Appendix A

Sediment Sampling Logs and Core Photographs

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Battelle
The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* Project #: *G606422*
Location: *New Bedford, MA* Vessel: *R/V Gale Force*
Client: *USACE NAE* Chief Scientist: Theresa Himmer

Station ID: *	~~S-07D-NWS-36-10~~	Time On Station:	1209	**All measurements are ±0.1 feet**	
Core Sample ID:	S-07D-NWS-36-10	Northing (NAD 83):	2708761.6	Water Depth (*A*):	
Logged by:	MW	Easting (NAD 83):	815516.2	Length of push core assembly (*B*):	N/A
Collection Mechanism:	~~Push Core~~ Auger	GPS Accuracy:	2.04	Water surface to top of handle (*C*):	
Date:	11/8/07	Predicted Tide (ft):	NA	Length of core (from bottom) (*D*):	1.0
		Time of Collection:	1212	Surveyed elevation (NVGD 29) (*E*):	NA
		Time Depart Station:	1218	Water surface from surveyed elevation (*F*):	

Calculations for Determination of Z* Elevation

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

(*H*) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(*z**) Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(*I*) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

N/A

Elevation (NVGD) (i.e. Bottom = *H*)	Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.0		organics silt sand gravel	Dark Brown	100%	fine to large			S-07D-NWS-36-00-05 (1) FRB
0.2								
0.0		gravel silt sand	gray Brown	100%	fine to large			S-07D-NWS-36-05-1 Archive Frozen

File ID of digital photograph(s):

Comments:

(1) showed + subsampled on 12/6/07 JMF/MW

* Station ID: NWS-36, AFM 12/11/07

Coresample ID: S-07D-NWS-36-00-10

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The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* Project #: *G606422*
Location: *New Bedford, MA* Vessel: *R/V Gale Force*
Client: *USACE NAE* Chief Scientist: Theresa Himmer

Station ID:	*S-07~~5~~ NWS-35-10	Time On Station:	1225	**All measurements are ±0.1 feet**	
Core Sample ID:		Northing (NAD 83):	2708761.2	Water Depth (*A*):	NA
Logged by:	MW	Easting (NAD 83):	815503.6	Length of push core assembly (*B*):	NA
Collection Mechanism:	~~Push Core~~ Auger	GPS Accuracy:	2.74	Water surface to top of handle (*C*):	NA
Date:	11/8/07	Predicted Tide (ft):	NA	Length of core (from bottom) (*D*):	1.0
		Time of Collection:	1228	Surveyed elevation (NVGD 29) (*E*):	NA
		Time Depart Station:	1231	Water surface from surveyed elevation (*F*):	NA

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

N
A

Elevation (NVGD) (i.e. Bottom = *H*)	Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.0		organics silt sand	Dark Brown	loose	fine to large			S-07D-NWS-35-00-05 PCB Throughout S-07D-NWS-35-05-10 Archive
0.0								

File ID of digital photograph(s):

Comments:

* Station ID: NWS-35 AEM 12/11/07
Sample ID: S-07D-NWS-35-00-10

Thawed and split 12/6/07 MW/JMF

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Project Name: *New Bedford Harbor Environmental Monitoring* | Project #: *G606422*
Location: *New Bedford, MA* | Vessel: *R/V Gale Force*
Client: *USACE NAE* | Chief Scientist: Theresa Himmer

Station ID: *	~~S-07D-NWS-37-10~~	Time On Station:	1237	**All measurements are ±0.1 feet**	
Core Sample ID:	S-07D-NWS-37-10	Northing (NAD 83):	2708682.0	Water Depth (*A*):	NA
Logged by:	MW	Easting (NAD 83):	815535.0	Length of push core assembly (*B*):	NA
Collection Mechanism:	~~Push Core~~ Auger	GPS Accuracy:	3.87	Water surface to top of handle (*C*):	NA
Date:	11/8/07	Predicted Tide (ft):	NA	Length of core (from bottom) (*D*):	1.0
		Time of Collection:	1240	Surveyed elevation (NVGD 29) (*E*):	NA
		Time Depart Station:	1242	Water surface from surveyed elevation (*F*):	NA

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

N/A

Elevation (NVGD) (i.e. Bottom = *H*)	Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.0		Sand Silt organics throughout	Brown	loose	fine to large			S-07D-NWS-37-00-05 PCB ① Throughout
0.0								S-07D-NWS-37-00-05 Archive Frozen

File ID of digital photograph(s):

Comments:

① thawed + subsampled 12/6/07 JMF/MW

* Station ID: NWS-37, AEM 12/11/07
core sample ID: S-07D-NWS-37-00-10

Battelle *The Business of Innovation*

Project Name: *New Bedford Harbor Environmental Monitoring* Project #: *G606422*
Location: *New Bedford, MA* Vessel: *R/V Gale Force*
Client: *USACE NAE* Chief Scientist: Theresa Himmer

Station ID: ② ~~S-07D-C007-030E-10~~		Time On Station:	1312	**All measurements are ±0.1 feet**	
Core Sample ID: ↳		Northing (NAD 83):	2708683.0	Water Depth (*A*):	NA
Logged by:	MW	Easting (NAD 83):	815499.0	Length of push core assembly (*B*):	NA
Collection Mechanism:	~~Push-Core~~ Auger	GPS Accuracy:	1.94	Water surface to top of handle (*C*):	NA
Date:	11/8/07	Predicted Tide (ft):	NA	Length of core (from bottom) (*D*):	1.0
		Time of Collection:	1324	Surveyed elevation (NVGD 29) (*E*):	NA
		Time Depart Station:	1324	Water surface from surveyed elevation (*F*):	NA

Calculations for Determination of Z* Elevation

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

(*H*) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(*z**) Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(*I*) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

