length of Core (from bottom) (D):	3.65
Latitude N:	41040.004	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°55.099	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:		All Measurements are + 0.1 feet	
Predicted Tide (ft):			
Time of Collection:	12:56		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	13:00		

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-1.1
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-11.9
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 3.65-1.86=1.79	-10.11
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-8.25
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-8.3

(Note if ≠ I_2 within ± 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e. Bottom = 0)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
		Mud (clay)	Very Dark Gray	Moderate			Homogenous
1.86	-	-	-	-	-	-	-
		Clay w/shell Hash	Olive Gray	Well consolidated			Homogenous
3.65							

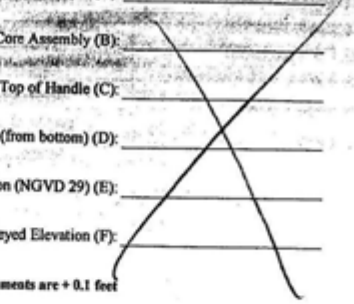
Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: LH11
Core Sample ID: S-090-C011
Date: 11/17/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: KGM
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D):
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):
All Measurements are + 0.1 feet



Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

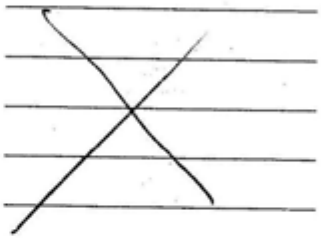
(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)



Elevation (NGVD) (i.e. Bottom = H	Unified Soil Classification System Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0	OL	organic clayey silt	black				
1.2	MH	organic silt (clayey) w/ occasional sand lense	very dark ~~olive~~ gray				
2.0							very high concentration of bivalve fragments, many whole articulated shells 0.01' - 0.1' dia
2.9		highly organic clayey silt	very dark olive gray			H_2S	
3.65							

Comments:
sample taken at 1.3-1.8 feet

12/10/09
LT16
Kimwipes
KimWipes

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	S-090-C012	Water Depth (A):	7.6
Core Sample ID:	LI16	Length of Push Core Assembly (B):	15.3
Date:	10/16/09	Water Surface to Top of Handle (C):	3.95
Time On Station:	13:08	Length of Core (from bottom) (D):	2.96
Latitude N:	41039.982	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°55.095	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:			
Predicted Tide (ft):			
Time of Collection:	13:17		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	13:20		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.9
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-12.25
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 2.96-1.4 = 1.56	-10.69
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-9.29
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-8.5

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
		Mud (clay)		Moderate			Homogenous
1.4		Clay w/shell hash + sand	Dark Olive Gray				
1.84		Clay	Olive Gray	Well consolidated			Homogenous - Some Organic Detritus
2.96							

Comments:
-sheen + strong H_2S odor @ top of core

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring	**Project #:** W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA	**Vessel:**
Client: USACE-NAE	**Chief Scientist:**

Station ID:	LI16	Water Depth (A)	
Core Sample ID:	S-Ø90-CØ12	Length of Push Core Assembly (B)	
Date:	12/10/09	Water Surface to Top of Handle (C)	
Time On Station:		Length of Core (from bottom) (D)	3.0
Latitude N:		Surveyed Elevation (NGVD 29) (E)	
Longitude W:		Water Surface from Surveyed Elevation (F)	
GPS Accuracy:			
Predicted Tide (ft):			
Time of Collection:			
Collection Mechanism:			
Logged by:	DRW		
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if ≠ I_2 within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
1.5	OL	organic silt, fibrous plant material	Black	homogenous		strong Petrol	
2.3		Silty clay matrix, sand w/ v. high concentration of Bivalve shells (max size ½" or 1 cm)	dark olive grey	silty clay matrix looks as if it was winnowed away, leaving higher conc. of small shells.		H_2S	
3.0		Silty clay w/ sand and (fine) organic detritus	olive grey	homogenous		Strong H_2S	

Comments:

Two Samples

	time:
1.0 - 1.5	1000
1.6 - 2.1	1000

Station: LK19
11/17/09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBII Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: S-096-C013
Core Sample ID: LK19
Date: 10/16/09
Time On Station: 13:25
Latitude N: 41039.970
Longitude W: 70° 55.085
GPS Accuracy:
Predicted Tide (ft):
Time of Collection: ~~Push Core~~ 13:34
Collection Mechanism: ~~Box~~ Push Core
Logged by: D. Bailey
Time Depart Station: 13:39

Water Depth (A): 8.5
Length of Push Core Assembly (B): 15.25
Water Surface to Top of Handle (C): 3.05
Length of Core (from bottom) (D): 3.08
Surveyed Elevation (NGVD 29) (E): —
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F: -0.8

(H) Elev. of the bottom of the core (NGVD): G - (B-C): -13

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition): -11.62

3.08-1.70=1.38

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D: -9.92

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A: -9.3

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
		Mud (clay)	Very Dark Gray	Moderate			Homogenous
1.70	-	-	-	-	-	-	-
		Clay w/shell hash	Olive Gray	Well consolidated			Organic Detritus
3.08							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring — Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA — Vessel:
Client: USACE-NAE — Chief Scientist:

Station ID: KB19
Core Sample ID: S-090-C013-
Date: 11/19/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: KBM
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D):
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Minus = -)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0							
	OL	organic silt	black/ dark grey			petroleum	sheen
1.5							
1.7		other transition layer					
		silty clay	dark olive grey				high % shell hash
2.2		silty clay	olive grey			H_2S	
3.08							

Comments: Sample taken between 1.7 - 2.7 feet
high shell content in area of sample

Station: LG20
11/17/09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: S-090-C014
Core Sample ID: LG20
Date: 10/15/09
Time On Station: 13:41
Latitude N: 41°39.965
Longitude W: 70°55.107
GPS Accuracy:
Predicted Tide (ft):
Time of Collection: 13:48
Collection Mechanism: Push Core
Logged by: D. Bailey
Time Depart Station: 13:55

Water Depth (A): 3.65
Length of Push Core Assembly (B): 13.3
Water Surface to Top of Handle (C): 7.25
Length of Core (from bottom) (D): 2.10
Surveyed Elevation (NGVD 29) (E): -
Water Surface from Surveyed Elevation (F): -

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) -0.7

(H) Elev. of the bottom of the core (NGVD): G - (B-C) -6.75

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) ~~-7.85~~ -5.65

2.20 - 1.0 = 1.1

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D -4.65

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A -4.35

(Note if $\neq I_2$ within + 1.0 feet, discard and resample) ✓

Elevation (NGVD) (i.e. Bottom = H)	Unified Soil Classification (USCS) Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
		Sandy Clay	Black	Moderate	Fine Sand		- Well sorted Fine Sand - Homogenous
1.0			Dark Gray				- Transition layer
1.46							
		Clay w/shell fragments	Olive Gray &				- Homogenous
2.10							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring — Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA — Vessel:
Client: USACE-NAE — Chief Scientist:

Station ID: L620
Core Sample ID: S-090-C014
Date: 11/17/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: KGM
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D):
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Station + H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0							
	SC	Silty fine/medium sand organic	black				sand gets coarser with depth
0.65							coarser sand (w/ gravel than overlying layer
	SM/OL	sand w/ silt & clay	black				
1.0		sand mixed w/ dark grey clayey silt			shell fragments		angled transition
1.5							
		Clayey silt	dark olive grey				
2.1							

