



Nobis Engineering
PO Box 2890
Concord, New Hampshire 03302

PROJECT

Remedial Design For Operable Unit 01

New Bedford Harbor Superfund Site

New Bedford, Massachusetts

BORING NO. FD-25

SHEET 1 of 3

FILE NO. 48138.07

CHKD. BY J. Trotter

Boring Co. Atlantic Testing Laboratories, Limited Boring Location northing 2697209.8 easting 814043.7
 Driller R. Pryce Ground Surface El. 7.19 Datum NGVD
 Logged By R. Chase Date Start 8/26/99 Date End 8/30/99

Sampler: 2-inch O.D. split-barrel sampler driven 24 inches with a 140 lb. safety hammer free falling from a height of 30 inches.
 Drill Rig: CME 75 truck mount
 Drilling Method: 4-inch I.D. (HW) flush-joint casing; spin and wash.

Groundwater Readings (from ground surface)				
Date	Time	Depth	Elev.	Stabilization Time
No water levels recorded				

DEPTH (ft)	Casing	SAMPLE INFORMATION					SAMPLE DESCRIPTION (ASTM D2488)	STRATUM DESCRIPTION	REMARKS
		Type & No.	PEN/REC (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	SPT N-Value			
1	Spin	S-1	24/16	0-2	26-29-32-25	61	Poorly graded sand (SP); dry, very dense, 75% fine sand, 5% coarse sand, 5% medium sand, 5% fine gravel, 5% silt, 5% asphalt, gray. (FILL) Advance HW drill casing to 3 ft.	SP (FILL)	
2	Spin								
3	Spin								
4	Spin	S-2	24/10	3-5	22-18-15-15	33	Similar to S-1, except dense, and wet. Advance HW drill casing to 8 ft.	SP (FILL)	
5	Spin								
6	Spin								
7	Spin								
8	Spin								
9	Spin	S-3	21/8	8-9.8	49-38-20-50/3*	58	Poorly graded sand with gravel (SP); wet, very dense, 50% fine sand, 10% medium sand, 5% coarse sand, 30% fine gravel, 5% silt, gray. (FILL) Advance HW drill casing to 13 ft.	SP (FILL)	
10	Spin								
11	Spin								
12	Spin								
13	Spin								
14	Spin	S-4	24/8	13-15	44-17-8-4	25	Silty sand (SM); wet, medium dense, 60% fine sand, 5% coarse sand, 5% medium sand, 30% silt, gray. Advance HW drill casing to 18 ft.	SM	
15	Spin								
16	Spin								
17	Spin								
18	Spin								
19	Spin	S-5	24/12	18-20	5-6-6-6	12	Organic soil (OL); wet, stiff, 100% organic silt, gray. Advance HW drill casing to 23 ft.	OL	
20	Spin								

0 to 4 - Very Loose 5 to 10 - Loose 11 to 30 - Medium Dense 31 to 50 - Dense Over 50 - Very Dense	0 to 2 - Very Soft 3 to 4 - Soft 5 to 8 - Medium Stiff 9 to 15 - Stiff 16 to 30 - Very Stiff Over 30 - Hard	1. S denotes split-barrel sampler. 2. U denotes 3-inch O.D. undisturbed sample. 3. UO denotes 3-inch Osterberg undisturbed sample. 4. PEN denotes penetration length of sampler. 5. REC denotes recovered length of sample. 6. SPT denotes Standard Penetration Test.	7. PID denotes Photoionization Detector 8. PPM denotes parts per million. 9. PP denotes Pocket Penetrometer. 10. FVST denotes field vane shear test. 11. RQD denotes Rock Quality Designation. 12. R denotes core run number.
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REMARKS:
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SHEET 2 of 3

FILE NO. 48138.07

CHKD. BY J. Trotter

Boring Co. Atlantic Testing Laboratories, Limited

Driller R. Pryce

Logged By R. Chase

Boring Location

northing 2697209.8 easting 814043.7

Ground Surface El.

7.19

Datum NGVD

Date Start

8/26/99

Date End

8/30/99

Sampler: 2-inch O.D. split-barrel sampler driven 24 inches with a 140 lb. safety hammer free falling from a height of 30 inches.

Drill Rig: CME 75 truck mount

Drilling Method: 4-inch I.D. (HW) flush-joint casing; spin and wash.

Groundwater Readings (from ground surface)

