

DRILLING LOG for Well #: SB-1

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114

SITE MAP

Building #2

Building #1

Building #3

NOTES:

Project: Raytheon, Wayland Project Number: 143.40
 Client: Raytheon Company Log By: C. McKenna
 Drilling Co.: ERM-New England Driller: C. McKenna
 Date Started: 20 October 1995 Date Finished: 20 October 1995
 Location: Wayland, MA Drilling Method: Hand Auger
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: _____ Well Depth: _____ Boring Diam.: ~2.0" I.D.
 Surface Elev.: _____ MP: _____ Depth to GW: NM
 MP Elev.: _____

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc (ppm) initial/2 hr	Lab Samp # & Anal.
1									
2									
3									
4									
5						Tan, dry, very fine to fine SAND.			VOC, SVOC, PCB, Metals
6									
7						Note: • SB - 1 was collected using a hand auger from the bottom of the drywell			
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB HAMMER
 (2) 300 LB HAMMER
 (3) SLIDE HAMMER

Key to Well Construction

Sandpack
 Well Screen
 Bentonite Seal
 Cement
 Grout

Key to Geologic Symbols

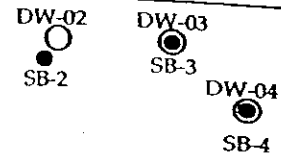
Till
 Silt
 Sandy Gravel
 Bedrock (Fine-Grain)
 Clay
 Silty Sand
 Gravel
 Bedrock (Coarse-Grain)
 Silty Clay
 Sand
 Fill

DRILLING LOG for Well #: SB-2

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114

SITE MAP

Building #2



Building #3

NOTES: Standard two foot split spoon sampling with 140lb hammer.

Project: Raytheon Wayland Project Number: 143.40
 Client: Raytheon Company Log By: C. McKenna/C. Frate
 Drilling Co.: T & K Drilling Driller: Kevin & Alan
 Date Started: 20 October 1995 Date Finished: 20 October 1995
 Location: Wayland, MA Drilling Method: 4.25" Hollow Stem Auger
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: 14.5' Well Depth: _____ Boring Diam.: 4.25" I.D.
 Surface Elev.: _____ MP: _____ Depth to GW: ≈15'
 MP Elev.: _____

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) initial/2 hr	Lab Samp. # & Anal.
1				4-5					
2				3-3	15"	Tan, dry, very fine to fine SAND.	S-1 5' - 2.5' 9:10AM	0.0 / 0.0	
3				2-4					
4				4-7	12"	Top 6" - Tan, dry, very fine to fine SAND. Piece of clay pipe at 3'. Bottom 5" - Dark brown, dry, fine to medium SAND trace Silt - fill.	S-2 2.5' - 4.5' 9:15AM	0.0 / 0.0	PCB
5				12-10					
6				9-16	18"	Top 8" - Dark brown, dry, fine to med. SAND with trace Silt - fill. Bottom 10" - Light brown SILT, trace Clay, trace fine Sand, damp to wet.	S-3 4.5' - 6.5' 9:20AM	0.0 / 0.0	
7				17-16					
8				16-15	20"	Tan, dry, very fine to fine SAND.	S-4 6.5' - 8.5' 9:25AM	0.0 / 0.0	
9				8-14					
10				14-16		Tan, dry, very fine to fine SAND.	S-5 8.5' - 10.5' 9:30AM	0.0 / 0.0	
11				23-14					
12				16-15		Tan, dry, very fine to fine SAND. Bottom 3" - wet	S-6 10.5' - 12.5' 9:35AM	0.0 / 0.0	
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts

- (1) 140 LB. HAMMER
- (2) 300 LB. HAMMER
- (3) SLIDE HAMMER

Key to Well Construction

- Sandpack
- Well Screen
- Bentonite Seal
- Cement
- Grout

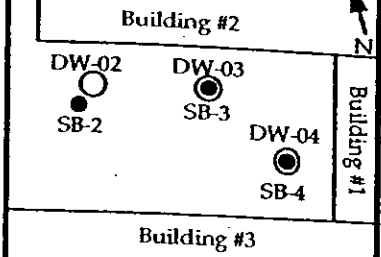
Key to Geologic Symbols

- Fill
- Silt
- Sandy Gravel
- Bedrock (Fine-Grain)
- Clay
- Silty Sand
- Gravel
- Bedrock (Coarse-Grain)
- Silty Clay
- Sand
- Fill

DRILLING LOG for Well #: SB-3

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114

SITE MAP



Project: Raytheon, Wayland Project Number: 143.40
 Client: Raytheon Company Log By: C. McKenna/C. Frate
 Drilling Co.: T & K Drilling Driller: Kevin & Alan
 Date Started: 20 October 1995 Date Finished: 20 October 1995
 Location: Wayland, MA Drilling Method: 4.25" Hollow Stem Auger
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: 14.5' Well Depth: _____ Boring Diam.: 4.25" I.D.
 Surface Elev.: _____ MP: _____ Depth to GW: ≈15'
 MP Elev.: _____

NOTES: Standard two foot split spoon sampling with 140lb hammer.

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) initial/2 hr	Lab Samp. # & Anal.
1						Boring started inside drywell, DW-03, at 6' below ground surface.			
2									
3									
4									
5									
6									
7				2 - 6	22"	Top 6" - Dark brown to black, mix of SILT, sand & clay; damp.	S - 1 6' - 8'	0.0 / 2.1	PCB, Pest. VOC, SVOC
8			7 - 8						
9				8 - 10	20"	Tan, very fine to fine SAND, dry.	S - 2 8' - 10'	0.0 / 0.0	
10			10 - 12						
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

Key to Well Construction

- Sandpack
- Well Screen
- Bentonite Seal
- Cement
- Grout

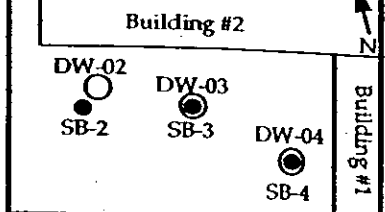
Key to Geologic Symbols

- Till
- Silt
- Sandy Gravel
- Bedrock (Fine-Grain)
- Clay
- Silty Sand
- Gravel
- Bedrock (Coarse-Grain)
- Silty Clay
- Sand
- Fill

DRILLING LOG for Well #: SB-4

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114

SITE MAP



Project: Raytheon Wayland Project Number: 143.40
 Client: Raytheon Company Log By: C. McKenna/C. Frate
 Drilling Co.: T & K Drilling Driller: Kevin & Alan
 Date Started: 20 October 1995 Date Finished: 20 October 1995
 Location: Wayland, MA Drilling Method: 4.25" Hollow Stem Auger
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: 14.5' Well Depth: _____ Boring Diam.: 4.25" I.D.
 Surface Elev.: _____ MP: _____ Depth to GW: =15'
 MP Elev.: _____

NOTES: Standard two foot split spoon sampling with 140lb hammer.

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) initial/2 hr	Lab Samp. # & Anal.
1						Boring started at the bottom of drywell DW-04, 3.5' below ground surface.			
2									
3									
4				1-1	15"	Top 2" - Black cinders, asphalt.	S-1	0.0	
5				1-1		Bottom 13" - Tan, dry, very fine SAND.	3.5' - 5.5'	0.0	
6				1-1	18"	Tan, dry, very fine SAND.	S-2	0.0	
7				1-1			5.5' - 7.5'	0.0	
8				4-8	20"	Top 18" - alternating layers of fine and very fine SAND, tan, dry.	S-3	0.0	
9				4-3		Bottom 2" - Gray-brown SILT.	7.5' - 9.5'	0.0	
10				3-5	16"	SATURATED, fine brown SAND; little silt; iron oxidation staining in alternating layers.	S-4	0.0	
11				5-8			9.5' - 11.5'	0.0	
12				6-6	15"	Top 8" - Fine brown saturated SAND; little silt; iron oxidation in alternating layers.	S-5	0.0	
13				8-7		Bottom 7" - Gray-brown CLAY, some silt.	11.5' - 13.5'	0.0	
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

Key to Well Construction

- Sandpack
- Well Screen
- Bentonite Seal
- Cement
- Grout

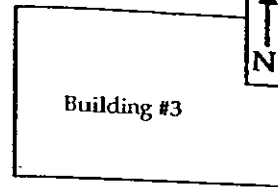
Key to Geologic Symbols

- Till
- Silt
- Sandy Gravel
- Bedrock (Fine-Grain)
- Clay
- Silty Sand
- Gravel
- Bedrock (Coarse-Grain)
- Silty Clay
- Sand
- Fill

DRILLING LOG for Well #: SB-5

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114

SITE MAP



NOTES: Standard two foot split spoon sampling with 140lb hammer.