N/A

Elevation (NVGD) (i.e. Bottom = *H*)	Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.0		organics sand silt	Dark Brown	loose	fine to large			S-07D-C007-30E-00-05 PCB & S-07D-C007-30E-05-10 Archive
0.4		gravel sand	Brown	loose	fine to large			
0.0								

File ID of digital photograph(s):

Comments:

Thawed and split 12/6/08 MW/JMF

① Station Location S/B 030E, incorrectly labled in planning phase. MW

② Station ID: C007-030E Page ___ of ___

AEM 12/11/07

Core Sample ID: S-07D-C007-030E-00-10

Battelle *The Business of Innovation*

Project Name: *New Bedford Harbor Environmental Monitoring* **Project #:** *G606422*
Location: *New Bedford, MA* **Vessel:** *R/V Gale Force*
Client: *USACE NAE* **Chief Scientist:** Theresa Himmer

Station ID: *	~~07-NWS-38-10~~ S-07D-NWS-38-10	Time On Station:	1342	**All measurements are ±0.1 feet**	
Core Sample ID:		Northing (NAD 83):	2708819.2	Water Depth (*A*):	NA
Logged by:	MW	Easting (NAD 83):	815570.4	Length of push core assembly (*B*):	NA
Collection Mechanism:	~~Push Core~~ Auger	GPS Accuracy:	2.84	Water surface to top of handle (*C*):	NA
Date:	11/8/07	Predicted Tide (ft):	NA	Length of core (from bottom) (*D*):	1.0
		Time of Collection:	1345	Surveyed elevation (NVGD 29) (*E*):	NA
		Time Depart Station:	1350	Water surface from surveyed elevation (*F*):	NA

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

N/A

Elevation (NVGD) (i.e. Bottom = *H*)	Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.0	~~organic silt~~ SM	organic silt	Brown	fibrous	Course fine			S-07D-NWS-38-00-05 PCB(1)
0.8		gravel clay organic mix	gray with Brown	loose	fine to large			S-07D-NWS-38-05-10 Archive Frozen
0.0								

File ID of digital photograph(s):

Comments:

(1) Shaved + Split 12/6/07 JMF/NW

* Station ID: NWS-38 AFM 12/11/07
core sample ID: S-07D-NWS-38-00-10

Battelle
The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* Project #: *G606422*
Location: *New Bedford, MA* Vessel: *R/V Gale Force*
Client: *USACE NAE* Chief Scientist:

Station ID:	C007-016	Time On Station:	0810	**All measurements are ±0.1 feet**	
Core Sample ID:	S-07D ~~S-07B~~-C007-016-00-11	Northing (NAD 83):	2708950.30	Water Depth (*A*):	4.9
Logged by:	JMF	Easting (NAD 83):	815396.21	Length of push core assembly (*B*):	8
Collection Mechanism:	*Push-Core*	GPS Accuracy:	2.02	Water surface to top of handle (*C*):	2
Date:	11/9/07	Predicted Tide (ft):		Length of core (from bottom) (*D*):	1.1
		Time of Collection:	09:21	Surveyed elevation (NVGD 29) (*E*):	
		Time Depart Station:	0830	Water surface from surveyed elevation (*F*):	

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

	Elevation (NVGD) (i.e. Bottom = *H*)		Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.1				SANDY SILT	Black	loose	fine			S-07D-C007-016-00-05 PCB①
0.6				SANDY SILTY clay	Grey; Brown	firm	fine			S-07D-C007-016-05-1.0 Archive Freezer
0.0										

File ID of digital photograph(s):

Comments:

① thawed + split 12/6/07 JMF/MW

Battelle
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Project Name: *New Bedford Harbor Environmental Monitoring* Project #: *G606422*
Location: *New Bedford, MA* Vessel: *R/V Gale Force*
Client: *USACE NAE* Chief Scientist:

Station ID:	C007-C006-023	Time On Station:	0835	**All measurements are ±0.1 feet**	
Core Sample ID:	~~S07B~~-C007-023-00-10 S07D	Northing (NAD 83):	2705814.36	Water Depth (*A*):	4.9
Logged by:	JMF	Easting (NAD 83):	815411.39	Length of push core assembly (*B*):	8
Collection Mechanism:	*Push-Core*	GPS Accuracy:	2.13	Water surface to top of handle (*C*):	1.9
Date:	11/9/07	Predicted Tide (ft):		Length of core (from bottom) (*D*):	1.0
		Time of Collection:	0838	Surveyed elevation (NVGD 29) (*E*):	
		Time Depart Station:	0845	Water surface from surveyed elevation (*F*):	

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

	Elevation (NVGD) (i.e. Bottom = *H*)		Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.0				Silt	Black	loose	fine	H_2S		S-07D-C007-023-00-05 PCB
0.7				sandy clay	Brown	firm	fine	H_2S		S-07D-C007-023-05-10 Archive
0										

File ID of digital photograph(s):

Comments: SM. oil sheen on top of core
H_2S odor

Trimmed and split 12/6/07 MW/JMF

Battelle
The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* Project #: *G606422*
Location: *New Bedford, MA* Vessel: *R/V Gale Force*
Client: *USACE NAE* Chief Scientist:

Station ID:	~~C007-028~~ ~~C006-028~~	Time On Station:	0851	**All measurements are ±0.1 feet**	
Core Sample ID:	~~S-07B-C007-028-00-13~~ S-07D	Northing (NAD 83):	2709703.73	Water Depth (*A*):	4.4
Logged by:	JMF	Easting (NAD 83):	815400.89	Length of push core assembly (*B*):	8
Collection Mechanism:	*Push-Core*	GPS Accuracy:	3.40	Water surface to top of handle (*C*):	1.9
Date:	11.9.07	Predicted Tide (ft):		Length of core (from bottom) (*D*):	1.3
		Time of Collection:	0855	Surveyed elevation (NVGD 29) (*E*):	
		Time Depart Station:	0900	Water surface from surveyed elevation (*F*):	