Date	Time	Depth	Elev.	Stabilization Time
No water levels recorded				

DEPTH (ft)	Casing	SAMPLE INFORMATION					SAMPLE DESCRIPTION (ASTM D2488)	STRATUM DESCRIPTION	REMARKS
		Type & No	PEN/REC (inches)	DEPTH (feet)	BLOWS PER 6 INCHES	SPT N-Value			
21	Spin								
22	Spin								
23	Spin						Inferred strata change at 23 ft.		
24	Spin	S-6	24/17	23-25	9-5-9-11	14	Silty sand (SM); wet, medium dense, 80% fine sand, 20% silt, gray. Advance HW drill casing to 28 ft.	SM	
25	Spin								
26	Spin								
27	Spin								
28	Spin								
29	Spin	S-7	24/6	28-30	22-20-15-15	35	Similar to S-6, except dense. Advance HW drill casing to 33 ft.	SM	
30	Spin								
31	Spin								
32	Spin								
33	Spin								
34	Spin	S-8	24/7	33-35	24-12-15-15	27	Poorly graded sand (SP); wet, medium dense, 70% fine sand, 15% medium sand, 5% coarse sand, <5% fine gravel, <5% silt, gray. Advance HW drill casing to 38 ft.	SP	
35	Spin								
36	Spin								
37	Spin								
38	Spin								
39	Spin	S-9	24/7	38-40	14-10-9-7	19	Well-graded sand (SW); wet, medium dense, 65% fine sand, 20% medium sand, 10% coarse sand, <5% silt, gray. Advance HW drill casing to 43 ft.	SW	
40	Spin								

0 to 4 - Very Loose
5 to 10 - Loose
11 to 30 - Medium Dense
31 to 50 - Dense
Over 50 - Very Dense

0 to 2 - Very Soft
3 to 4 - Soft
5 to 8 - Medium Stiff
9 to 15 - Stiff
16 to 30 - Very Stiff
Over 30 - Hard

1. S denotes split-barrel sampler.
2. U denotes 3-inch O.D. undisturbed sample.
3. UO denotes 3-inch Osterberg undisturbed sample.
4. PEN denotes penetration length of sampler.
5. REC denotes recovered length of sample.
6. SPT denotes Standard Penetration Test.

7. PID denotes Photoionization Detector
8. PPM denotes parts per million.
9. PP denotes Pocket Penetrometer.
10. FVST denotes field vane shear test
11. RQD denotes Rock Quality Designation.
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Driller R. Pryce
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Boring Location northing 2697209.8 easting 814043.7
Ground Surface El. 7.19 Datum NGVD
Date Start 8/26/99 Date End 8/30/99

Sampler: 2-inch O.D. split-barrel sampler driven 24 inches with a 140 lb. safety hammer free falling from a height of 30 inches.
Drill Rig: CME 75 truck mount
Drilling Method: 4-inch I.D. (HW) flush-joint casing; spin and wash.

Groundwater Readings (from ground surface)

Date	Time	Depth	Elev.	Stabilization Time
No water levels recorded				

DEPTH	Casing	SAMPLE INFORMATION					SAMPLE DESCRIPTION (ASTM D2488)	STRATUM DESCRIPTION	REMARKS
		Blows (ft)	Type & No.	PEN/REC (inches)	DEPTH (feet)	BLOWS PER 6 INCHES			
41	Spin								
42	Spin								
43	Spin								
44	Spin	S-10	24/2	43-45	14-14-20-13	34	Poorly graded gravel (GP); wet, dense, 95% fine gravel, <2% fine sand, <1% medium sand, <1% coarse sand, <1% silt, gray. Advance 3-7/8 in. roller bit to 50 ft. Advance HW drill casing to 50 ft.	GP	
45	Spin								
46	Spin								
47	Spin								
48	Spin						Probable boulder from 47.5 to 49.1 ft.		
49	Spin							Probable Boulder	
50	Spin								
51	Spin	S-11	3/3	50-50.3	50/3*	>50	Poorly graded sand (SP); wet, 90% fine sand, 5% medium sand, 5% silt, gray. Advance HW casing to 53 ft. Probable cobble/boulder from 50.3 to 51.5 ft.	SP	
52	Spin							Probable Boulder	
53	Spin								
54	Spin	S-12	24/6	53-55	11-6-5-5	11	Poorly graded sand (SP); wet, medium dense, 75% fine sand, <5% medium sand, <5% coarse sand, 10% fine gravel, <5% silt, gray. Advance 3-7/8 in. roller bit to 55.5 ft. Advance HW casing to 56 ft. Advance 3-7/8 in. roller bit to 60.5 ft.	SP	
55	Spin								
56	Spin								
57							Possible bedrock from 55.8 to 57.5 ft.	POSSIBLE BEDROCK	
58							Possible void from 57.5 to 58.5 ft.	Probable Void	
59							Top of apparent bedrock at 58.5 ft.		
60							Bottom of exploration at 60.5 ft; refusal.	BEDROCK	

GRAVEL SOIL (UNIONS)	SOFT SOIL (UNIONS)	SYMBOLS
0 to 4 - Very Loose 5 to 10 - Loose 11 to 30 - Medium Dense 31 to 50 - Dense Over 50 - Very Dense	0 to 2 - Very Soft 3 to 4 - Soft 5 to 8 - Medium Stiff 9 to 15 - Stiff 16 to 30 - Very Stiff Over 30 - Hard	1. S denotes split-barrel sampler. 2. U denotes 3-inch O.D. undisturbed sample. 3. UO denotes 3-inch Osterberg undisturbed sample. 4. PEN denotes penetration length of sampler. 5. REC denotes recovered length of sample. 6. SPT denotes Standard Penetration Test. 7. PID denotes Photoionization Detector 8. PPM denotes parts per million. 9. PP denotes Pocket Penetrometer. 10. FVST denotes field vane shear test. 11. RQD denotes Rock Quality Designation. 12. R denotes core run number.

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