Project: Raytheon, Wayland Project Number: 143.40
 Client: Raytheon Company Log By: C. McKenna/C. Frate
 Drilling Co.: T & K Drilling Driller: Kevin & Alan
 Date Started: 20 October 1995 Date Finished: 20 October 1995
 Location: Wayland, MA Drilling Method: 4.25" Hollow Stem Auger
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: 14.5' Well Depth: _____ Boring Diam.: 4.25" I.D.
 Surface Elev.: _____ MP: _____ Depth to GW: =18'
 MP Elev.: _____

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) initial/2 hr	Lab Samp. # & Anal.
1				10 - 14	15"	Dark brown, fine-medium SAND; trace coarse sand; trace silt; dry.	S - 1 5' - 2.5' 12:20	1.2 / 0.0	
2				8 - 9					
3				6 - 6	19"	Dark brown, fine-medium SAND; trace coarse sand; trace silt; dry.	S - 2 2.5' - 4.5' 12:25	0.0 / 0.0	
4				9 - 17		Mid 4" - Tan fine SAND.			
5				5 - 6	14"	Medium brown fine SAND; moist at top.	S - 3 4.5' - 6.5' 12:30	0.0 / 0.0	
6				9 - 13		Mid 4" - very coarse SAND to fine SAND with trace gravel.			
7				18 - 8	15"	Brown, fine SAND and some Silt; little medium sand.	S - 4 6.5' - 8.5' 12:35	0.0 / 0.0	PCB, Total Metals
8				19 - 22		Mid 6" - fine-med SAND with some coarse sand.			
9				13 - 18	12"	Very poorly sorted mix of fine SAND to fine gravel.	S - 5 8.5' - 10.5' 12:40	0.0 / 0.0	
10				19 - 28		Damp; dark brown.			
11				26 - 24	22"	Top 2" - v-poorly sorted mix of fine SAND-fine gravel.	S - 6 10.5' - 12.5' 12:45	0.0 / 0.0	
12				22 - 24		Next 8" - Very fine tan SAND. Next 8" - Clayey SILT.			
13						Bottom 4" - Medium brown SAND.			
14				13 - 18	19"	Top 6" - Brown SILT.	S - 7 12.5' - 14.5' 12:50	0.0 / 0.0	
15				21 - 22		Bottom 13" - Tan, fine SAND, minor layering			
16									
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

Key to Well Construction

- Sandpack
- Well Screen
- Bentonite Seal
- Cement
- Grout

Key to Geologic Symbols

- Till
- Clay
- Silty Clay
- Silt
- Silty Sand
- Sand
- Sandy Gravel
- Gravel
- Fill
- Bedrock (Fine-Grain)
- Bedrock (Coarse-Grain)

DRILLING LOG for Well #: SB-6

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114

SITE MAP Building #3

Building #4

NOTES: Standard two foot split spoon sampling with 140lb hammer.

Project: Raytheon Wayland Project Number: 143.40
 Client: Raytheon Company Log By: C. McKenna/C. Frate
 Drilling Co.: T & K Drilling Driller: Kevin & Alan
 Date Started: 20 October 1995 Date Finished: 20 October 1995
 Location: Wayland, MA Drilling Method: 4.25" Hollow Stem Auger
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: 14.5' Well Depth: _____ Boring Diam.: 4.25" I.D.
 Surface Elev.: _____ MP: _____ Depth to GW: =16.5'
 MP Elev.: _____

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) initial/2 hr	Lab Samp. # & Anal.
1				4 - 6	15"	Dark brown medium SAND; damp; little coarse sand.	S - 1	0.0	
2			5 - 6	5' - 2.5'			11:30		
3				4 - 6	18"	Top 2" - Dark brown med. SAND, damp; little coarse sand. Bottom 16" - Very fine to fine tan SAND; dry.	S - 2	0.0	
4			7 - 8	2.5' - 4.5'			11:35		
5				3 - 6	15"	Top 2" - Dk br. med. SAND; damp; little coarse sand. Mid 4" - Clayey silt. Bottom 9" - Medium brown SAND.	S - 3	0.0	
6			8 - 11	4.5' - 6.5'			11:40		
7				24 - 20	12"	Chunk of rock at 7' Fine to medium brown SAND, little silt.	S - 4	0.0	
8			18 - 21	6.5' - 8.5'			11:45		
9				6 - 10	15"	Dark brown, silty fine SAND. Dry, pockets of brown clay.	S - 5	0.0	TPH-8100
10			10 - 11	8.5' - 10.5'			11:50		
11				22 - 18	18"	Top 6" - Dark brown med. SAND; damp; little coarse sand. Bottom 12" - Varved very fine and fine SAND. Dry.	S - 6	0.0	
12			19 - 16	10.5' - 12.5'			11:55		
13				12 - 14		Top 6" - Dark brown med. SAND; damp; little coarse sand. Bottom 12" - Varved very fine and fine SAND. Dry.	S - 7	0.0	
14			12 - 14	12.5' - 14.5'			12:00		
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

Key to Well Construction

- Sandpack
- Well Screen
- Bentonite Seal
- Cement
- Grout

Key to Geologic Symbols

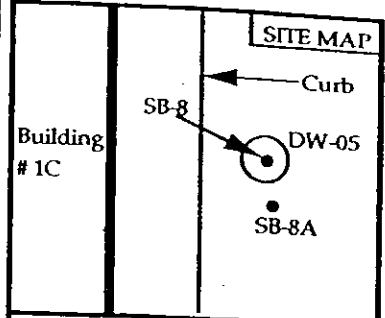
- Till
- Silt
- Sandy Gravel
- Bedrock (Fine-Grain)
- Clay
- Silty Sand
- Gravel
- Bedrock (Coarse-Grain)
- Silty Clay
- Sand
- Fill

DRILLING LOG for Well #: SB-8

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
BOSTON, MA 02114

SITE MAP

Project: Raytheon, Wayland Project Number: 143.40
 Client: Raytheon Company Log By: C. McKenna/C. Frate
 Drilling Co.: T & K Drilling Driller: Kevin & Alan
 Date Started: 20 October 1995 Date Finished: 20 October 1995
 Location: Wayland, MA Drilling Method: 4.25" Hollow Stem Auger
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: 14.5' Well Depth: _____ Boring Diam.: 4.25" I.D.
 Surface Elev.: _____ MP: _____ Depth to GW: =18'
 MP Elev.: _____



NOTES: Standard two-foot split-spoon sampling with 140lb hammer.

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) initial/2 hr	Lab Samp. # & Anal.
1									
2									
3									
4									
5									
6				5 - 5 1 - 1	15"	Top 8" - Dark brown slimy muck with bright green material (Cu or Ni?) Bottom 7" - Iron oxidized medium SAND.	S - 1 4.5' - 6.5' 13:30	0.0 33.5	PCB; Pest. VOC; Tot. Metals
7									
8				4 - 4 7 - 8	14"	Fine-medium brown SAND. Some iron oxidation staining present.	S - 2 6.5' - 8.5' 13:40	0.0 10.6	PCB; Total Metals
9									
10				11 - 13 15 - 19	14"	Fine to coarse Brown SAND; damp.	S - 3 8.5' - 10.5' 13:50	0.0 2.5	PCB; Total Metals
11									
12				13 - 21 22 - 26	14"	Fine to medium varved SAND; tan; damp.	S - 4 10.5' - 12.5' 13:55	0.0 34.8	PCB; SVOC Total Metals
13									
14				9 - 19 17 - 24	14"	Fine to medium varved SAND; tan; damp.	S - 5 12.5' - 14.5' 14:00	0.0 0.0	
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts:
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

Key to Well Construction

- Sandpack
- Well Screen
- Bentonite Seal
- Cement
- Grout

Key to Geologic Symbols

- Till
- Clay
- Silty Clay
- Silt
- Silty Sand
- Sand

- Sandy Gravel
- Gravel
- Fill
- Bedrock (Fine-Grain)
- Bedrock (Coarse-Grain)

DRILLING LOG for Well #: SB-8A

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114

Project: Raytheon, Wayland Project Number: 143.40
 Client: Raytheon Company Log By: C. McKenna/C. Frate
 Drilling Co.: T & K Drilling Driller: Kevin & Alan
 Date Started: 20 October 1995 Date Finished: 20 October 1995
 Location: Wayland, MA Drilling Method: 4.25" Hollow Stem Auger
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: 14.5' Well Depth: _____ Boring Diam.: 4.25" I.D.
 Surface Elev.: _____ MP: _____ Depth to GW: =18'
 MP Elev.: _____

SITE MAP

Building # 1C

← Curb

○ DW-05

● SB-8A

NOTES: Standard two-foot split-spoon sampling with 140lb hammer.

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) initial/2 hr	Lab Samp. # & Anal.
1				4 - 14		Top 3" - FILL - cinders/asphalt	S - 1	0.0	
2				6 - 7	12"	Bottom 9" - Brown fine SAND and medium gravel; dry.	0.5' - 2.5' 14:20	31.2	
3				8 - 5		Brown, fine to medium SAND; dry.	S - 2	0.0	
4				4 - 4	12"		2.5' - 4.5' 14:25	15.2	
5				2 - 2		Same as above.	S - 3	0.0	PCB's & Total Metals
6				1 - 2	13"		4.5' - 6.5' 14:30	0.0	
7				7 - 8		Same as above; damp.	S - 4	0.0	
8				10 - 10	14"		6.5' - 8.5' 14:35	0.0	
9				5 - 7		Same as above; damp.	S - 5	0.0	PCB's & Total Metals
10				7 - 9	18"		8.5' - 10.5' 14:40	0.0	
11				13 - 15		Same as above; damp. Bottom 10" - layering evident.	S - 6	0.0	
12				16 - 29	20'		10.5' - 12.5' 14:45	0.0	
13				18 - 18		Same as above.	S - 7	0.0	
14				20 - 22	17'		12.5' - 14.5' 14:50	0.0	
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

Key to Well Construction

- Sandpack
- Well Screen
- Bentonite Seal
- Cement
- Grout

Key to Geologic Symbols

- Till
- Silt
- Sandy Gravel
- Bedrock (Fine-Grain)
- Clay
- Silty Sand
- Gravel
- Bedrock (Coarse-Grain)
- Silty Clay
- Sand
- Fill