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

	Elevation (NVGD) (i.e. Bottom = *H*)		Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.3 ~~0.8~~				Silt	Black	loo	fine		S-07B-C007-028-00-13	S-07D-028-00-05 PCB (1)
0.5				sandy clay	Brown	firm	fine			S-07D-028-05-10 Archive Frozen
0 ~~0.3~~										

File ID of digital photograph(s):

Comments:

(1) thawed + subsampled on 12/6/07 JMF/MW

Battelle
The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* Project #: *G606422*
Location: *New Bedford, MA* Vessel: *R/V Gale Force*
Client: *USACE NAE* Chief Scientist:

Station ID: ~~C007-040~~ C006-040 Time On Station: 0914 **All measurements are ±0.1 feet**
Core Sample ID: ~~S-07B-C007-040-00-11~~ S-07D Northing (NAD 83): ① ~~2708513.74~~ Water Depth (*A*): 6.1
Logged by: JMF / MW Easting (NAD 83): ② ~~815465.70~~ Length of push core assembly (*B*): 8
Collection Mechanism: *Push-Core* GPS Accuracy: ~~3.46~~ 3.17 Water surface to top of handle (*C*): 0.7
Date: ~~11/9/07~~ 11/9/07 Predicted Tide (ft): — Length of core (from bottom) (*D*): 1.1
Time of Collection: 0919 Surveyed elevation (NVGD 29) (*E*):
Time Depart Station: 0925 Water surface from surveyed elevation (*F*):

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

Elevation (NVGD) (i.e. Bottom = *H*)	Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.1		Silty Sand	~~color~~ Black	loose	fine			S-07D-C007-040-00-05 PCB
~~0.0~~ 0.55		Sandy clay with peat	Brown	firm	fine			S-07D-C007-040-05-11 Archive
00								

File ID of digital photograph(s):

Comments: ① 2708574.11
② 815462.2

Thawed and Split 12/6/07 MW/JMF

Battelle
The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* Project #: *G606422*
Location: *New Bedford, MA* Vessel: *R/V Gale Force*
Client: *USACE NAE* Chief Scientist:

Station ID:	C007-038	Time On Station:	0936	**All measurements are ±0.1 feet**	
Core Sample ID:	S-078-C007-038-00-10 OTD	Northing (NAD 83):	2708516.44	Water Depth (*A*):	3.8 4.1 4.0
Logged by:	JMF/MW	Easting (NAD 83):	815383.68	Length of push core assembly (*B*):	8
Collection Mechanism:	*Push-Core*	GPS Accuracy:	3.13	Water surface to top of handle (*C*):	3.0
Date:	11/9/07	Predicted Tide (ft):	—	Length of core (from bottom) (*D*):	1.0
		Time of Collection:	0953	Surveyed elevation (NVGD 29) (*E*):	
		Time Depart Station:	0958	Water surface from surveyed elevation (*F*):	

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

	Elevation (NVGD) (i.e. Bottom = *H*)		Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.0				Sandy Silt	Black	loose	fine			S-07D-C007-038-00-05 PCB ①
0.5				Sandy silty clay	Grey-Brown	firm	fine			Peat @ transition S-07D-C007-038-05-10 Archive
00										

File ID of digital photograph(s):

Comments:

1st 2 attempt to start

① thawed + subsampled 12/6/07 JMF/MW

Battelle
The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* Project #: *G606422*
Location: *New Bedford, MA* Vessel: *R/V Gale Force*
Client: *USACE NAE* Chief Scientist:

Station ID:	~~07~~-NWS-33	Time On Station:	1055	**All measurements are ±0.1 feet**	
Core Sample ID:	S-~~07B~~-~~07~~-NWS-33-00-12 07D	Northing (NAD 83):	2709040.0	Water Depth (*A*):	—
Logged by:	JMF	Easting (NAD 83):	815330.6	Length of push core assembly (*B*):	—
Collection Mechanism:	~~Push Core~~ Auger	GPS Accuracy:	2.36	Water surface to top of handle (*C*):	—
Date:	11/9/07	Predicted Tide (ft):	—	Length of core (from bottom) (*D*):	1.2
		Time of Collection:	1058	Surveyed elevation (NVGD 29) (*E*):	—
		Time Depart Station:	1106	Water surface from surveyed elevation (*F*):	—

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

	Elevation (NVGD) (i.e. Bottom = *H*)		Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.2				organic material w/ sand	Rusty Brown	firm	fine-med			S-07D-NWS-33-00-05 PCB
0.8				Sand	Gray-Brown	firm	fine-med			S-07D-NWS-33-05-12 Archive
00										

File ID of digital photograph(s):

Comments: taken w/ soil auger. Stacked on land

Thawed and split 12/6/2007 MW/JMF

Battelle *The Business of Innovation*

Project Name: *New Bedford Harbor Environmental Monitoring* Project #: *G606422*
Location: *New Bedford, MA* Vessel: *R/V Gale Force*
Client: *USACE NAE* Chief Scientist:

Station ID:	07-NWS-34	Time On Station:	1110	**All measurements are ±0.1 feet**	
Core Sample ID:	S-07B-07-NWS-34-00-10 07D	Northing (NAD 83):	2708923.3	Water Depth (*A*):	—
Logged by:	JMF	Easting (NAD 83):	815338.1	Length of push core assembly (*B*):	—
Collection Mechanism:	~~Push-Core~~ Auger	GPS Accuracy:	2.35	Water surface to top of handle (*C*):	—
Date:	11/9/07	Predicted Tide (ft):	—	Length of core (from bottom) (*D*):	1.0
		Time of Collection:	1115	Surveyed elevation (NVGD 29) (*E*):	—
		Time Depart Station:	1117	Water surface from surveyed elevation (*F*):	—

Calculations for Determination of Z* Elevation

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

(*H*) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(*z**) Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(*I*) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

	Elevation (NVGD) (i.e. Bottom = *H*)		Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.0				organic material w/ sand	Rusty Brown	firm	fine		S-07B	PCB Homologue S-07D-NWS-34-00-05
0.0										Archive bottom 0.5-1.0 S-07D-NWS-34-05-10

File ID of digital photographs:

Comments:

Staked areas on shore.