Comments: sample taken at 1.0-1.5 feet

12/10/09
LE12
Kimwipes

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	LE12	Water Depth (A):	7.9
Core Sample ID:	SAIC-029	Length of Push Core Assembly (B):	15.2
Date:	10/21/09	Water Surface to Top of Handle (C):	5.2
Time On Station:	13:32	Length of Core (from bottom) (D):	2.33
Latitude N:	41° 40.000	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70° 55.116	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	21 ft.		
Predicted Tide (ft):			
Time of Collection:	13:35		
Collection Mechanism:	push core		
Logged by:	KBM		
Time Depart Station:	13:40		

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	0.9
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-9.1
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 2.33 - 0.6 = 1.73	-7.37
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-6.77
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-7.0

(Note if ≠ I_2 within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Below = -)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0							
		clay	dark olive grey	firm			shell hash
0.6							
		clay	medium dark olive grey	firm			transition layer shell hash
1.8							
		clay	olive grey	firm			shell hash
2.33							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: LE12
Core Sample ID: S-090-C029
Date: 12/10/2009
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.3
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD E-F

(H) Elev of the bottom of the core (NGVD) G - (B-C)

(z*) Elev of visual transition (NGVD(H + (distance to visual transition)

(I) Elev of the sed-water interface as measured from bottom of core (NGVD) H + D

(I_2) Elev of the sed-water interface as measured from water depth (NGVD) G - A

(Note if $\neq I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
	OL	Organic Silt w/ few % fine sand	Black - V. dk gry	homogeny		Petrol	Heavy sheen
0.86	ML	Silt	V. dark grey	homogen		H_2S	no sheen
1.4		Silt matrix w/ high concentration of bivalve shells (1cm)	V dk grey.			H_2S	
2.1		Silty clay w/ org. detritus, no shells.	dk grey - olive gry	homogenous		H_2S	
2.3							

Comments:

Two samples
0.4 - 0.9 Time: 1025
1.0 - 1.5 1025

Station: LF 16
11/17/09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBII Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	LF16	Water Depth (A):	7.3
Core Sample ID:	S090-030	Length of Push Core Assembly (B):	15.3 ~~16.25~~
Date:	10/21/09	Water Surface to Top of Handle (C):	4.0 ~~3.5~~
Time On Station:	13:56	Length of Core (from bottom) (D):	3.53
Latitude N:	41°39.983	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°55.111	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	21 ft.		
Predicted Tide (ft):			
Time of Collection:	14:00		
Collection Mechanism:	push core		
Logged by:	KGM		
Time Depart Station:	14:10		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	0.6 ~~0.05~~
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-10.7
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-10.7
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-7.17
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-6.7

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Minus = ft)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		silty clay	dark grey/ black	Medium			
3.53							

Comments: 1st core: 3.5 ft long but shows no clay transition layer
2nd core: overpenetrated
Kept 1st core

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: LF16
Core Sample ID: S-090-C030
Date: 11/17/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism: Push core
Logged by: KGM
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D):
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		highly organic clay with sand	dark grey/ black	moderately consolidated		petroleum odor. H_2S	visible sheen
3.5							

Comments:

~~[illegible]~~, Sandy content varies through core, ex: sample taken at 1.5-2.0 feet is highly sandy: contains > 50% sand

New Bedford Harbor
12/16/09
LN19
2.8 ft.

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	LN19	Water Depth (A):	9.6
Core Sample ID:	S-09D-0001		
Date:	12/14/09	Length of Push Core Assembly (B):	14.2
Time On Station:	12:17		
Latitude N:	41° 39.971'	Water Surface to Top of Handle (C):	1.7
Longitude W:	70° 55.067'		
GPS Accuracy:	12 ft.	Length of Core (from bottom) (D):	2.8
Predicted Tide (ft):	—		
Time of Collection:	12:29	Surveyed Elevation (NGVD 29) (E):	
Collection Mechanism:	push core		
Logged by:	KGM	Water Surface from Surveyed Elevation (F):	
Time Depart Station:	12:33		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-1.2 NGVD 29 (Sheet pile # 21: Area 4)
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-13.7
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 12.5	-11.44
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D 2.8 - 0.54 = 2.26	-10.9
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-10.8

(Note if ≠ I_2 within + 1.0 feet, discard and resample)

Internal description, core split 12/16/09 @ 11:05

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.1	OL	organic silt fibrous	Black	Loose		Petrol	sheen (Heavy)
0.54	OL/ML	Silt w/ organics and shell hash	Black - v. dk grey (5Y 2.5/1 - 5Y 3/1)	moderately consolidated	shell frag	H_2S, slight petrol	slight sheen
~~1.08~~ 1.26	~~ML~~ ML	Silt w/ organics & low % fine sand	v. dk grey (5Y 3/1) colors bands	↓	shell frag	H_2S	possible sheen
1.58		Silt-clayey silt matrix w/ high conc. shells	dark olive grey (5Y 3/2)	moderately well consolidated	~1 cm shell	H_2S	* high conc. of bivalve shells, approx 1 cm width.
2.30		Silt-clayey silt w/ shells & organics	dark olive grey (5Y 3/2)	↓	Shell hash (coarse sand sized)	H_2S	occasional bivalve shells, higher conc. "layer" 2.1'-2.2'.
2.80		Clayey silt & organic detritus	dark olive grey (5Y 3/2)	↓	fine-med sand	H_2S	homogenous, no shells.

Comments:

Two samples time: one QC Time

0-0.5' 12/16, 12:15 0.6-1.1 MSMSD 12:20, 12/16

0.6-1.1' 12/16, 12:20

New Bedford Harbor
12/16/09
LN14
2.2 ft.

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: LN14
Core Sample ID: S-09D-C062
Date: 12/14/09
Time On Station: 12:41
Latitude N: 41° 39. 992
Longitude W: 70° 55. 067
GPS Accuracy: 10ft.
Predicted Tide (ft): —
Time of Collection: 12:49
Collection Mechanism: Push Core
Logged by: KGM
Time Depart Station: 12:54

Water Depth (A): 7.8
Length of Push Core Assembly (B): 12.8
Water Surface to Top of Handle (C): 2.6
Length of Core (from bottom) (D): 2.2
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) — −1.0 (Sheetpile #21 Area L)

(H) Elev. of the bottom of the core (NGVD): G - (B-C) — −11.2
12.8 − 2.6 = 10.2

(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) — -9.72
2.20 − 0.72 = 1.48

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D — −9.0

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A — −8.8

(Note if ≠ I_2 within + 1.0 feet, discard and resample)

Internal description, core split 12/14/09 @ 1155

Elevation (NGVD) (i.e. Bottom = H)	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.72	OL	Highly organic silt, fibrous	Black (5Y 2.5/1)	loose/ unconsolidated		Petrol	High/strong sheen
1.10	ML	Silt w/ fine-med sand and shell hash	dark olive grey (5y 3/2)	moderately consolidated	shell hash	H_2S	
1.48		Silt w/ fine sand; homogenous.	dark olive grey (5Y 3/2)	moderately-well consolidated			
2.20		Silty SAND w/ shell frags and gravel	dark olive grey (5Y 3/2)	↓	~2ϕ gravel	↓	

Comments:

Two samples Time:
0.2 - 0.7' 12/14, 1230
0.8 − 1.3' 12/14, 1230

New Bedford Harbor
12/16/09
LK12
3558

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: LK12
Core Sample ID: S-09D-C0003
Date: 12/14/09
Time On Station: 13:01
Latitude N: 41°40.000
Longitude W: 70°55.083
GPS Accuracy: 10 ft.
Predicted Tide (ft): —
Time of Collection: 13:06
Collection Mechanism: push core
Logged by: KGM
Time Depart Station: 13:11

Water Depth (A): 8.6
Length of Push Core Assembly (B): 14.25
Water Surface to Top of Handle (C): 2.35
Length of Core (from bottom) (D): 3.55
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F): -0.8 (Sheetpile #21 Area) 12/21/09 KGM
(H) Elev. of the bottom of the core (NGVD): G - (B-C): ~~-11.9~~ -12.7 KGM 12/21 ~~-10.55~~ -11.75
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition): 3.55 - 2.6 = Ø95 ~~3.55 - 1.4 = 2.15~~
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D: -9.15
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A: -9.4

(Note if ≠ I_2 within ± 1.0 feet, discard and resample)

Intended description, core split 12/16/09 @ 12:45

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
1.46	OL	highly Organic Silt, fibrous	Black (5Y 2.5/1)	Loose		Retrol	high/strong sheen
2.6	OL/ML	Organic Silt mixed w/ Silty fine sand and Shells-Shell frags	Black and dark olive gray "mottled" (patches of 5Y 2.5/1 and 5Y 3/2)	Loose	1cm shell, (bivalve)	H_2S	Layer of transition between "OL" and ML – possibly disturbed in dredging process?
3.55	ML	Silt or Clayey Silt w/ occasional Shell layers/lenses	dark olive gray (5Y 3/2)	Moderately well consolidated	1cm bivalve shell	H_2S	- good, well-defined transition between OL/ML above and ML (this layer). - Consistency was a good indicator @ transition-2 layers. - Shell/bivalve layer @ 3.1-3.26'

Comments:

Two Samples:

	Time:	
0.9-1.4	12/16	13:06
2.1-2.6	12/16	13:06

New Bedford Harbor
12/16/09
LM09
2.55 ft

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	LM09	Water Depth (A):	~~8.4~~ 8.2 KGM 12/14/09
Core Sample ID:	S-09D-C004		
Date:	12/14/09	Length of Push Core Assembly (B):	13.7
Time On Station:	13:20		
Latitude N:	41° 40.012'	Water Surface to Top of Handle (C):	2.6
Longitude W:	70° 55.072'		
GPS Accuracy:	10ft	Length of Core (from bottom) (D):	2.55
Predicted Tide (ft):	—		
Time of Collection:	13:25	Surveyed Elevation (NGVD 29) (E):	
Collection Mechanism:	push core		
Logged by:	KGM	Water Surface from Surveyed Elevation (F):	
Time Depart Station:	13:30		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.7 (Sheet pile #21: Area L)
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-11.8
13.7 - 2.6 = 11	
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-10.03
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-9.25
2.55 - 0.78 = 1.77	
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-8.9

(Note if ≠ I_2 within + 1.0 feet, discard and resample)

* Internal description, core split 12/16/09 @ 1318

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.78	OL/ML	Organic silt	Black - (5Y 2.5/1 to 5Y 3/2) dark olive grey	Loose	-	Petrol -	Seems like a mixture of OL and ML, distinct from OL. - Slight sheen
2.55	ML	Silt w/ organic detritus and occasional shell frag	dark olive grey (5Y 3/2)	moderately well consolidated	- 3cm Bay scallop shell	H_2S	- definitely ML, distinct from overlaying layer by consistency in "firmness", color, and homogenous texture.

Comments:

Two samples Fne:
0.2 - 0.7, 12/16 @ 1322
0.8 - 1.3, 12/16 @ 1322

New Bedford Harbor
12/16/09
LH06
4458

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring	Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA	Vessel:
Client: USACE-NAE	Chief Scientist:

Station ID:	LH06	Water Depth (A):	7.4
Core Sample ID:	S-09D-C005	Length of Push Core Assembly (B):	15.65
Date:	12/14/09	Water Surface to Top of Handle (C):	4.0
Time On Station:	13:34	Length of Core (from bottom) (D):	4.45
Latitude N:	41°40.025'	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°55.099'	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	10 ft.		
Predicted Tide (ft):	–		
Time of Collection:	13:44		
Collection Mechanism:	pushcore		
Logged by:	KGM		
Time Depart Station:	13:50		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	-0.3 (sheetpile #21 Area L)
(H) Elev. of the bottom of the core (NGVD): G - (B-C) 15.65 - 4.0 = 11.65	-11.95
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 4.45 - 1.8 = 2.65	-9.3
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-7.5
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-7.7

(Note if ≠ I_2 within + 1.0 feet, discard and resample)

* Interval description, core split on 12/16/09 @ 1405

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
1.8	OL	Organic silt w/ sand;	Black (5Y 2.5/1)	Loose	Coarse sand	Petrol	heavy sheen
3.56	ML	Silt, homogenous	v. dk grey (5Y 3/1)	moderately consolidated		H_2S	
4.45	ML	ML, silt to clayey silt. w/ shells & shell frags	(5Y 3/2) dk olive grey	moderately-well consolidated		H_2S	

Comments:

Two samples:	Time:
1.3 - 1.8	12/16, 1415
2.0 - 2.5	12/16, 1415

New Bedford Harbor
12/16/09
LJ05
2.25'

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring — Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA — Vessel:
Client: USACE-NAE — Chief Scientist:

Station ID: LJ05
Core Sample ID: S-05D-C006
Date: 12/14/09
Time On Station: 13:56
Latitude N: 41°40.029'
Longitude W: 70°55.088'
GPS Accuracy: 10 ft
Predicted Tide (ft): —
Time of Collection: 14:02
Collection Mechanism: push core
Logged by: KGM
Time Depart Station: 14:07

Water Depth (A): 9.1
Length of Push Core Assembly (B): 14.2
Water Surface to Top of Handle (C): 2.5
Length of Core (from bottom) (D): 2.25
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F — −0.3 (sheet pile #21 area)
(H) Elev. of the bottom of the core (NGVD): G - (B-C) — −12.0
14.2 − 2.5 = 11.7
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) — −10.3
2.25 − 0.55 = 1.7
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D — −9.75
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A — −9.4

(Note if ≠ I_2 within + 1.0 feet, discard and resample)

* Interval Description, core split 12/14/09 @ 1435

Elevation (NGVD) (i.e. Bottom + H)	Lithology (include USCS Code)	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.55	OL	Organic Silt	Black (5Y 2.5/1)	Loose		Petrol	
2.25	ML	Silt → Clayey Silt w/ Organic detritus and shell frags -Sand mixed into matrix below 1.5' as well as shell @2.0-2.1'	dark olive gry	Moderately well to well consolidated	med. sand and shell (2 cm), but predominantly a fine grained matrix.	H_2S	-Definitive horizon/break between OL and ML layers.