DRILLING LOG for Well #: SB-9

ERM NEW ENGLAND, INC.
205 PORTLAND STREET
BOSTON, MA 02114

SITE MAP

Project: Raytheon, Wayland Project Number: 143.40
 Client: Raytheon Company Log By: C. McKenna
 Drilling Co.: ERM-New England Driller: C. McKenna
 Date Started: 20 October 1995 Date Finished: 20 October 1995
 Location: Wayland, MA Drilling Method: Hand Auger
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: _____ Well Depth: _____ Boring Diam.: ≈2.0" I.D.
 Surface Elev.: _____ MP: _____ Depth to GW: NM
 MP Elev.: _____

DW-08



Building #3

NOTES:

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) initial/2 hr	Lab Samp. # & Anal.
1									
2									
3									
4									
5						Tan, dry, very fine to fine SAND, well sorted.			VOC, SVOC, PCB, Metals
6									
7						Note: • SB - 9 was collected using a hand auger from the bottom drywell #8			
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

Key to Well Construction

- Sandpack
- Well Screen
- Bentonite Seal
- Cement
- Grout

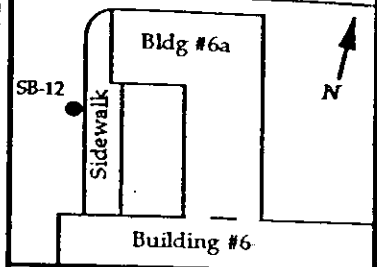
Key to Geologic Symbols

- Till
- Silt
- Sandy Gravel
- Bedrock (Fine-Grain)
- Clay
- Silty Sand
- Gravel
- Bedrock (Coarse-Grain)
- Silty Clay
- Sand
- Fill

DRILLING LOG for Well #: SB-12

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114

SITE MAP



Project: Raytheon, Wayland Project Number: 143.40
 Client: Raytheon Company Log By: J. D'Agostino
 Drilling Co.: T & K Drilling Driller: Kevin & Alan
 Date Started: 23 January 1996 Date Finished: 23 January 1996
 Location: Wayland, MA Drilling Method: 4.25" Hollow Stem Auger
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: 17 Well Depth: _____ Boring Diam.: 4.25" I.D.
 Surface Elev.: _____ MP: _____ Depth to GW: ≈17
 MP Elev.: _____

NOTES: Standard two-foot split-spoon sampling with 140lb hammer.

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc (ppm) Initial/2 hr	Lab Samp. # & Anal.
1						Asphalt and frost			
2				9 - 13	3"	Top 1" - Dark brown-black, med-coarse, SAND and Silt with some gravel, poorly sorted, dry.	S - 1	0.0	
3				12 - 11		Bottom 2" - Light brown - same material.	1' - 3' 8:55AM	0.0	
4				5 - 7	14"	14" - Light brown, fine SAND and Silt, no gravel or cobbles, well sorted(all sand & silt), no odor, no stain, dry.	S - 2	0.0	
5				6 - 8			3' - 5' 9:05 AM	0.0	
6				5 - 6	15"	15" - Light brown, V-fine SAND and Silt, no gravel or cobbles, well sorted, no odor, no stain, wet on outside of spoon, moist on inside of sample.	S - 3	0.0	
7				7 - 18			5' - 7' 9:10AM	0.0	
8				16 - 18	9"	9" - Light brown, V-fine SAND and Silt, trace coarse sand, few cobbles, not well sorted, no odor, no stain, dry.	S - 4	0.0	
9				10 - 42			7' - 9' 9:15AM	0.0	
10				10 - 12	23"	23" - Light brown, fine SAND and Silt, some coarse sand, trace gravel, well sorted, no odor, no stain, dry.	S - 5	0.0	
11				18 - 21			9' - 11" 9:25AM	0.0	
12				22 - 26	16"	Top 8" - Brown, fine-coarse SAND and Silt, with trace coarse gravel, poor sorting, no odor, no stain, dry.	S - 6	0.0	
13				30 - 34		Bottom 8" - Brown, coarse SAND and Silt with significant gravel, poorly sorted, no odor, no stain, dry.	11" - 13' 9:30AM	0.0	
14				22 - 20	13"	Top 7" - Light brown, med-coarse SAND and Silt, with gravel, poorly sorted, no odor or stain, moist-wet.	S - 7	2.5	TPH-8100
15				19 - 21		Bottom 6" - Light brown V-fine SAND and Silt, well sorted, cohesive, no odor or staining, wet.	13' - 15' 9:40AM	0.0	VOC 8260
16				6 - 16	16"	16" - Light brown-brown, V-fine SAND and Silt w/trace clay, no gravel, well sorted, no odor or staining, wet-saturated(in the water table).	S - 8	0.0	
17				18 - 20			15' - 17' 9:50AM	0.0	
18						Notes:			
19						• No well set at this location			
20						• Water table at ≈16'-17'			
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

Key to Well Construction

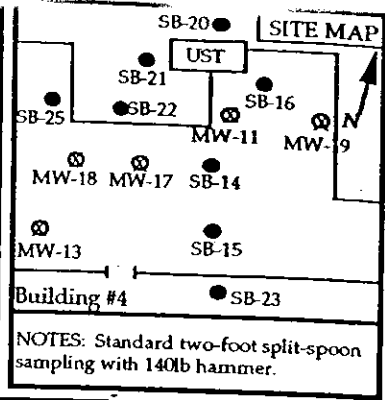
Sandpack
 Well Screen
 Bentonite Seal
 Cement
 Grout

Key to Geologic Symbols

Till
 Silt
 Sandy Gravel
 Bedrock (Fine-Grain)
 Clay
 Silty Sand
 Gravel
 Bedrock (Coarse-Grain)
 Silty Clay
 Sand
 Fill

DRILLING LOG for Well #: SB-14

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114



Project: Raytheon, Wayland Project Number: 143.40
 Client: Raytheon Company Log By: L. D'Agostino
 Drilling Co.: T & K Drilling Driller: Kevin & Alan
 Date Started: 23 January 1996 Date Finished: 23 January 1996
 Location: Wayland, MA Drilling Method: 4.25" Hollow Stem Auger
 Screen Diameter: _____ Length: _____ Slot Size: _____
 casing Diameter: _____ Length: _____ Type: _____
 string Depth: 11' Well Depth: _____ Boring Diam.: 4.25" I.D.
 surface Elev.: _____ MP: _____ Depth to GW: _____
 MP Elev.: _____

Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) initial/2 hr	Lab Samp. # & Anal.
			30 - 44 47 - 55	17"	17" - Brown-lt. brown, med-coarse SAND and Silt, with gravel, v-poorly sorted, no odor or stain, dry.	S - 1 1' - 3' 1:05PM	0.0 310	
			17 - 38 35 - 40	12"	12" - Brown, med-coarse SAND, Silt and gravel, with rock flour from cobbles, loose and unconsolidated, poor sorting, no odor or stain, dry.	S - 2 3' - 5' 1:45PM	0.0 280	
			22 - 39 20 - 29	12"	12" - Brown, med-coarse SAND, Silt and gravel, loose, poorly sorted, no odor or stain, dry; backfill(?)	S - 3 5' - 7' 2:05PM	0.0 300	
			11 - 17 26 - 19	10"	10" - Brown-gray, med-coarse SAND and Silt with gravel, poorly sorted, loose, dry; v-small pocket of oil in end of spoon.	S - 4 7' - 9' 2:15PM	0.0 270	
			15 - 24 27 - 21	2"	2" - Rock fragments covered in oil; no sand or silt.	S - 5 9' - 11' 2:25PM	0.0 -	

Notes for Blowcounts
 J.B. HAMMER
 J.B. HAMMER
 J.E. HAMMER

Key to Well Construction

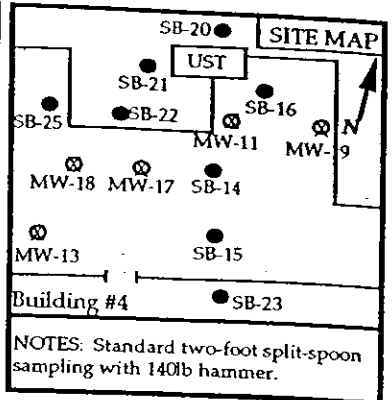
- Sandpack
- Bentonite Seal
- Grout
- Well Screen
- Cement

Key to Geologic Symbols

- Till
- Silt
- Sandy Gravel
- Bedrock (Fine-Grain)
- Clay
- Silty Sand
- Gravel
- Bedrock (Coarse-Grain)
- Silty Clay
- Sand
- Fill

DRILLING LOG for Well #: SB-15

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114



Project: Raytheon, Wayland Project Number: 143.40
 Client: Raytheon Company Log By: J. D'Agostino
 Drilling Co.: T & K Drilling Driller: Kevin & Alan
 Date Started: 23 January 1996 Date Finished: 24 January 1996
 Location: Wayland, MA Drilling Method: 4.25" Hollow Stem Auger
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: 17 Well Depth: _____ Boring Diam.: 4.25" I.D.
 Surface Elev.: _____ MP: _____ Depth to GW: ≈17
 MP Elev.: _____