Thawed and split 12/6/2007 MW/JMF

Battelle
The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* **Project #:** *G606422*
Location: *New Bedford, MA* **Vessel:** *R/V Gale Force*
Client: *USACE NAE* **Chief Scientist:**

Station ID:	C007-010	Time On Station:	0953	**All measurements are ±0.1 feet**	
Core Sample ID:	S-07D-C007-010-00-06	Northing (NAD 83):	2709127.5	Water Depth (*A*):	4.6 4.3
Logged by:	MW	Easting (NAD 83):	815353.5	Length of push core assembly (*B*):	8.0
Collection Mechanism:	*Push-Core*	GPS Accuracy:	2.30	Water surface to top of handle (*C*):	3.1
Date:	11/14/07	Predicted Tide (ft):		Length of core (from bottom) (*D*):	0.6
		Time of Collection:	1028	Surveyed elevation (NVGD 29) (*E*):	
		Time Depart Station:	1031	Water surface from surveyed elevation (*F*):	

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

Elevation (NVGD) (i.e. Bottom = *H*)	Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
0.6		Sand and gravel	gray Black	loose	Fine to large			Some fines in upper half of core
0.0								S-07D-C007-010-00-05 PCB① TOP .5'
								~~S-07D-C007-010-05-10 Archived Frozen~~
								S-07D-C007-010-05-07

File ID of digital photograph(s):

Comments:

① thawed + subsampled on 12/6/07 JMF/MW

Battelle
The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* Project #: *G606422*
Location: *New Bedford, MA* Vessel: *R/V Gale Force*
Client: *USACE NAE* Chief Scientist:

Station ID:	C007-039 ~~C006-039~~	Time On Station:	0928	**All measurements are ±0.1 feet**	
Core Sample ID:	S-~~07B~~-C007-039-00-1.4 -07D-	Northing (NAD 83):	2708513.66	Water Depth (*A*):	5.1
Logged by:	JMF / MW	Easting (NAD 83):	815412.04	Length of push core assembly (*B*):	8
Collection Mechanism:	*Push-Core*	GPS Accuracy:	3.43	Water surface to top of handle (*C*):	1.3
Date:	11/9/07	Predicted Tide (ft):	—	Length of core (from bottom) (*D*):	1.4
		Time of Collection:	0930	Surveyed elevation (NVGD 29) (*E*):	
		Time Depart Station:	0933	Water surface from surveyed elevation (*F*):	

Calculations for Determination of Z* Elevation

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

(*H*) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(*z**) Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(*I*) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

	Elevation (NVGD) (i.e. Bottom = *H*)		Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.4				SILT	Black	loose	fine	H_2S		S-07D-C007-039-00-05 PCR©
0.65				Sandy Silt	Brown	firm	fine	H_2S		S-07D-C007-039-05-1.4 Archive Frozen
00										

File ID of digital photographs:

Comments: H_2S odor, slight sheen on surface of core

Thawed and Split 12/7/07 MW/JMF

Battelle
The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* Project #: *G606422*
Location: *New Bedford, MA* Vessel: *R/V Gale Force*
Client: *USACE NAE* Chief Scientist:

Station ID: C007-030W	Time On Station: 1140	**All measurements are ±0.1 feet**	
Core Sample ID: S-07B-C007-030W-00-1~~0~~ 07D	Northing (NAD 83): 2708653.3	Water Depth (*A*): —	
Logged by: JMF	Easting (NAD 83): 815363.1	Length of push core assembly (*B*): —	
Collection Mechanism: ~~Push Core~~ Auger	GPS Accuracy: 2.43	Water surface to top of handle (*C*): —	
Date: 11/9/07	Predicted Tide (ft): —	Length of core (from bottom) (*D*): 1.0	
	Time of Collection: 1144	Surveyed elevation (NVGD 29) (*E*):	
	Time Depart Station: 1147	Water surface from surveyed elevation (*F*):	

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

	Elevation (NVGD) (i.e. Bottom = *H*)		Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.0				Sand w/ organic material	Brown	firm	med to fine ~~sand~~ ~~of organic~~ ~~material~~			S-07D-C007-030W-00-05 PCBs①
0.4	—	—	—	—	—	—	—	* strong chemical odor	—	—
0				Sand	Brown Grey	firm	med w/ organic			S-07D-C007-030W-05-10

File ID of digital photograph(s):

Comments:

* odor - unidentifiable chemical-like odor not H_2S, very strong smell

① Thawed + subsampled 12/7/07 JMF/MW

Battelle
The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* Project #: *G606422*
Location: *New Bedford, MA* Vessel: *R/V Gale Force*
Client: *USACE NAE* Chief Scientist:

Station ID:	C007-033	Time On Station:	1129	**All measurements are ±0.1 feet**	
Core Sample ID:	S-07D-C007-033-00-11	Northing (NAD 83):	270 8614.23	Water Depth (*A*):	3.3'
Logged by:	MW	Easting (NAD 83):	815412.05	Length of push core assembly (*B*):	8.0
Collection Mechanism:	*Push-Core*	GPS Accuracy:	2.84	Water surface to top of handle (*C*):	3.6
Date:	11/12/07	Predicted Tide (ft):		Length of core (from bottom) (*D*):	1.1
		Time of Collection:	1133	Surveyed elevation (NVGD 29) (*E*):	
		Time Depart Station:	1140	Water surface from surveyed elevation (*F*):	