Comments:

Two samples: Time:
0-0.5' 12/14 14:40
0.6-1.1' 12/14 14:40

New Bedford Harbor
12/16/09
LI02
3 of 4

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring	Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA	Vessel:
Client: USACE-NAE	Chief Scientist:

Station ID:	LI02	Water Depth (A):	7.7
Core Sample ID:	S-09D-C007		
Date:	12/14/09	Length of Push Core Assembly (B):	13.6
Time On Station:	14:15		
Latitude N:	41°40.041'	Water Surface to Top of Handle (C):	2.8
Longitude W:	70°55.094'		
GPS Accuracy:	10 ft.	Length of Core (from bottom) (D):	3.0
Predicted Tide (ft):	—		
Time of Collection:	14:31	Surveyed Elevation (NGVD 29) (E):	
Collection Mechanism:	Push Core		
Logged by:	KGM	Water Surface from Surveyed Elevation (F):	
Time Depart Station:	14:38		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	0.0 (sheet pile #21: Area L)
(H) Elev. of the bottom of the core (NGVD): G - (B-C) 13.6 - 2.8 = 10.8	-10.8
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 3.0 - 2.6 = 0.4 ~~3.0 - 1.2 = 1.8~~	KGM 12/21/09 ~~9.0~~ -10.4
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-7.8
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-7.7

(Note if ≠ I_2 within ± 1.0 feet, discard and resample)

* Interval Description, core split 12/16/09 @ 1450

Elevation (NGVD) (i.e. Bottom = H)	Lithology - include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
1.2	OL	organic silt	Black (5Y 2.5/1)	Loose		petrol	heavy sheen
2.26	OL/ML	organic silt - clayey silt	Black (5Y 2.5/2)	Loose - moderately consolidated		Petrol/H_2S	Sheen
2.6	OL/ML	organic silt - clayey silt	Black - dark olive grey	moderately consolidated		~~Slight~~ Petrol/H_2S	DKW 12/16 ~~Slt~~ color varies in patches (5Y 2.5/2 - 5Y 3/2)
3.0	ML	silt - clayey silt	Dark olive grey	moderately - well consolidated		- Shell (bivalve) ~2 cm	color is 5Y 3/2

Comments:

Two Samples:	Time:
0.7 - 1.2	12/16 1500
2.1 - 2.6	12/16 1500

NC1
11-25-2009
NC1
0.0-0.5
NC1
0.5-1.2

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	NC1	Water Depth (A):	4.4
Core Sample ID:	S090-C0023	Length of Push Core Assembly (B):	14.5
Date:	10/21/09	Water Surface to Top of Handle (C):	7.0
Time On Station:	11:30	Length of Core (from bottom) (D):	2.6
Latitude N:	41° 40.547	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70° 54.842	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	15ft		
Predicted Tide (ft):			
Time of Collection:	11:35		
Collection Mechanism:	push core		
Logged by:	KGM		
Time Depart Station:	11:38		

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	3.0
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-4.5
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 2.6 - 0.8 = 1.8	-2.7
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-1.9
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-1.4

(Note if $\neq I_2$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H) (ft)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0	OL	silty clay	black	firm			shell hash
0.8		clay	dark olive grey	firm			
1.3		clay	olive grey	firm			
2.6							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: NC1
Core Sample ID: S-090-C023
Date: 11/25/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.6
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Status = II	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.53	OL	Silt w/organics homogenous	Black				All layers homogenous in texture
0.90	"	clayey silt w/organics	v. dk brown				
1.44		silty clay w/high % organics	dk gray-dk olive grey				
2.6		silty clay w/fine sand and low % organics	dk olive gray				

Comments:
Two samples:
0 - 0.5'
0.5 - 1.0'

Time:
0845
0845

NC2
11-25-2009

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	NC2	Water Depth (A):	3.9
Core Sample ID:	SD90-0022	Length of Push Core Assembly (B):	14.25
Date:	10/21/09	Water Surface to Top of Handle (C):	7.3
Time On Station:	11:13	Length of Core (from bottom) (D):	2.65
Latitude N:	41° 40.546	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70° 54.809	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	14 ft.		
Predicted Tide (ft):			
Time of Collection:	11:20		
Collection Mechanism:	push core		
Logged by:	KGM		
Time Depart Station:	11:25		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	3.0
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-3.95
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition)	-1.75
2.65 - 0.45 = 2.2	
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-1.3
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-0.9

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Below = -ft)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0							
0.18		Silt	brown	loose			
		silty clay	black	medium			
0.45		clayey sand	brown	medium			
0.6		sandy clay	black	medium			
1.2							
		clay	olive grey	firm			
2.65							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: NC 2
Core Sample ID: S-090-C022
Date: 11/25/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DAW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.7
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Station + H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
	SC	Silt, homogenous w/organics	Black				Sheen noted 1" "transition" layer 2" Boundary.
0.64							
	ML	Silty clay w/ high % organics	Vdk olive grey				
1.7							
		silty clay - Low % organics	dk olive gny - olive grey				

Comments:

Two Samples:
0-0.5' Time: 0906
0.5-1.0' 0906

NC3
11-25-2009

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	NC3	Water Depth (A):	4.5
Core Sample ID:	S090E0024	Length of Push Core Assembly (B):	15.1
Date:	10/21/09	Water Surface to Top of Handle (C):	7.9
Time On Station:	11:41	Length of Core (from bottom) (D):	2.33
Latitude N:	41°40.517	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°54.842	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	16 ft.		
Predicted Tide (ft):			
Time of Collection:	11:48		
Collection Mechanism:	push core		
Logged by:	KGM		
Time Depart Station:	11:51		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	2.9
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-4.3
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-2.52
2.33 - 0.55 = -1.78	
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-1.97
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-1.6

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		silty clay	dark grey	medium			
0.55		clay	brown grey	firm			
1.2		clay	olive grey	firm			shell hash
2.33							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: NC3
Core Sample ID: S-090-C024
Date: 11/25/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by:
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.3'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.32	OL	Silt w/ high organics content	Black				HEAVY SHEEN
0.98	OL	Silty clay w/ high organic content	V. dk brown - Black				HEAVY SHEEN
2.3		Silty clay w/ organics & shell fragments	dark olive grey				← TRANSITION between SHEEN/NO SHEEN

Comments:

Two samples:
0 - 0.5' Time: 0930
0.5 - 1.0' 0930

NC4
11-25-2008
spoons
spoons

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	NC4	Water Depth (A):	4.1
Core Sample ID:	SD90-C0021	Length of Push Core Assembly (B):	13.9
Date:	10/21/09	Water Surface to Top of Handle (C):	6.7
Time On Station:	10:56	Length of Core (from bottom) (D):	2.49
Latitude N:	41°40.521	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70° 54.815	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	18		
Predicted Tide (ft):			
Time of Collection:	11:03		
Collection Mechanism:	push core		
Logged by:	KGM		
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	3.1
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-4.1
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition)	-2.21
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D (2.49 - 0.6 = 1.89)	-1.61
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-1.0

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Above = +)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0	OH/CH	silty clay	dark grey	firm			
0.6		clay w/sand(?)	dark grey	firm			
1.2		clay	Olive grey	firm			w/shell hash
2.49							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: NC4
Core Sample ID: S-090-C021
Date: 11/25/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.5
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVDX: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.3	OL	SILT, high organics content	Black				
0.6	MH/OH	Clayey silt w/ high organics	V. dk gray-Black				SHEEN & petrol odor
1.0		Silty clay ↓ w/ organics and shell frags below 2.0'	V. dk olive gray; dk olive gray				some sheen between 0.6-1.0'; no sheen after 1.0'