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) total/2 hr	Lab Samp. # & Anal.
1						Asphalt and frost.			
2				20 - 15 6 - 6	12"	12" - Light brown-brown, fine-coarse SAND and Silt with trace fine gravel, loose, no odor, no stain dry.	S - 1 1' - 3' 2:50PM	0.0 250	
3									
4				7 - 7 6 - 5	2"	2" - Brown, fine-med SAND and Silt with trace coarse sand, loose, dry. Two chunks of coarse gravel in spoon.	S - 2 3' - 5' 2:55PM	0.0 842	
5									
6				5 - 6 4 - 4	12"	Top 6" - Brown, fine-coarse SAND and Silt with fine gravel, loose and unconsolidated, no odor or stain, dry Bottom 6" - Fine-med SAND and Silt with trace coarse sand, homogeneous, no odor or stain, dry.	S - 3 5' - 7' 3:05PM	0.0 607	
7									
8				13 - 7 8 - 16	16"	16" - Brown, fine-med SAND and Silt with trace coarse sand and fine gravel, loose no odor or stain, dry.	S - 4 7' - 9' 3:10 PM	0.0 290	
9									
10				18 - 18 17 - 14	16"	Top 10" - Brown, fine-coarse SAND and Silt with trace fine gravel, loose, dry. Some oil in top 10". Bottom 6" - Black, sticky oil coated fine SAND and SILT w/trace coarse sand, silt and clay in nose of spoon.	S - 5 9' - 11' 3:20PM	8.4 1036	
11									
12				5 - 7 14 - 15	17"	17" - Black, oil saturated fine-med. SAND and Silt, trace gravel and cobbles, pockets of oil visible in certain places.	S - 6 11' - 13' 11:15:AM	104 467	
13									
14				10 - 10 15 - 25	16"	Top 11" - Gray-black, fine SAND and Silt, well sorted, intermittent oil saturated zones throughout. Bottom 5" - Brown, fine SAND and Silt, no visible contamination, wet.	S - 7 13' - 15' 11:25:AM	38.2 251	
15									
16				6 - 12 15 - 19	15"	15" - Brown, fine-med SAND and Silt, no gravel or cobbles, homogeneous, saturated with water.	S - 8 15' - 17' 11:35:AM	14.4 11.6	
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

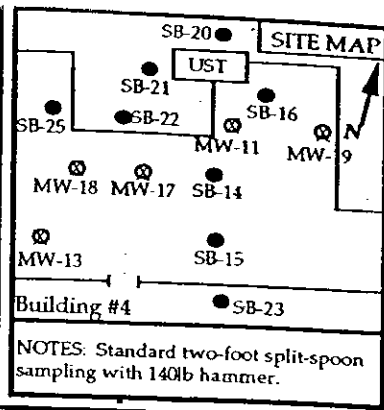
Key to Well Construction
 Sandpack
 Well Screen
 Bentonite Seal
 Cement
 Grout

Key to Geologic Symbols
 Till
 Clay
 Silty Clay
 Silt
 Silty Sand
 Sand

Sandy Gravel
 Gravel
 Fill
 Bedrock (Fine-Grain)
 Bedrock (Coarse-Grain)

DRILLING LOG for Well #: SB-16

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114



Project: Raytheon Wayland Project Number: 143.40
 Client: Raytheon Company Log By: L. D'Agostino
 Drilling Co.: T & K Drilling Driller: Kevin & Alan
 Date Started: 23 January 1996 Date Finished: 23 January 1996
 Location: Wayland, MA Drilling Method: 4.25" Hollow Stem Auger
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: 7 Well Depth: _____ Boring Diam.: 4.25" I.D.
 Surface Elev.: _____ MP: _____ Depth to GW: ≈17
 MP Elev.: _____

NOTES: Standard two-foot split-spoon sampling with 140lb hammer.

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) initial/2 hr	Lab Samp # & Anal.
1									
2				4 - 2 5 - 8	10"	10" - Brown, fine-med SAND and Silt with trace coarse sand and gravel, no odor or stain, dry.	S - 1 1' - 3' 3:40PM	0.0 155	
3									
4				4 - 5 21 - 12	7"	Top 4" - Brown, fine-med SAND and Silt with trace coarse sand and gravel, no odor or stain, dry. Bottom 3" - V-dark brown, fine-med SAND and Silt with trace coarse sand, slight odor, no stain, dry.	S - 2 3' - 5' 3:50PM	0.0 280	
5									
6				4 - 6 8 - 4	9"	9" - Black, oil stained and saturated, fine-med SAND and Silt with trace gravel, petroleum odor.	S - 3 5' - 7' 4:05PM	11.6 250	
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB HAMMER
 (2) 300 LB HAMMER
 (3) SLIDE HAMMER

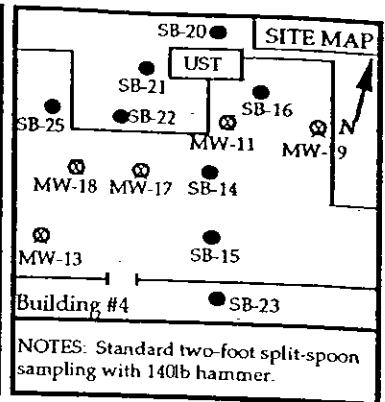
Key to Well Construction
 Sandpack
 Well Screen
 Bentonite Seal
 Cement
 Grout

Key to Geologic Symbols
 Till
 Clay
 Silty Clay
 Silt
 Silty Sand
 Sand

Sandy Gravel
 Gravel
 Fill
 Bedrock (Fine-Grain)
 Bedrock (Coarse-Grain)

DRILLING LOG for Well #: SB-20

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114



Project: Raytheon Wayland Project Number: 143.40
 Client: Raytheon Company Log By: J. D'Agostino
 Drilling Co.: Geologic Driller: Chirs & Tom
 Date Started: 25 January 1996 Date Finished: 25 January 1996
 Location: Wayland, MA Drilling Method: 2.25" Hollow Stem Auger
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: _____ Well Depth: _____ Boring Diam.: 2.25" I.D.
 Surface Elev.: _____ MP: _____ Depth to GW: _____
 MP Elev.: _____

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc (ppm) initial/2 hr	Lab Samp # & Anal.
1				14 - 17	15"	13" - Brown, fine-med SAND and Silt with trace gravel and wood, no odor or stain, dry.	S - 1 5' - 2.5'	4.4	
2				19 - 23		2" - Light brown, v-fine SAND, Silt and Clay (silty-clay) No odor or stain, dry.	8:45AM	0.0	
3				14 - 22	16"	Top 6" - Light brown, v-fine SAND and Silt with little or no clay, no odor or stain, dry.	S - 2 2.5' - 4'	0.0	
4				26		Bottom 10" - Brown, fine-med. SAND and Silt with trace coarse sand, no odor or stain, dry.	8:50AM	0.0	
5				6 - 9	18"	Top 4" - Light brown, med. SAND and Silt with trace coarse sand, no odor or stain, dry. Next 12" - Lt. brown v-fine SAND and Silt, no odor or stain, dry.	S - 3 4' - 6'	0.0	
6				14 - 33		Bottom 2" - Fine-coarse SAND, Silt and gravel.	9:15AM	0.0	
7				102 -	5"	5" - Brown-gray, fine-coarse SAND and Silt with gravel; loose, unconsolidated and poorly sorted, areas of oil stained sand and gravel (cohesive masses), not saturated.	S - 4 6' - 8'	0.0	
8				100/2.5"			9:20AM	0.0	
9				144 - 95	14"	14" - Gray, fine-coarse SAND and gravel with some silt (mainly gravel), pockets of oil throughout spoon, not liquid but cohesive. (Last 18" driven with 300lb hammer.)	S - 5 8' - 10'		
10				72 -			11:15AM	316	
11				50/2.5"					
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB HAMMER
 (2) 300 LB HAMMER
 (3) SLIDE HAMMER

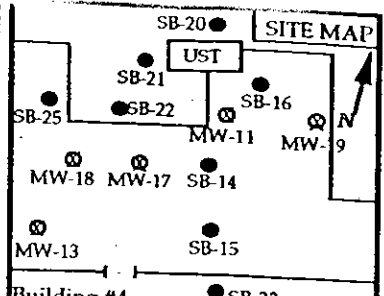
Key to Well Construction
 Sandpack
 Well Screen
 Bentonite Seal
 Cement
 Grout

Key to Geologic Symbols
 Till
 Clay
 Silty Clay
 Silt
 Silty Sand
 Sand

Sandy Gravel
 Gravel
 Fill
 Bedrock (Fine-Grain)
 Bedrock (Coarse Grain)

DRILLING LOG for Well #: SB-21

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114



Project: Raytheon, Wayland Project Number: 143.40
 Client: Raytheon Company Log By: J. D'Agostino
 Drilling Co.: Geologic Driller: Chirs & Tom
 Date Started: 25 January 1996 Date Finished: 25 January 1996
 Location: Wayland, MA Drilling Method: Geoprobe
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: 8' Well Depth: _____ Boring Diam.: 2"
 Surface Elev.: _____ MP: _____ Depth to GW: _____
 MP Elev.: _____

NOTES: Standard two-foot split-spoon sampling with 140lb hammer.