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

Elevation (NVGD) (i.e. Bottom = *H*)	Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.1		silt w organic material	Black	loose	fine	H_2S		S-07D-C007-033-00-05
0.6		Firm to med olive Brown sand	olive Brown	Firm	med			PCB①
0.0								S-07D-C007-033-05-11 Archive Frozen

File ID of digital photograph(s):

Comments:
① thawed + subsampled 12/7/07 JMF/MW

Battelle
The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* Project #: *G606422*
Location: *New Bedford, MA* Vessel: *R/V Gale Force*
Client: *USACE NAE* Chief Scientist:

Station ID:	C007-062	Time On Station:	0845	**All measurements are ±0.1 feet**	
Core Sample ID:	S-07D-C007-062-00-09	Northing (NAD 83):	2708165.1	Water Depth (*A*):	4.5
Logged by:	MW	Easting (NAD 83):	815565.6	Length of push core assembly (*B*):	8.0
Collection Mechanism:	*Push-Core*	GPS Accuracy:	2.94	Water surface to top of handle (*C*):	3.3
Date:	11/14/2007	Predicted Tide (ft):		Length of core (from bottom) (*D*):	0.9
		Time of Collection:	0850	Surveyed elevation (NVGD 29) (*E*):	
		Time Depart Station:	0851	Water surface from surveyed elevation (*F*):	

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

Elevation (NVGD) (i.e. Bottom = *H*)	Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
0.9		Silt	Black	loose	fine			S-07D-C007-062-00-05 ① PCB Possible mixed Clay and Silt below 0.7
0.7		Clay and Silt	Olive gray with Black	firm	fine			S-07D-C007-062-05-1.0 Archive Frozen
0.0								

File ID of digital photograph(s):

Comments:

① QA Split taken here thawed + subsampled 12/7/07 JMF/MW

Battelle
The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* Project #: *G606422*
Location: *New Bedford, MA* Vessel: *R/V Gale Force*
Client: *USACE NAE* Chief Scientist:

Station ID:	C007-055	Time On Station:	0856	**All measurements are ±0.1 feet**	
Core Sample ID:	S-07D-C007-055-00-1.5	Northing (NAD 83):	2708267.8	Water Depth (*A*):	6.3'
Logged by:	MW	Easting (NAD 83):	815460.2	Length of push core assembly (*B*):	9.0
Collection Mechanism:	*Push-Core*	GPS Accuracy:	4.70	Water surface to top of handle (*C*):	1.6
Date:	11/14/07	Predicted Tide (ft):		Length of core (from bottom) (*D*):	1.5
		Time of Collection:	0904	Surveyed elevation (NVGD 29) (*E*):	
		Time Depart Station:	0906	Water surface from surveyed elevation (*F*):	

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

Elevation (NVGD) (i.e. Bottom = *H*)	Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.5		Silt	Black	loose	fine			S-07D-C007-055-00-1.5
0.7		Clay sand shells	olive gray	firm	fine med			PCB① silt streaks
0.0								S-07D-C007-055-05-1.5 Archive Frozen

File ID of digital photograph(s):

Comments:
① thawed + subsampled 12/7/07 JMF/MW

Battelle
The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* Project #: *G606422*
Location: *New Bedford, MA* Vessel: *R/V Gale Force*
Client: *USACE NAE* Chief Scientist:

Station ID:	C007-048	Time On Station:	0913	**All measurements are ±0.1 feet**	
Core Sample ID:	S-07D-C007-048-00-12	Northing (NAD 83):	708385.1	Water Depth (*A*):	5.3
Logged by:	MW	Easting (NAD 83):	815413.7	Length of push core assembly (*B*):	8.0
Collection Mechanism:	*Push-Core*	GPS Accuracy:	3.32	Water surface to top of handle (*C*):	1.5
Date:	11/14/07	Predicted Tide (ft):		Length of core (from bottom) (*D*):	1.2
		Time of Collection:	0916	Surveyed elevation (NVGD 29) (*E*):	
		Time Depart Station:	0920	Water surface from surveyed elevation (*F*):	

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

Elevation (NVGD) (i.e. Bottom = *H*)	Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.2		Silt and organic Detritus	Black	loose fibrous	fine to med			S-07D-C007-048-00-05 PCB①
0.4		Clay and organic Detritus	Olive gray	Firm	fine to med			S-07D-C007-048-05-12 Archive Frozen
0.0								

File ID of digital photograph(s):

Comments:
Could not get exactly on station due to Wood St. Bridge and Sediment Traps.

① Thawed + Subsampled 12/7/07 JMF/MW

Battelle
The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* **Project #:** *G606422*
Location: *New Bedford, MA* **Vessel:** *R/V Gale Force*
Client: *USACE NAE* **Chief Scientist:**

Station ID:	C007-049	Time On Station:	0926	**All measurements are ±0.1 feet**	
Core Sample ID:	S-07D-C007-049-00-11	Northing (NAD 83):	2705402.5	Water Depth (*A*):	5.1
Logged by:	MW	Easting (NAD 83):	815468.1	Length of push core assembly (*B*):	4.0
Collection Mechanism:	*Push-Core*	GPS Accuracy:	3.94	Water surface to top of handle (*C*):	1.6
Date:	11/14/07	Predicted Tide (ft):		Length of core (from bottom) (*D*):	1.1
		Time of Collection:	0930	Surveyed elevation (NVGD 29) (*E*):	
		Time Depart Station:	0939	Water surface from surveyed elevation (*F*):	

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

Elevation (NVGD) (i.e. Bottom = *H*)	Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.1		Silt	Black	Loose	Fine			S-07D-C007-049-00-05 PCB①
0.8		Clay	Olive gray	Firm	Fine			S-07D-C007-049-05-11 Archive Frozen
0.0								