Comments: TWO SAMPLES AND ONE QC SAMPLE
0-0.6'
0.6-1.1'
0.6-1.1=MSMSD (QC)
TIME: 0955

NCS
11-25-2009

SEDIMENT FIELD SAMPLING LOG

WOODS HOLE GROUP

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	NC5	Water Depth (A):	3.9
Core Sample ID:	SQ90-0020	Length of Push Core Assembly (B):	14.35
Date:	10/20/09	Water Surface to Top of Handle (C):	7.4
Time On Station:	10:42	Length of Core (from bottom) (D):	12.6
Latitude N:	41° 40. 500	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70° 54. 786	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	18 ft.		
Predicted Tide (ft):			
Time of Collection:	10:50		
Collection Mechanism:	push core		
Logged by:	KBM		
Time Depart Station:	10:52		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	~~3.4~~ 3.3
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-3.65
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-2.35
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-1.05
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-0.6

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0		silty clay	dark brown grey	medium to firm (wet looks at top)			
1.3		clay	olive grey	firm			minimal shell hash
2.6							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: NC5
Core Sample ID: S-090-C020
Date: 11/25/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.6
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.3	OL	Silty clay, organics	black, v. dk grey				Sheen
0.9	OL	Clayey silt w/ organics (high %)	Black				Heavy sheen & odor
1.4		Silty clay w/ organics	v. dk brown				- light sheen, - transition between High sheen (OL) and cleaner sed @ bottom.
2.6		Silty clay w/ organics and shell hash	dark olive grey - olive grey				

Comments:

Two samples:
~~[illegible]~~ 0.5 - 1.0'
1.0' - 1.5'

Time:
1020
1020

NC6
11-25-2009

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring — Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA — Vessel:
Client: USACE-NAE — Chief Scientist:

Station ID: NC6
Core Sample ID: S090-0019
Date: 10/21/09
Time On Station: 10:23
Latitude N: 41°40.488
Longitude W: 70°54.776
GPS Accuracy: 14ft.
Predicted Tide (ft):
Time of Collection: 10:26 // 10:35
Collection Mechanism: 4inch core
Logged by: KGM
Time Depart Station: 10:39

Water Depth (A): 3.6
Length of Push Core Assembly (B): 12.6 // ~~14.8~~
Water Surface to Top of Handle (C): 6.95 // ~~7.1~~
Length of Core (from bottom) (D): 1.3
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F): ~~3.6~~ 3.3
(H) Elev. of the bottom of the core (NGVD): G - (B-C): -2.35
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition): -1.18
1.3 - 0.13 = 1.17
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D: -1.05
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A: -0.3
(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Stations + M)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0		silty clay	dark grey	firm			
0.13		clay	olive grey	firm			
0.5		clay	dark black	firm			
1.3							

Comments:
1st attempt > 0.5 ft too short
2nd attempt > 1.0 ft too short, keeping 1st attempt

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: NC6
Core Sample ID: S-090-C-019
Date: 11/25/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.3
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.10 ~~0.1~~		SAND SILT CLAY Mottled w/ organics	DARK gray		fine sand		
0.40 ~~0.40~~		CLAY	grey - light grey	V. Firm consolidated			
0.80 0.80	OV	clayey SILT w/ Organics	Black			Petrol odor	SHEEN
1.3		Silty clay w/ Organics	V. dk brown To Olive brown				Slight sheen 0.8 - 1.1'

Comments:

Two samples
0.3 - 0.8'
0.8 - 1.3'

Time:
1045
1045

NC 7
11-25-2009

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	NC7	Water Depth (A):	4.5
Core Sample ID:	S090-C0018	Length of Push Core Assembly (B):	14.3
Date:	10/21/09	Water Surface to Top of Handle (C):	7.7
Time On Station:	10:07	Length of Core (from bottom) (D):	1.5
Latitude N:	41°40.471	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°54.766	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	14 ft.		
Predicted Tide (ft):			
Time of Collection:	10:12		
Collection Mechanism:	push core		
Logged by:	KbM		
Time Depart Station:	10:16		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	3.2
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-3.4
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-2.0
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D (1.5 − 0.1 = 1.4)	-1.9
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-1.3

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		silt	dark grey	loose	very fine		
0.1		sandy clay	grey		small to medium		well sorted
0.3		clay	dark grey	firm			
0.95		clay	olive grey	firm			shell hash
1.5							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring — Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA — Vessel:
Client: USACE-NAE — Chief Scientist:

Station ID: NC7
Core Sample ID: S-090-C018
Date: 11/25/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.5'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H	Lithology - Modified USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
	SW	SAND, Poorly Sorted w/ 10-15% Fines	grey-dark grey		fine gravel (-1 ϕ)		
0.24							Heavy sheen
	SL	Clayey silt w/ organics	Black				
0.5							
		Silty clay	V. dark Brown				Slight sheen
	ML						
0.88							
		Silty clay w/ 10-15% sand and shell frags	dark Olive grey				

Comments:

Two Samples
0 - 0.5' Time 1105
0.5 - 1.0' 1105

NC8
11-25-2009

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: NC8
Core Sample ID: SMP0-C025
Date: 10/21/09
Time On Station: 11:56
Latitude N: 41° 40.472
Longitude W: 70° 54.859
GPS Accuracy: 12A
Predicted Tide (ft):
Time of Collection: 12:00
Collection Mechanism: push core
Logged by: KGM
Time Depart Station: 12:05

Water Depth (A): 4.1
Length of Push Core Assembly (B): 14.65
Water Surface to Top of Handle (C): 7.0
Length of Core (from bottom) (D): 2.85
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) 2.6

(H) Elev. of the bottom of the core (NGVD): G - (B-C) -5.05

(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) -3.8

2.85 - 1.6 = 1.25

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D -2.2

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A -1.5

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0							
		sandy clay	dark grey	medium			with ulva
0.25							
		sandy clay (fine sand)	very dark grey	firm			
1.6							
		clay	olive grey	firm			shell hash
2.85							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring — Project #: W912WJ-09-D-0001, Task Order No. 0010
Location: New Bedford, MA — Vessel:
Client: USACE-NAE — Chief Scientist:

Station ID: NCB
Core Sample ID: S-090-C025
Date: 11/25/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.9
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.3	OL	Silty clay w/organics	Black V. dk Brown				
0.75		Clayey silt w/high % organics	Black	Loose			Heavy sheen
1.3		Sand-silt-clay w/high organic content	V. dk Brown		fine-med Sand		Slight sheen
2.9		Silty clay w/sand	dk olive gry				

Comments:

Two Samples:
0.3 - 0.8' Time: 11:36
0.8 - 1.3' 11:30

Station: SC1
11/8/09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: SC1
Core Sample ID: SC90-C026
Date: 11/24/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.7
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.6	OL	Silt with fine sand & organics	Black	Loose		Petrol odor	Heavy sheen
1.36	OL/OH	organic clayey silt	Dark olive grey	moderately consolidated			Transition layer? Slight sheen
2.7		silty clay, homogeneous Large oyster shell @ 2.6'-2.7'	Dark olive grey	well consolidated			no sheen

Comments:

2 samples:
0-0.5' Time: 0935
0.5-1.0' 0935

Station: SC2
11/24/09
Kimwipes

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	SC2	Water Depth (A):	~~3.7~~ // 3.4
Core Sample ID:	SC90-C0.27	Length of Push Core Assembly (B):	~~15.2~~ // 13.15
Date:	10/21/09	Water Surface to Top of Handle (C):	~~8.8~~ ~~6.95~~ // 7.2
Time On Station:	12:40	Length of Core (from bottom) (D):	2.23
Latitude N:	41° 40.385	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70° 54.853	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	13 ft.		
Predicted Tide (ft):			
Time of Collection:	13:00		
Collection Mechanism:	push core		
Logged by:	KGM		
Time Depart Station:	13:06		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	1.5
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-4.45
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-3.22
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D (2.23 - 1 = 1.23)	-2.22
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-1.9