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) initial/2hr	Lab Samp. # & Anal.
						Concrete			
1				X	18"	Top 6" - Light brown, v-fine SAND and Silt. Mid 6" - Br, fine-med SAND & Silt, trace coarse sand. Bot. 6" - Br, v-fine SAND, Silt & clay, trace coarse sand.	S - 1 0.5' - 2' 12:15	192 52.2	
2				X	18"	Top 9" - Brown, v-fine SAND, Silt and trace clay, no odor or stain, damp. Bottom 9" - Light brown, fine-med. SAND and Silt, no odor or stain, dry.	S - 2 2' - 4' 12:30	0.0 82	
3				X	2"	2" - Light brown, fine-med SAND and Silt, no odor or stain, dry.	S - 3 4' - 6' 12:35	- 217	
4						Rock bit used to break through refusal.			
5				X	2"	2" - Light brown, fine-med SAND and Silt, loose, no odor or stain, dry.	S - 4 6.7' - 8' 1:30	-	
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts:
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

Key to Well Construction
 Sandpack
 Well Screen
 Bentonite Seal
 Cement
 Grout

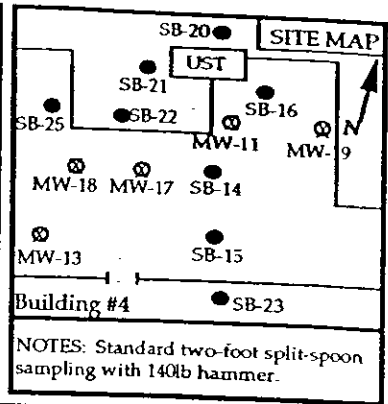
Key to Geologic Symbols
 Till
 Clay
 Silty Clay
 Silt
 Silty Sand
 Sand

Sandy Gravel
 Gravel
 Fill
 Bedrock (Fine-Grain)
 Bedrock (Coarse-Grain)

DRILLING LOG for Well #: SB-22

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114

Project: Raytheon, Wayland Project Number: 143.40
 Client: Raytheon Company Log By: I. D'Agostino
 Drilling Co.: Geologic Driller: Chirs & Tom
 Date Started: 26 January 1996 Date Finished: 26 January 1996
 Location: Wayland, MA Drilling Method: 2.25" Hollow Stem Auger
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: 8.5' Well Depth: _____ Boring Diam.: _____
 Surface Elev.: _____ MP: _____ Depth to GW: _____
 MP Elev.: _____



Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc (ppm) initial / 2 hr	Lab Samp. # & Anal.
1									
2									
3									
4									
5				9 - 14	9"	9" - Brown, fine-med SAND and Silt with trace coarse sand and fine gravel, no odor or stain, dry.	S - 1 4' - 6' 8:00AM	65	
6				11 - 3					
7				8 - 11	5"	5" - Brown, fine-med SAND and silt, with some coarse sand and fine gravel, one cobble, no odor or stain, damp	S - 2 6' - 8' 8:05AM	62.3	
8				37 - 52					
9						Refusal encountered at 8.5'			
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

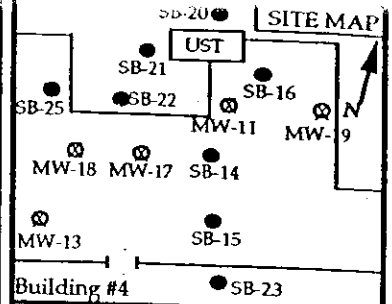
Footnotes for Blowcounts
 (1) 140 LB HAMMER
 (2) 300 LB HAMMER
 (3) SLIDE HAMMER

Key to Well Construction
 Sandpack
 Well Screen
 Bentonite Seal
 Cement
 Grout

Key to Geologic Symbols
 Till
 Clay
 Silty Clay
 Silt
 Silty Sand
 Sand
 Sandy Gravel
 Gravel
 Fill
 Bedrock (Fine-Grain)
 Bedrock (Coarse-Grain)

DRILLING LOG for Well #: SB-23

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114



NOTES: Standard two-foot split-spoon sampling with 140lb hammer.

Project: Raytheon, Wayland Project Number: 14340
 Client: Raytheon Company Log By: J. D'Agostino
 Drilling Co.: ERM-New England Driller: Kurt & John
 Date Started: 25 January 1996 Date Finished: 25 January 1996
 Location: Wayland, MA Drilling Method: Geoprobe
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: _____ Well Depth: _____ Boring Diam.: 4
 Surface Elev.: _____ MP: _____ Depth to GW: ≈16'
 MP Elev.: _____

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) initial/2 hr	Lab Samp. # & Anal.
1				X	22"	22" - Brown, fine SAND and Silt, no odor or stain, dry.	S - 1 0' - 2' 11:10AM		
2				X					
3				X	20"	20" - Lt. brown, fine SAND and Silt, no odor or stain, dry.	S - 1 2' - 4' 11:20AM		
4				X					
5				X	20"	20" - Lt. brown, fine SAND and Silt, no odor or stain, dry.	S - 3 4' - 6' 11:30AM		
6				X					
7				X	20"	Top 14" - Lt. brown, fine SAND and Silt, no odor or stain, dry. Bottom 6" - Lt. brown, v-fine SAND and Silt, no odor or stain, dry.	S - 4 6' - 8' 11:40AM		
8				X					
9				X	20"	Top 10" - Lt. brown, v-fine SAND and Silt, clean and dry. Bottom 10" - Lt brown, v-fine SAND, SILT and Clay, clean, damp.	S - 5 8' - 10' 11:50AM		
10				X					
11				X	20"	20" - Brown, v-fine SAND and Silt, clean and dry.	S - 6 10' - 12' 12:00PM		
12				X					
13				X	20"	20" - Brown, v-fine SAND and Silt, clean and damp.	S - 7 12' - 14' 12:10PM		
14				X					
15				X	20"	20" - Brown, v-fine SAND and Silt, clean, saturated.	S - 8 14' - 16' 12:20PM		
16									
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

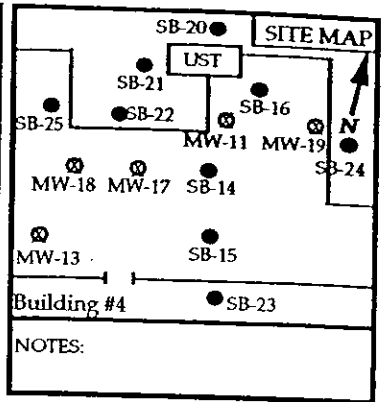
Key to Well Construction
 Sandpack
 Well Screen
 Bentonite Seal
 Cement
 Crout

Key to Geologic Symbols
 Till
 Clay
 Silty Clay
 Silt
 Silty Sand
 Sand

Sandy Gravel
 Gravel
 Fill
 Bedrock (Fine-Grain)
 Bedrock (Coarse-Grain)

DRILLING LOG for Well #: SB-24

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114



Project: Raytheon Wayland Project Number: 143.40
 Client: Raytheon Company Log By: I. D'Agostino
 Drilling Co.: ERM-New England Driller: Kurt & John
 Date Started: 25 January 1996 Date Finished: 25 January 1996
 Location: Wayland, MA Drilling Method: Geoprobe
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: _____ Well Depth: _____ Boring Diam.: 1"
 Surface Elev.: _____ MP: _____ Depth to GW: _____
 MP Elev.: _____

NOTES:

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc (ppm) Initial/2 hr	Lab Samp. # & Anal.
1				X	20"	20" - Brown, fine-med SAND, Silt & Gravel, loose, unsorted, no odor or stain, dry.	S-1 0' - 2'		
2							2:10 PM		
3				X	20"	20" - Brown-dark brown, med SAND and Gravel, poor sorting, unconsolidated, no odor or stain, dry.	S-1 2' - 4'		
4							2:30 PM		
5				X	4"	4" - GRAVEL pieces and brown fine Sand, dry refusal at =6'.	S-3 4' - 6'		
6							2:40 PM		
7						Note: • SB-24 completed to 6' below ground surface • SB-24A was advanced inside boiler room sump to characterized soil below 6' bgs inside boiler room.			
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

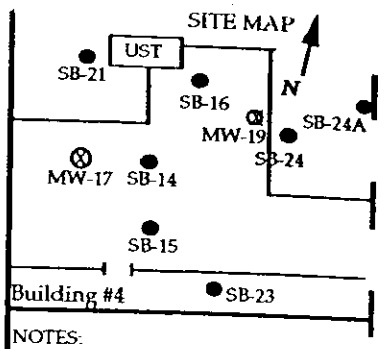
Key to Well Construction
 Sandpack
 Well Screen
 Bentonite Seal
 Cement
 Grout

Key to Geologic Symbols
 Till
 Clay
 Silty Clay
 Silt
 Silty Sand
 Sand

Sandy Gravel
 Gravel
 Fill
 Bedrock (Fine-Grain)
 Bedrock (Coarse-Grain)

DRILLING LOG for Well #: SB-24A

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114



Project: Raytheon, Wayland Project Number: 143.40
 Client: Raytheon Company Log By: I. D'Agostino
 Drilling Co.: ERM-New England Driller: Kurt & John
 Date Started: 25 January 1996 Date Finished: 25 January 1996
 Location: Wayland, MA Drilling Method: Geoprobe
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: _____ Well Depth: _____ Boring Diam.: 1"
 Surface Elev.: _____ MP: _____ Depth to GW: _____
 MP Elev.: _____

NOTES:

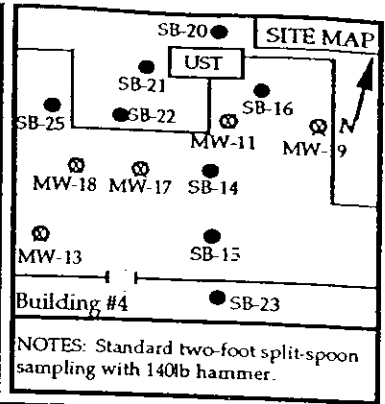
Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) Initial/2hr	Lab Samp. # & Anal.
1									
2									
3									
4									
5					22"	22" - Clean, brown, fine-med SAND and Silt, well sorted, no odor or stain, dry (appears to be backfill from prior removal action).	S - 1 4' - 6' 5:10 PM		
6									
7					20"	Top 6" - Same as above. Bottom 14" - Dark brown, medium SAND, Silt, Gravel and cobbles, poorly sorted, no odor or stain, dry.	S - 1 6' - 8' 5:30 PM		
8									
9					18"	Brown, fine-coarse SAND, Silt and Gravel, unconsolidated, poorly sorted, no odor or stain, dry.	S - 3 8' - 10' 5:40 PM		
10									
11					4"	4" - Same as above. Refusal at ≈10.5'	S - 4 10' - 10.5' 5:50 PM		
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

Key to Well Construction		Key to Geologic Symbols	
Sandpack	Well Screen	Till	Silt
Bentonite Seal	Cement	Clay	Silty Sand
Grout		Silty Clay	Sand
		Sandy Gravel	Gravel
		Bedrock (Fine-Grain)	Bedrock (Coarse-Grain)
		Fill	

DRILLING LOG for Well #: SB-25

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114



Project: Raytheon, Wayland Project Number: 143.40
 Client: Raytheon Company Log By: I. D'Agostino
 Drilling Co.: ERM-New England Driller: Kurt & John
 Date Started: 25 January 1996 Date Finished: 25 January 1996
 Location: Wayland, MA Drilling Method: Geoprobe
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: _____ Well Depth: _____ Boring Diam.: _____
 Surface Elev.: _____ MP: _____ Depth to GW: ≈17'
 MP Elev.: _____

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc (ppm) initial/2hr	Lab Samp. # & Anal.
1					20"	Top 14" - Brown, fine-med SAND and Silt, dry. Bottom 6" - Brown, fine SAND and Silt, dry.	S - 1 0' - 2' 3:55PM		
2									
3					24"	Top 14" - Brown, fine-med SAND and Silt with some coarse sand, dry. Next 5" - Brown, v-fine SAND, Silt and clay, damp. Bottom 5" - Brown, med. SAND and Silt.	S - 2 2' - 4' 4:00PM		
4									
5					5"	5" - Gray-brown, fine SAND and Silt with trace fine gravel, loose, clean, dry.	S - 3 4' - 6' 4:05PM		
6									
7					5"	5" - Brown, fine-coarse SAND and Silt with trace fine gravel, loose and unconsolidated, dry.	S - 4 6' - 8' 4:10PM		
8									
9					8"	Top 4" - Brown, fine SAND and Silt with trace fine gravel, no odor or stain, damp. Bottom 4" - Brown, med-coarse SAND and Silt, clean, damp, nose of spoon has silty clay.	S - 5 8' - 10' 4:15PM		
10									
11					12"	12" - Brown, med-coarse SAND and Silt with trace fine gravel, clean and damp.	S - 6 10' - 12' 4:20PM		
12									
13					5"	5" - Brown, fine-coarse SAND and Silt with trace fine gravel, med gravel in top of spoon, sweet smell, traces of oil in bottom of spoon.	S - 7 12' - 14' 4:25PM		
14									
15					12"	12" - Black, oil soaked fine SAND and SILT with trace fine gravel in certain areas(≈1" sections).	S - 8 14' - 16' 4:30PM		
16									
17					18"	18" - Black, oil saturated v-fine SAND and Silt.	S - 9 16' - 18' 4:35PM		
18									
19					17"	Top 3" - Black, oil coated fine SAND and silt. Next 4" - Clean, brown, fine SAND and silt. Next 7" - Black oil coated fine SAND and silt Bottom 3" - Clean, brown, fine SAND and silt.	S - 10 18' - 20' 4:40PM		
20									
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB HAMMER
 (2) 300 LB HAMMER
 (3) SLIDE HAMMER

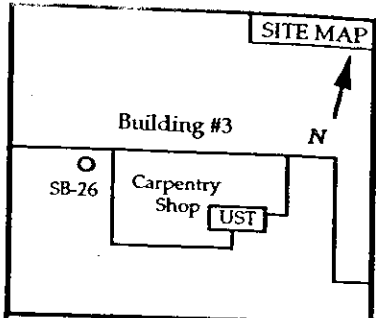
Key to Well Construction		Key to Geologic Symbols	
Sandpack	Well Screen	Till	Silt
Bentonite Seal	Cement	Clay	Silty Sand
Grout		Silty Clay	Sand
		Sandy Gravel	Gravel
		Bedrock (Fine-Grain)	Bedrock (Coarse-Grain)
		Fill	

DRILLING LOG for Well #: SB-26

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114

SITE MAP

Project: Raytheon, Wayland Project Number: 143.40
 Client: Raytheon Company Log By: J. D'Agostino
 Drilling Co.: Geologic Driller: Mike & Darell
 Date Started: 21 March 1996 Date Finished: 21 March 1996
 Location: Wayland, MA Drilling Method: Odex Air Rotary
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: _____ Type: _____
 Boring Depth: ≈20' vertical Well Depth: _____ Boring Diam.: 6"
 Surface Elev.: _____ MP: _____ Depth to GW: ≈17'
 MP Elev.: _____



NOTES: SB-26 advanced vertically, 4' off building #3, to a depth of 20'.

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Soil Classification based on inspection of cuttings (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) initial/2 hr	Lab Samp. # & Anal.
1						Asphalt			
2									
3									
4									
5									
6									
7						1-10' - Brown, med-coarse SAND, Silt and trace Gravel; dry; clean, no evidence of petroleum impact based on visual and olfactory observations.			
8									
9									
10									
11									
12									
13						Brown, fine SAND, SILT and trace Gravel, clean, dry, no evidence of petroleum impact based on visual and olfactory observations.	S-1, 10'-15' 12:30PM		
14									
15									
16						Brown, SILT and CLAY with trace v-fine Sand, wet, strong petroleum odor, visibly saturated with petroleum.	S-2, 15'-17.5' 12:55 AM		TPH-8100
17									
18									
19						Brown SILT and CLAY with trace v-fine Sand, slight petroleum odor, visibly saturated with petroleum. Unimpacted soils observed on end of drill hammer.	S-3, 17.5'-20' 1:10PM		
20									
21									
22						Notes:			
23						• Soils were impacted with petroleum from 15' - 20' below ground surface based upon visual and olfactory observations.			
24						• Soils on end of hammer appeared clean and free from petroleum impact.			

Footnotes for Blowcounts
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

Key to Well Construction
 Sandpack
 Well Screen
 Bentonite Seal
 Cement
 Grout

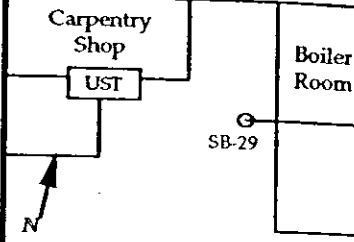
Key to Geologic Symbols
 Till
 Silt
 Sandy Gravel
 Bedrock (Fine-Grain)
 Clay
 Silty Sand
 Gravel
 Bedrock (Coarse-Grain)
 Silty Clay
 Sand
 Fill

DRILLING LOG for Well #: SB-29

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114

Building #3 SITE MAP

Project: Raytheon, Wayland Project Number: 143.40
 Client: Raytheon Company Log By: I. D'Agostino
 Drilling Co.: Geologic Driller: Mike & Darell
 Date Started: 20 March 1996 Date Finished: 20 March 1996
 Location: Wayland, MA Drilling Method: Odex Air Rotary
 Screen Diameter: _____ Length: _____ Slot Size: _____
 Casing Diameter: _____ Length: 30' @ 45° angle Type: _____
 Boring Depth: ≈23' vertical Well Depth: _____ Boring Diam.: 6"
 Surface Elev.: Not measured MP: _____ Depth to GW: ≈17'
 MP Elev.: _____



NOTES: SB-29 advanced ten feet off boiler room wall at a 45° angle.

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Soil Classification based on inspection of cuttings (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) initial/2 hr	Lab Samp. # & Anal.
1						Concrete and rebar			
2									
3						Brown, med-coarse SAND, SILT and trace Gravel; dry; clean, no evidence of petroleum impact based on visual and olfactory observations.	S-1, 1'-4' 8:15 AM		
4									
5									
6						Brown, med-coarse SAND, SILT and trace Gravel; dry; clean, no evidence of petroleum impacts to soil.	S-2, 4'-7' 9:55AM		
7									
8						Brown, med-coarse SAND, SILT, some Gravel; dry; clean, no evidence of petroleum impacts to soil based on visual and olfactory observations.	S-3, 7'-9' 10:15 AM		
9									
10									
11									
12						Brown, med-coarse SAND, SILT and Gravel; dry; clean, no evidence of petroleum impacts to soil based on visual and olfactory observations.	S-4, 9'-14' 3:00PM		
13									
14									
15						Brown-black, med SAND with trace gravel and silt, poorly sorted, moist, strong petroleum odor, visibly impacted with petroleum	S-5, 14'-16' 3:10PM		TPH-8100
16									3-5' horizontally under building
17						Brown-black, med-coarse SAND and Gravel trace silt, strong petroleum odor, visibly impacted with petroleum	S-6, 16-18' 3:25 PM		5-7' horizontally under building
18									
19						Brown-black, coarse SAND and Silt with trace gravel, strong petroleum odor, visibly impacted in places. Two samples collected: one of relatively clean material and one from visibly contaminated soils.	S-7, 18-20' 3:35 PM		TPH-8100
20							S-8, 18'-20' 3:35 AM		7'-10' horizontally under building
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