File ID of digital photograph(s):

Comments:

① thawed + subsampled 12/7/07 JMF

Battelle
The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* **Project #:** *G606422*
Location: *New Bedford, MA* **Vessel:** *R/V Gale Force*
Client: *USACE NAE* **Chief Scientist:**

Station ID:	C007-049-DUP	Time On Station:	0926	**All measurements are ±0.1 feet**	
Core Sample ID:	S-07D-049-DUP-00-1.2	Northing (NAD 83):	270840 2.5	Water Depth (*A*):	5.3
Logged by:	MW	Easting (NAD 83):	815468.1	Length of push core assembly (*B*):	8.0
Collection Mechanism:	*Push-Core*	GPS Accuracy:	3.94	Water surface to top of handle (*C*):	1.2
Date:	11/14/07	Predicted Tide (ft):		Length of core (from bottom) (*D*):	1.2
		Time of Collection:	0937	Surveyed elevation (NVGD 29) (*E*):	
		Time Depart Station:	0942	Water surface from surveyed elevation (*F*):	

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

Elevation (NVGD) (i.e. Bottom = *H*)	Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.2		Silt	Black	loose	fine			S-07D-C007-049-DUP-00-0
0.8		Clay	olive gray	firm	fine			PCB①
0.0								S-07D-C007-049-DUP-05
								Archive Frozen

File ID of digital photograph(s):

Comments:

① thawed + subsampled 12/7/07 JMF/MW

Battelle
The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* **Project #:** *G606422*
Location: *New Bedford, MA* **Vessel:** *R/V Gale Force*
Client: *USACE NAE* **Chief Scientist:**

Station ID:	NWS-39	Time On Station:	1135	**All measurements are ±0.1 feet**	
Core Sample ID:	S-07D-NWS-39-00-10	Northing (NAD 83):	270889.7	Water Depth (*A*):	NA
Logged by:	JMF/MW	Easting (NAD 83):	815509.2	Length of push core assembly (*B*):	NA
Collection Mechanism:	~~Push-Core~~ Auger	GPS Accuracy:	2.15	Water surface to top of handle (*C*):	NA
Date:	12/6/07	Predicted Tide (ft):		Length of core (from bottom) (*D*):	4.0'
		Time of Collection:	1145	Surveyed elevation (NVGD 29) (*E*):	NA
		Time Depart Station:	1150	Water surface from surveyed elevation (*F*):	NA

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

Elevation (NVGD) (i.e. Bottom = *H*)	Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
0.4		~~Silt~~ SAND w/ Org. material	Brown	fine - coarse loose	fine - coarse	—		S-07D-NWS-39-00-05 ①PCB* TOP 0.5'
0.0		gravel w/ some SAND	grey	loose	fine → large	—		S-07D-NWS-39-05-10 Archive Frozen

File ID of digital photograph(s):

Comments:

① subsampled 12/6/07 JMF/MW * QA Split Taken

Battelle
The Business of Innovation

Project Name: *New Bedford Harbor Environmental Monitoring* **Project #:** *G606422*
Location: *New Bedford, MA* **Vessel:** *R/V Gale Force*
Client: *USACE NAE* **Chief Scientist:**

Station ID:	NWS-039 DUP	Time On Station:	1135	**All measurements are ±0.1 feet**	
Core Sample ID:	S-07D-NWS-039-DUP 00-10	Northing (NAD 83):	2708819.7	Water Depth (*A*):	NA
Logged by:	JMF/MW	Easting (NAD 83):	815509.2	Length of push core assembly (*B*):	NA
Collection Mechanism:	~~Push Core~~ Ayda	GPS Accuracy:	2.15	Water surface to top of handle (*C*):	NA
Date:	12/6/07	Predicted Tide (ft):	-	Length of core (from bottom) (*D*):	1.0'
		Time of Collection:	1150	Surveyed elevation (NVGD 29) (*E*):	NA
		Time Depart Station:	1155	Water surface from surveyed elevation (*F*):	NA

Calculations for Determination of Z* Elevation

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

(H) Elevation of the bottom of the core (NVGD): *G - (B - C)*

(z)* Elevation of visual transition (NVGD): *H + (distance to visual transition)*

(I) Elevation of the sediment-water interface as measured from bottom of core (NVGD): *H + D*

(I_2) Elevation of the sediment-water interface as measured from water depth (NVGD): *G - A*

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

	Elevation (NVGD) (i.e. Bottom = *H*)		Lithology - Include USCS code	Type	Color	Consistency	Maximum particle size	Odor	Sample IDs	Comments
1.0				SAND w/ Org. Material	Brown	loose	fine - Coarse	-		S-07D-NWS-039-DUP-00-05 ①PCB 109 0.5'
0.6				gravel w/ silty, clay SAND	grey	loose	fine - coarse	-		S-07D-NWS-039DUP-05-10 Archive Freeze
0										

File ID of digital photograph(s):

Comments:

① subsampled 12/6/07 JMF/MW

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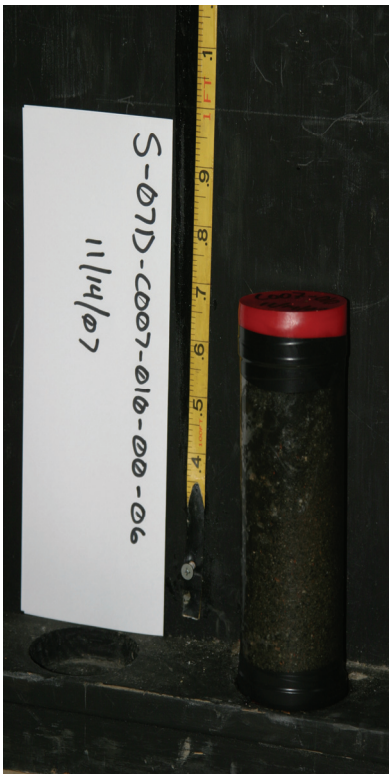
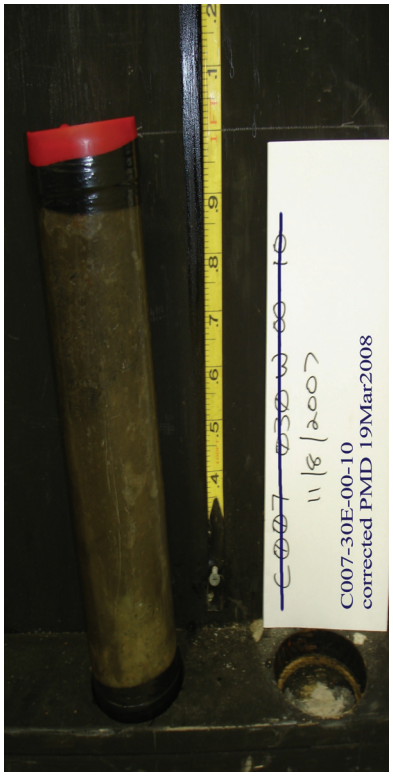


C007-010

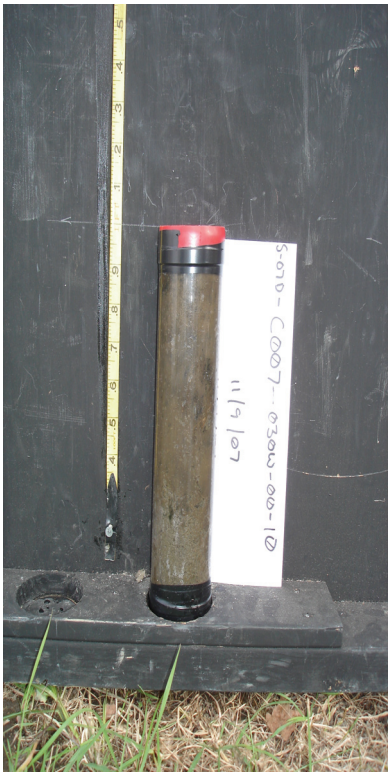
C007-016

C007-023

C007-028



C007-30E



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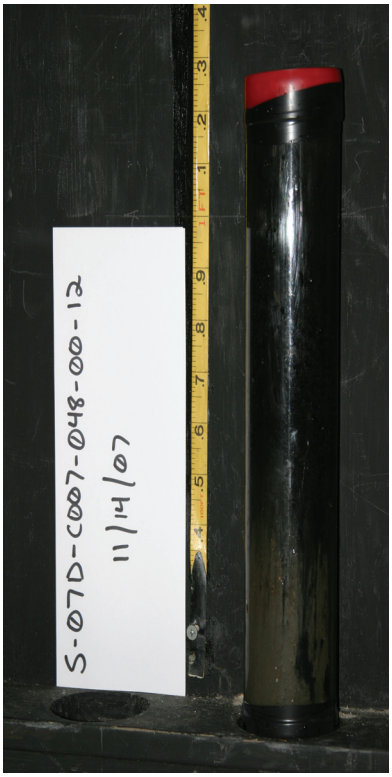
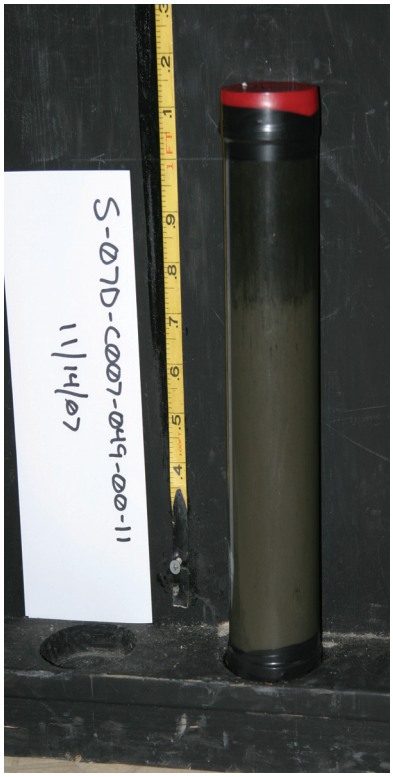
C007-038

C007-039

C007-040



C007-048



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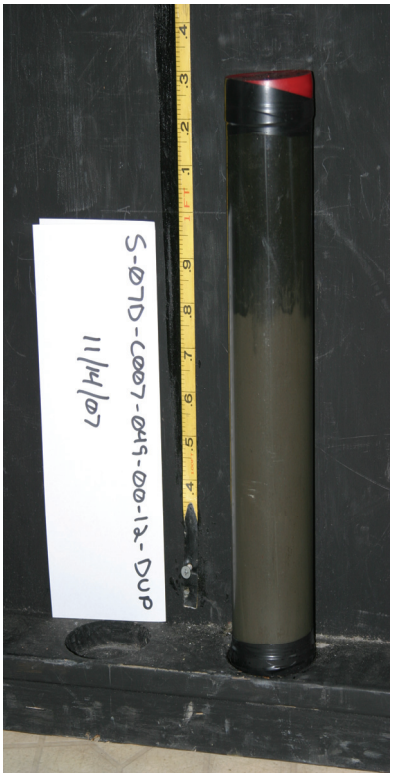
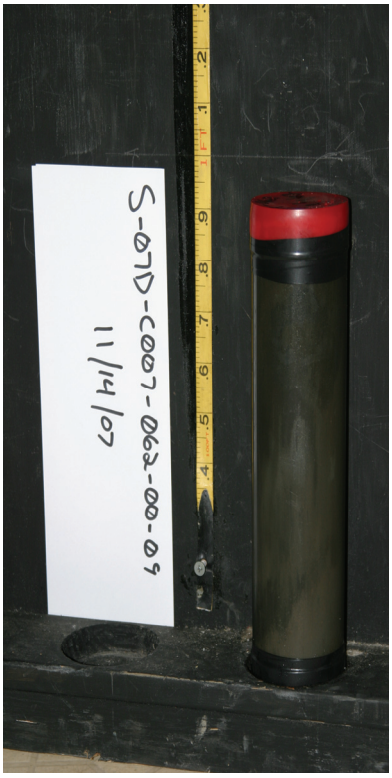