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = 0)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silty clay	dark grey	medium			fine sand mixed in
1.0		clay	olive grey	firm			streaking
2.23							

Comments: 1st attempt unsuccessful - too loose. Sheen appeared when dumped
2nd attempt too short
3rd attempt successful - discarding 2nd core, kept 3rd

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: SC2
Core Sample ID: S-090-0027-
Date: 11/24/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.2
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Above = +)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.9	OH/ML	Organic Silt	Black - V. dark grey				
2.2		Silty - Clay, Very homogenous, Occasional Shell frag, Some organic debris	olive grey				

Comments:

Two samples:
0-0.5' Time: 0950
0.5-1.0' 0950

Station: SC3
11/24/09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: SC3
Core Sample ID: S090-0028
Date: 10/21/09
Time On Station: 13:12
Latitude N: 41° 40.381
Longitude W: 70° 54.832
GPS Accuracy: 19A.
Predicted Tide (ft):
Time of Collection: 13:15
Collection Mechanism: push core
Logged by: KGM
Time Depart Station: 13:18

Water Depth (A): 2.2
Length of Push Core Assembly (B): 12.55
Water Surface to Top of Handle (C): 8.5
Length of Core (from bottom) (D): 1.7
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F: 1.3
(H) Elev. of the bottom of the core (NGVD): G - (B-C): -2.75
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition): ~~-1.25~~ - 1.65
1.7 - ~~1.25~~ = ~~1.45~~ 0.6
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D: -1.05
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A: -0.9
(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Minus = M) SE	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0							
0.3		sandy clay	brown	loose			ulva
		sandy Clay	dark grey	medium			
1.1		clay	dark olive grey	firm			
1.4		clay	olive grey	firm			
1.7							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: SC3
Core Sample ID: S-090-C-028
Date: 11/24/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.7
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

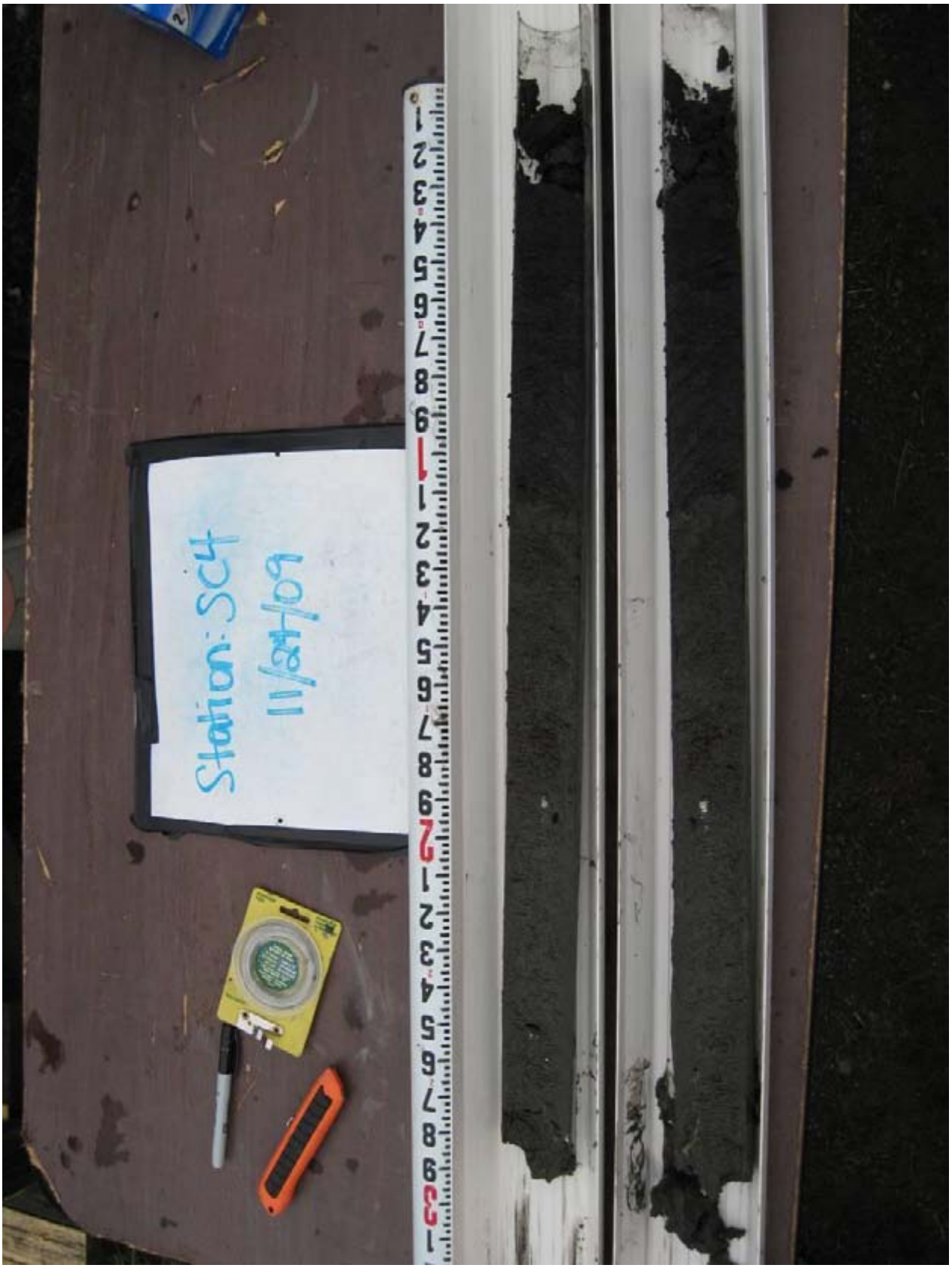
(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.65	OL	Sandy Silt	V dk brown				
1.0	OM/PT	clayey silt	black				heavy sheen
1.7		Sand-Silt-Clay w/gravel, Poorly sorted	dark brown (1.0 - 1.35) dk olive gray (1.35 - 1.7)				

Comments:

Two samples:

	Time
0 - 0.5	1010
0.5 - 1.0	1010


Station: SC4
11/8/09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	SC4	Water Depth (A):	3.0
Core Sample ID:	SC4 0031	Length of Push Core Assembly (B):	14.2
Date:	10/22/09	Water Surface to Top of Handle (C):	7.95
Time On Station:	8:47	Length of Core (from bottom) (D):	2.9
Latitude N:	41° 40.369	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70 64.865	Water Surface from Surveyed Elevation (F):	~~7.95~~
GPS Accuracy:	10'		
Predicted Tide (ft):			
Time of Collection:	08:51		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	08:57		

All Measurements are ± 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	1.5
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	~~-9.25~~ -4.75
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition)	-3.05
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	2.9-1.2=1.7 -1.85
(I_3) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-1.5

(Note if $\neq I_3$ within ± 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		silty clay	dark grey	medium			
1.2		clay	olive grey	firm			shell hash
2.9							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: SC4
Core Sample ID: [illegible] 5
Date: S-090 - CP31
Time On Station: 11/24/09
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.9
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.8	OL	Clayey Silt, some organics	black	homogenous		H_2S odor & petrol	, heavy sheen
1.14	OH/OL	Silty clay some org	v. dark grey	homogenous			
2.9		Silty clay some organic debris, & shell hash	olive grey	homogenous		H_2S	