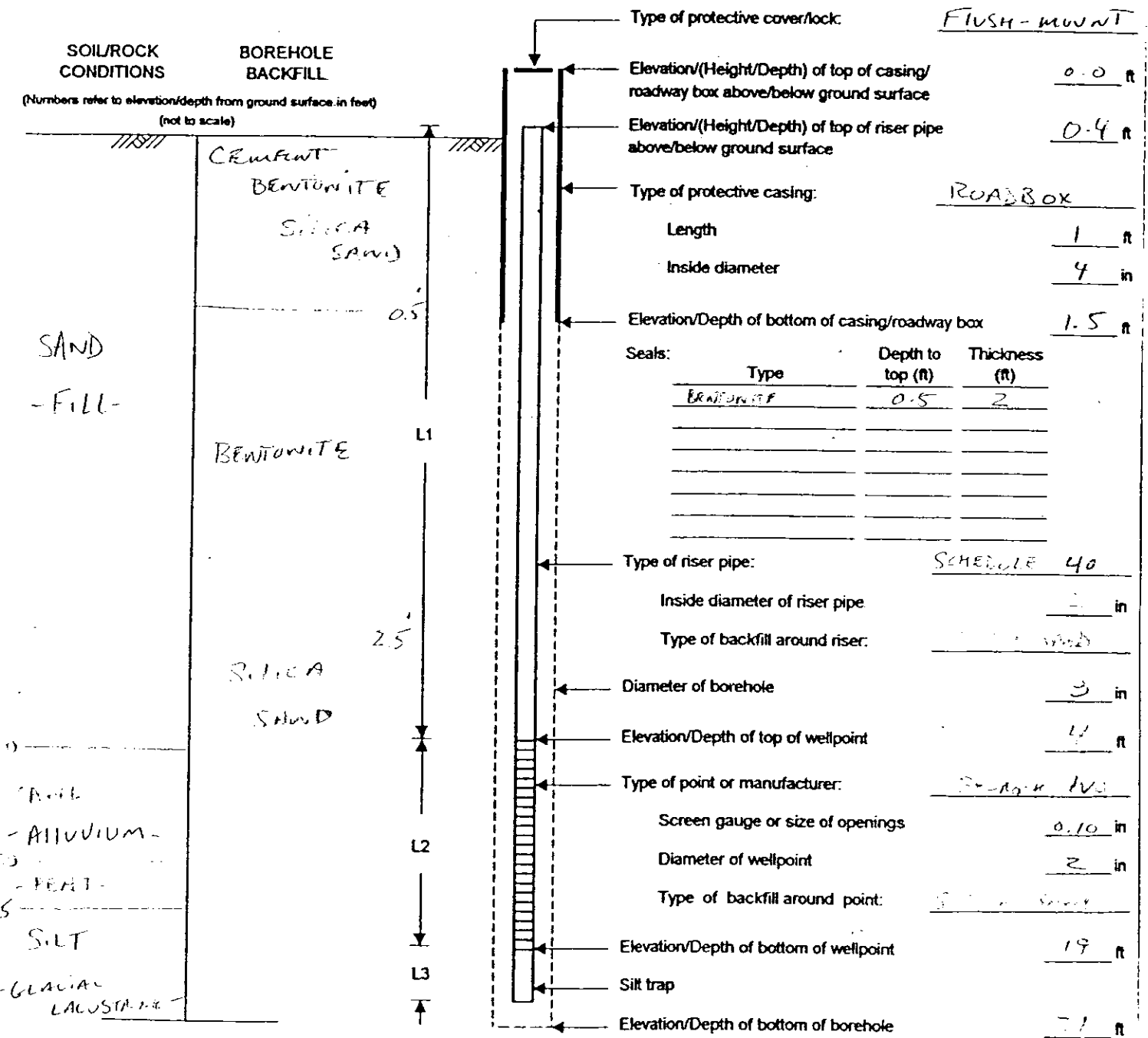
Key to Well Construction		Key to Geologic Symbols			
Sandpack	Well Screen	Till	Silt	Sandy Gravel	Bedrock (Fine-Grain)
Bentonite Seal	Cement	Clay	Silty Sand	Gravel	Bedrock (Coarse-Grain)
Grout		Silty Clay	Sand	Fill	

Project: FORMER RATHCON PLANT
 City/State: WAYLAND, MA
 Client: CONGRESS GROUP VENTURES
 Contractor: NEW HAMPSHIRE BORING
 Foreman: KEN SMITH

Test Boring: HA-101
 Installation Date: JAN 8, 1998
 Location: SEE PLAN
 H&A File No.: 12069-241
 H&A Rep.: J. McLAUGHLIN

Ground El. _____
 Survey Datum _____

Casing: Elevation Above Below Casing Pay from Ground Surface
 Depth Below Roadway Box Pay from Riser Top



Bottom of Exploration @ 21'

Remarks: _____

(Depths refer to ground surface)

$$\frac{4 \text{ ft}}{\text{Riser Pay Length (L1)}} + \frac{15 \text{ ft}}{\text{Length of point (L2)}} + \frac{2 \text{ ft}}{\text{Length of silt trap (L3)}} = \frac{21 \text{ ft}}{\text{Pay length}}$$

UNWISCONSIN 1001, 1003

Well # : HA101 Project : FORMER RAYTHEON FACILITY Project # : 12069-041
Project Address: City : WAYLAND State : MA Zip :
Date Start : 01/08/98 Date End : 01/08/98 Location : See Plan

Casing TYPE : H-S-A SAMMER:
Sampler S/S 140 lbs.
Casing SIZE : 4 1/4 in. I.D. FALL:
Sampler 1 3/8 in. I.D. 30 in.

GROUND WATER OBSERVATION
DATE 01/08/98 DEPTH 9' CASING OUT STABILIZATION PER. Upon Completion

S. /#	DEPTH	PEN	REC	BLOWS/6"	ST/CH	SAMPLE DESCRIPTION
S-1	0'-2'	24"	14"	7-9-24-	25	0'-0.3' - ASPHALT
S-2	2'-4'	24"	13"	24-28	8' 15' 16.5'	S-1: Dense, brown silty fine SAND, little medium to coarse sand, trace fine gravel.
S-3	4'-6'	24"	15"	37-42		S-2: Very dense, tan coarse to fine SAND, trace fine gravel.
S-4	6'-8'	24"	13"	50-50		S-3: Very dense, tan, coarse to fine SAND, trace fine gravel.
S-5	8'-10'	24"	11"	72-55		S-4: Very dense, tan, coarse to fine SAND, trace fine gravel.
S-6	10'-12'	24"	14"	50-70		-FILL-
S-7	15'-17'	24"	10"	6-8		S-5: Medium dense, gray fine SAND little coarse to medium sand, trace fine gravel.
S-8	19'-21'	24"	12"	12-15		S-6: Medium dense, gray fine SAND, little coarse to medium sand, trace fine gravel.
				6-8		-ALLUVIAL DEPOSITS-
				8-12	S-7: Stiff, dark brown fibrous PEAT, little silt, trace fine SAND. -ORGANIC DEPOSIT-	
					S-8: Very stiff, gray SILT, little clay.	
					-GLACIOLACUSTRINE DEPOSITS-	
					Bottom of exploration at 21' OW installed at 21'	

OPERATOR: K. Smith HELPER: S. Cooley INSPECTOR:

REMARKS: 2" PVC well installed at 21'

Boring #: HA102 Project: FORMER RAYTHEON FACILITY Project #: 12069-041
Project Address: City: WAYLAND State: MA Zip: _____
Date Start: 01/08/98 Date End: 01/08/98 Location: See Plan

Casing TYPE: H-W SAMMER: _____
Sampler S/S 140 lbs.
Casing SIZE: 4 in. I.D. FALL: _____
Sampler 1 3/8 in. I.D. 30 in.

GROUNDWATER OBSERVATION
DATE: 01/08/98 DEPTH: 12' CASING OUT STABILIZATION PER. Upon Completion

P.	S./#	DEPTH	PEN	REC	BLOWS/6"	ST/CH	SAMPLE DESCRIPTION
-	S-1	0' - 2'	24"	8"	9-29-30-	34	0' - 0.3' - ASPHALT
-	S-2	2' - 4'	24"	5"	7-17 20-46		S-1: Medium dense, tan coarse to fine SAND, trace silt. S-2: D.O. except dense
'	S-3	5' - 7'	24"	24"	PUSH		U-1: Push 3" undisturbed tube from 5' - 7' - FILL
-	S-3	8' - 10'	24"	10"	9-11 13-15	8'	S-3: Medium dense, coarse to fine SAND.
-	S-4	13' - 15'	24"	7"	27-30 14-38		-GLACIOLACUSTRINE DEPOSITS- S-4: Same except dense
'	S-5	19' - 21'	24"	7"	10-10 12-19		S-5: Same except medium dense.
'	S-6	25' - 27'	24"	6"	9-12 14-17		S-6: Medium dense, brown medium to fine SAND, little coarse sand.
'	S-7	29' - 31'	24"	17"	25-33 35-27		S-7: Very dense, brown fine SAND, trace medium sand.

DRILLER: K. Smith HELPER: S. Cooley INSPECTOR: _____

REMARKS: Page 1 of 2.

Boring #: HA102 Project: FORMER RAYTHEON FACILITY Project # : 12069-041
Project Address: City: WAYLAND State: MA Zip:
Date Start: 01/08/98 Date End: 01/08/98 Location: See Plan

Casing Sampler Casing Sampler
TYPE : H-W S/S SIZE: 4 in. I.D. 1 3/8 in. I.D.
CAMMER: 140 lbs. FALL: 30 in.