C007-049 duplicate

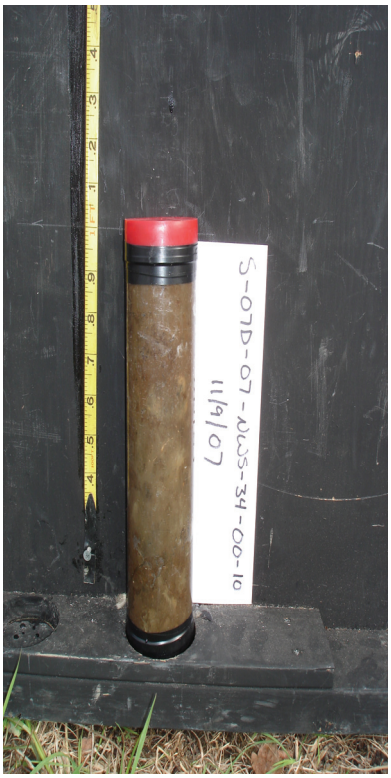
C007-055



C007-062

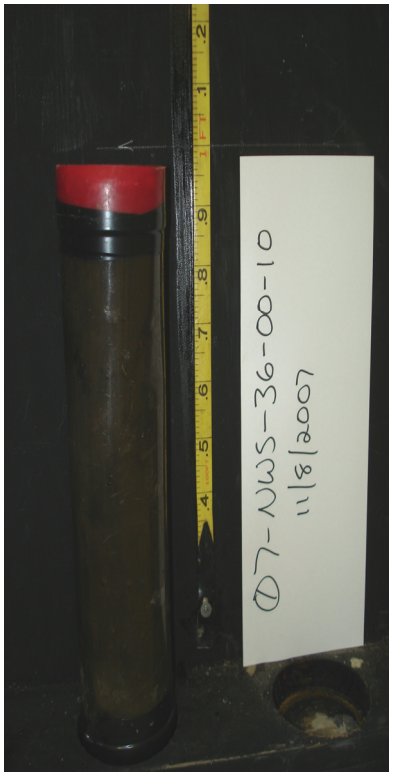
C007-033

07-NWS-033

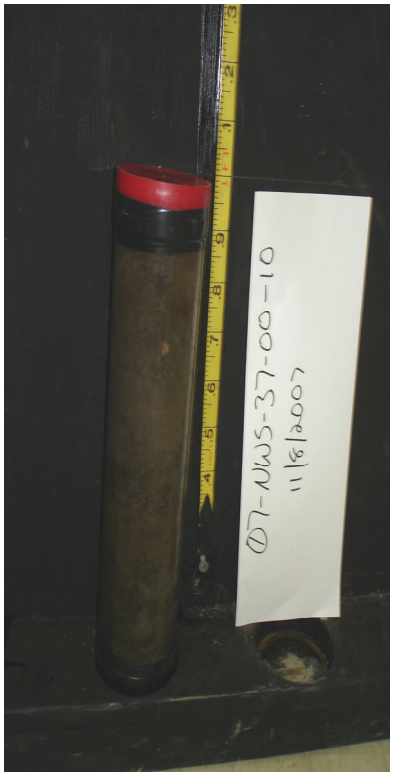


07-NWS-34

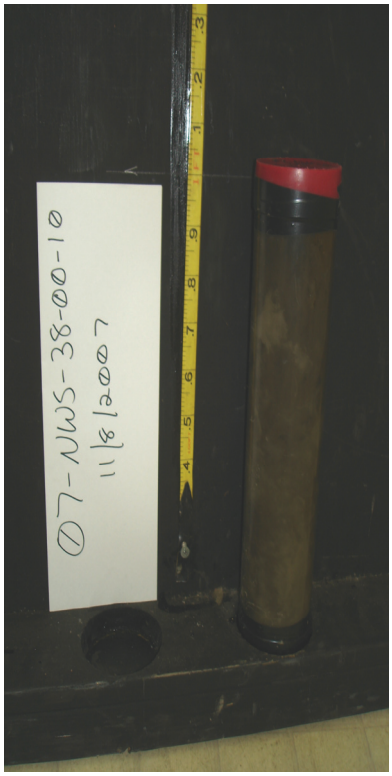
07-NWS-35



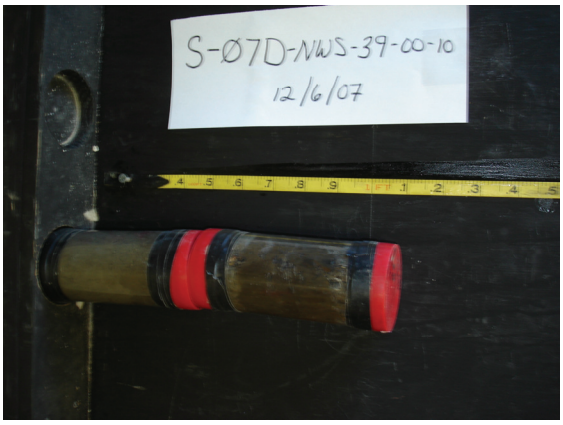
07-NWS-36



07-NWS-37



07-NWS-38



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