Comments:
Two Samples: Time:
0 - 0.5' 1620
0.5 - 1.0' 1620

Station: SC5
11/24/09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	SC5	Water Depth (A):	3.3
Core Sample ID:	SC90-0082	Length of Push Core Assembly (B):	13.9
Date:	10/22/09	Water Surface to Top of Handle (C):	7.35
Time On Station:	09:04	Length of Core (from bottom) (D):	3.0
Latitude N:	41°40.344	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°54.892	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	10'		
Predicted Tide (ft):			
Time of Collection:	09:08		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	09:12		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	1.6
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-4.95
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-3.5
3-1.65 = 1.45	
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-1.95
(I_2) Elev. of the sod-water interface as measured from water depth (NGVD): G - A	-1.7

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		sandy clay	dark grey/ black	moderate firm	very fine sand		Ulva, shell hash
1.65		clay	dark olive grey	firm			Ulva, shell hash
3.0							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: SC5
Core Sample ID: S-Ø90-CØ32
Date: 11/24/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 3.0'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) o.e. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.96	OL	Highly organic clayey silt; homogenous	V. OK. grey - BLACK				- 0.5-0.9 HEAVY SHEEN, - ulva frag.
1.4	ML	Silty clay w/ high organics, homogenous	v.dk brown				
3.0'		Silty clay w/ high organics, SAND & gravel →	olive grey	poorly sorted			

Comments:

Two samples

	time: m
0 - 0.5	1042
0.5 - 1.0	1042

Station: SC6
11/24/09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	SC6	Water Depth (A):	2.8
Core Sample ID:	S090-C033	Length of Push Core Assembly (B):	14.25
Date:	10/22/09	Water Surface to Top of Handle (C):	7.95
Time On Station:	09:18	Length of Core (from bottom) (D):	2.85
Latitude N:	41° 40.340	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70° 54.845	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	19'		
Predicted Tide (ft):			
Time of Collection:	09:29		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:			

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) 1.8

(H) Elev. of the bottom of the core (NGVD): G - (B-C) -4.5

(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) -2.6

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D 2.85 - 0.95 = -1.9 -1.65

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		silty clay	dark grey/ black	medium			no hash
0.95		clay	brown grey	firm			
1.65		clay	dark olive grey	firm			
2.85							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: SC6
Core Sample ID: S-090-C033
Date: 11/24/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.9
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Between = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
	SP	Organic silt	Black				Heavy sheen
0.6							
	SP/SM	Organic clayey silt, trace sand/low sand content	very dk Brown				Sheen
0.9							
		Silty clay w/organics	olive grey				
2.9							

Comments:

Two samples:
0 - 0.5 Time 1057
0.5 - 1.0 1057

Station: K1
11/24/09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: K1
Core Sample ID: S-090-C041
Date: 11/24/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DMW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.2
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.3	OL	Clayey silt w/organics and shell hash	Black	Very homogeneous matrix			
0.9	OL	Clayey silt w/organics	Black	homogeneous			Moderate sheen
2.2		Silty Clay w/ low % of fine sand	grey	homogeny			@ 1.0' fine sand % increases.

Comments:

Two samples
0-0.5' Time 1156
0.5-1.0' 1156

Station: K2
11/18/09
Kimwipes
Kimwipes

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	K2	Water Depth (A):	4.5
Core Sample ID:	SD10-0034	Length of Push Core Assembly (B):	12.75
Date:	10/22/09	Water Surface to Top of Handle (C):	6.6
Time On Station:	10:03	Length of Core (from bottom) (D):	1.35
Latitude N:	41°39.954	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°54.974	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	11'		
Predicted Tide (ft):			
Time of Collection:	10:06		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	10:10		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	2.7
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-3.45
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)	-2.55
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D (1.35 - 0.45)	-2.1
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): $G_{\&}$ A	-1.8

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Included USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		clayey sand	dark grey	medium firm			
0.45		sand	brown	firm			well sorted sand
0.85		sand	tan grey	firm	very fine Push 0.85 - 1.03		well sorted sand
1.35							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: K2
Core Sample ID: S-090-C-0321
Date: 11/24/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.4'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Relative to H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.38		SAND & gravel, poorly sorted, some organics & oyster shell	Dark grey		-2¢ gravel		
0.60		Sand & gravel, poorly sorted	grey brown		-2¢ gravel		
1.1		very fine sand, v. well sorted	brown				
1.4		fine sand, well sorted	yellow brown				

Comments:

~~One~~ Two Samples:
0-0.5' Time: 1211
0.5-1.0' 1211

\

Station: K3
11/24/09
Kimwipes

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: K3
Core Sample ID: S090-0035
Date: 10/22/09
Time On Station: 10:16
Latitude N: 41 39.937
Longitude W: 70° 54.963
GPS Accuracy: 9 ft
Predicted Tide (ft):
Time of Collection: 10:18
Collection Mechanism: Posh Core
Logged by: D. Bailey
Time Depart Station: 10:25

Water Depth (A): 5.1
Length of Push Core Assembly (B): 14.25
Water Surface to Top of Handle (C): 5.4
Length of Core (from bottom) (D): ~~3.2~~ 3.15
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) 2.8

(H) Elev. of the bottom of the core (NGVD) G - (B-C) -6.05

(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) -3.65

3.15 - 0.75 = 2.4

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D -2.9

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A -2.3

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		sandy clay	black/ dark grey	medium			shell hach
0.75		clay	dark olive grey (brown where peatts most dense)	firm			peaty organics throughout, varying densities, may have some sand mixed in
3.15							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: K3
Core Sample ID: S-090-C035
Date: 11/24/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by:
Time Depart Station: DRW

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 3.2'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.70		V. fine sand w/ silt and shell hash	V. dk gray				
0.92		Poorly sorted sand w/ gravel	dk gray				
1.96		Highly organic soft peat like w/ clay &	dk reddish brown				
3.2'		Sandy clay w/ high % of organics, fibrous.	V. dk brown		Sand is poorly sorted fine - coarse		

Comments:

Two samples:
0 - 0.5' Time: 1223
0.5 - 10' 1223

Kimwipes
Station: K14
11/24/09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: K4
Core Sample ID: SD90-0036
Date: 10/22/09
Time On Station: 10:29
Latitude N: 41°39.925
Longitude W: 70° 54.968
GPS Accuracy: 8ft
Predicted Tide (ft):
Time of Collection: 10:35
Collection Mechanism: Push Core
Logged by: D. Bailey
Time Depart Station: 10:39

Water Depth (A): 6.2
Length of Push Core Assembly (B): 14.2
Water Surface to Top of Handle (C): 4.95
Length of Core (from bottom) (D): 2.6
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) — 3.0

(H) Elev. of the bottom of the core (NGVD): G - (B-C) — -6.25

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) — -4.2

2.6 - 0.55 = 2.05

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D — -3.65

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A — -3.2

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology (include USCS Code)	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		Silty Clay	black	medium			
0.55		clay	Olive grey with brown organics	firm			heavy with peaty organics (0.7 – 2.6 appears all peat)
2.6							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: K4
Core Sample ID: S-090-C036
Date: 11/24/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.6'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Geology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.38	OL	Silty Sand	V. dk grey-Black	homogenous			
0.70		Sandy clay & fine Sand	grey	homogenous			Clast of peat included in Sandy clay matrix
2.6'		Peat, fibrous... some Clay, very uniform.	brown-reddish brown				

Comments:

Two samples: Time:
0-0.5' 1242
0.5-1.0' 1242

Station: K5
10/28/09
Kimwipes

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	K5	Water Depth (A):	6.7
Core Sample ID:	SD90-001-87	Length of Push Core Assembly (B):	15.2
Date:	10/22/09	Water Surface to Top of Handle (C):	5.85
Time On Station:	10:42	Length of Core (from bottom) (D):	0.0 2.07
Latitude N:	41°39.905	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°54.963	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	18 ft		
Predicted Tide (ft):			
Time of Collection:	10:47		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	10:51		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev) of Water Surface (NVGD: E-F	3.0
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-6.35
(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition) 2.07 - 0.55 = 1.52	-4.83
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	-4.28
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	3.7

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H	Lithology - Included USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		silty clay	black	medium			shell hash
0.55		clay	grey	firm			
1.55		clayey sand	brown/olive grey	firm			
1.8		Sand	brown	firm			
2.07							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: K5
Core Sample ID: S-090-C037
Date: 11/24/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station: ~~DRW~~

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.1
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
	GW	Sandy Silt	Black - V. dk grey	homogenous	fine-med sand		sheen is noticeable
0.4							
		Sand, w/gravel, Poorly sorted	grey - dark grey		max gravel ≈ -2ϕ → -3ϕ		
1.75							
		V. fine sand, well sorted	brown				

Comments: Two samples and one QC (MS/MSD)
0-0.5'
0.5-1.0'
0-0.5-MSMSD

Station: KC
11/30/10

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	K6	Water Depth (A):	7.5
Core Sample ID:	SWQ-C0040	Length of Push Core Assembly (B):	14.1
Date:	10/22/09	Water Surface to Top of Handle (C):	3.6
Time On Station:	11:24	Length of Core (from bottom) (D):	2.3
Latitude N:	41039.900	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70054.785	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	15 ft		
Predicted Tide (ft):			
Time of Collection:	11:31		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	11:36		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	3.3
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-7.2
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition)	-5.6
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D (2.3 - 0.7 = 1.6)	-4.9
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-4.2

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom + H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		silty clay	black	medium			w/ organics
0.7		clay	dark olive grey	firm			
1.05		clay	olive grey	firm			
2.3							

Comments:

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE
Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: K6
Core Sample ID: 8-K6-C040
Date: 11/24/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.3'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Notes + H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.5	OL	Clayey-silt w/shell hash	Black				
0.8	MC	Silty Clay homogenous	Black				slight sheen
2.3		Silty Clay w/ low % organics, homogenous	dk olive grey				

Comments: Two samples
0-0.5' Time: 1310
0.5-1.0' 1310

Station: K7
6/14/09
spoons

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID:	K7	Water Depth (A):	6.1
Core Sample ID:	S090-0038	Length of Push Core Assembly (B):	13.05
Date:	10/28/09	Water Surface to Top of Handle (C):	4.5
Time On Station:	10:55	Length of Core (from bottom) (D):	2.05
Latitude N:	41°39.892	Surveyed Elevation (NGVD 29) (E):	
Longitude W:	70°64.936	Water Surface from Surveyed Elevation (F):	
GPS Accuracy:	16ft		
Predicted Tide (ft):			
Time of Collection:	11:00		
Collection Mechanism:	Push Core		
Logged by:	D. Bailey		
Time Depart Station:	11:05		

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F	3.0
(H) Elev. of the bottom of the core (NGVD): G - (B-C)	-5.55
(z*) Elev. of visual transition (NGVD): H + (distance to visual transition)	-4.15
(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D	2.05 - .65 = 1.4 -3.5
(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A	-3.1

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H	Sublogy - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		sandy clay	dark grey	medium			slight shell hash, Ulva
0.65		clay	dark olive grey	firm			
2.05							

Comments: Very heavy core, very solid

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: S-090-C038
Core Sample ID: K7
Date: 11/24/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DRW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 2.1'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.56	SC	Silty sand, well sorted w/shell hash	Black				
2.1		Poorly sorted SAND & gravel. - Sand is fine-coarse - gravel is -1ϕ to -2ϕ	grey				

Comments:

Two samples:
0-0.5'
0.5-1.0'

Time:
1325
1325

Station: K8
11/24/09

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: K8
Core Sample ID: S090-0039
Date: 10/22/09
Time On Station: 11:10
Latitude N: 41°39.888
Longitude W: 70°54.914
GPS Accuracy: 16ft
Predicted Tide (ft):
Time of Collection: 11:15
Collection Mechanism: Push Core
Logged by: D. Bailey
Time Depart Station: 11:19

Water Depth (A): 4.6
Length of Push Core Assembly (B): 12.6
Water Surface to Top of Handle (C): 6.5
Length of Core (from bottom) (D): 1.34
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F) 3.3

(H) Elev. of the bottom of the core (NGVD): G - (B-C) ~~-4.8~~ -2.8

(z*) Elev. of visual transition (NGVD): H + (distance to visual transition) ~~-3.81~~ -2.01

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D 1.34 - 0.55 = 0.79 ~~-3.35~~ -1.46

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A -1.3

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.0		sandy clay	dark grey	Medium			with organics
0.55		clayey sand	medium brown grey	firm			with organics
0.9		sand	brown	firm			sand is well sorted
1.34							

Comments: very heavy / dense core

SEDIMENT FIELD SAMPLING LOG

Project Name: NBH Environmental Monitoring
Location: New Bedford, MA
Client: USACE-NAE

Project #: W912WJ-09-D-0001, Task Order No. 0010
Vessel:
Chief Scientist:

Station ID: K8
Core Sample ID: S-090-C039
Date: 4/24/09
Time On Station:
Latitude N:
Longitude W:
GPS Accuracy:
Predicted Tide (ft):
Time of Collection:
Collection Mechanism:
Logged by: DMW
Time Depart Station:

Water Depth (A):
Length of Push Core Assembly (B):
Water Surface to Top of Handle (C):
Length of Core (from bottom) (D): 1.3'
Surveyed Elevation (NGVD 29) (E):
Water Surface from Surveyed Elevation (F):

All Measurements are + 0.1 feet

Calculations for Determination of Z* Elevation

(G) Elevation (Elev.) of Water Surface (NVGD: E-F

(H) Elev. of the bottom of the core (NGVD): G - (B-C)

(z*) Elev. of visual transition (NGVD(: H + (distance to visual transition)

(I) Elev. of the sed-water interface as measured from bottom of core (NGVD): H + D

(I_2) Elev. of the sed-water interface as measured from water depth (NGVD): G - A

(Note if $\neq I_2$ within + 1.0 feet, discard and resample)

Elevation (NGVD) (i.e. Bottom = H)	Lithology - Include USCS Code	Type	Color	Consistency	Maximum Particle Size	Odor	Comments
0.7		Sand, poorly sorted, w/ shell hash/Cmps @0.7 ft.	Varies Black @ Surface, to v. dk grey/grey				
1.3'		Sand, - moderately Sorted, - medium grained texture - some gravel	Colors Varies, - 0.7-1.06 is dark brown - 1.06 to 1.3 is brown		-1 → -2 ϕ		

Comments:

Two samplers:

	Time
0-0.5'	1345
0.5-1.0'	1345