GROUNDWATER OBSERVATION

DATE DEPTH CASING STABILIZATION PER.
01/08/98 12' OUT Upon Completion

P.	S./#	DEPTH	PEN	REC	BLOWS/6"	ST/CH	SAMPLE DESCRIPTION
							-GLACIOLACUSTRINE DEPOSITS-
	S-8	34' -36'	24"	14"	8-11 16-22		S-8: Medium dense, brown medium fine SAND, trace coarse sand.
						36'	Bottom of exploration at 36' OW installed at 26'

CELLER: K. Smith HELPER: S. Cooley INSPECTOR:

MARKS: Page 2 of 2.

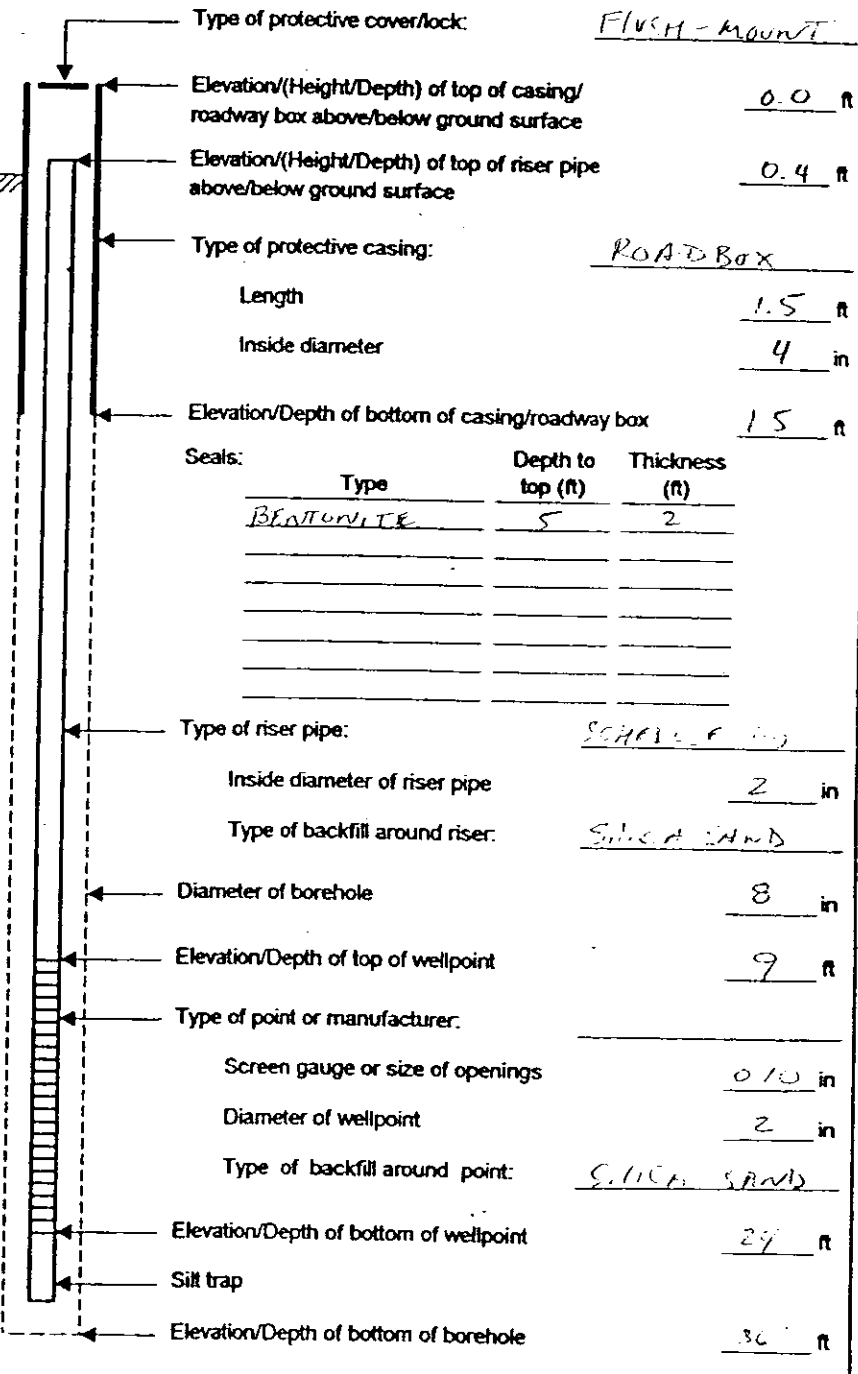
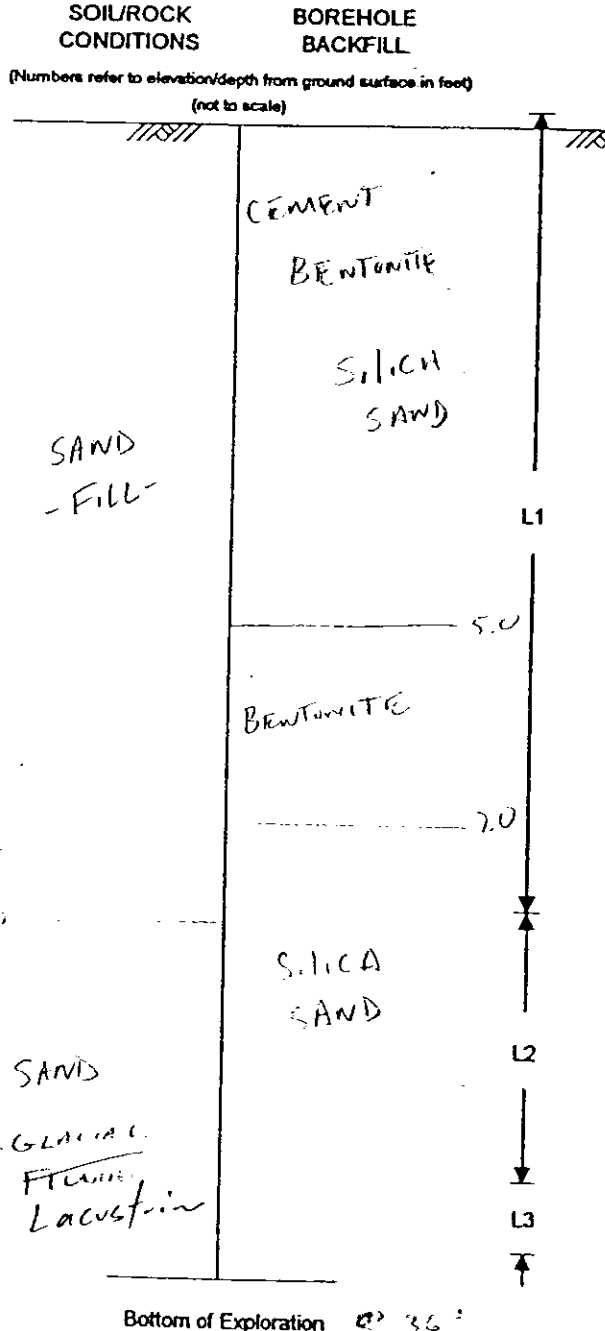
Project: FORMER BATHROOM PLANT
 City/State: WASHINGTON MD
 Client: CONGRESS GROUP VENTURES
 Contractor: NEW HAVEN LIFE BORING
 Foreman: KEN SMITH

Test Boring: HA-102
 Installation Date: JAN 9, 1998
 Location: SEE PLAN
 H&A File No.: 12064-041
 H&A Rep.: J. M'CAUGHLIN

Ground El. _____
 Survey Datum _____

Casing: Elevation Above Below Roadway Box
 Riser Pipe: Above Below Casing Pay from Ground Surface Pay from Riser Top

Type of protective cover/lock: FLUSH-MOUNT



Seals:	Type	Depth to top (ft)	Thickness (ft)
	BENTONITE	5	2

Type of protective casing: ROAD BOX
 Length: 1.5 ft
 Inside diameter: 4 in
 Elevation/Depth of bottom of casing/roadway box: 15 ft

Type of riser pipe: SCHEDULE 40
 Inside diameter of riser pipe: 2 in
 Type of backfill around riser: SILICA SAND

Diameter of borehole: 8 in
 Elevation/Depth of top of wellpoint: 9 ft
 Type of point or manufacturer: _____
 Screen gauge or size of openings: 0.10 in
 Diameter of wellpoint: 2 in
 Type of backfill around point: SILICA SAND
 Elevation/Depth of bottom of wellpoint: 29 ft
 Silt trap
 Elevation/Depth of bottom of borehole: 36 ft

Remarks: _____ (Depths refer to ground surface)

$$\frac{7 \text{ ft}}{\text{Riser Pay Length (L1)}} + \frac{15 \text{ ft}}{\text{Length of point (L2)}} + \frac{2 \text{ ft}}{\text{Length of silt trap (L3)}} = \frac{26 \text{ ft}}{\text{Pay length}}$$

Boring #: HA103 Project: FORMER RAYTHEON FACILITY Project #: 12069-041
Project Address: City: WAYLAND State: MA Zip: _____
Date Start: 01/08/98 Date End: 01/08/98 Location: See Plan

Casing TYPE: H-S-A Sampler S/S Casing SIZE: 4 1/4 in. I.D. Sampler 1 3/8 in. I.D.
CAMMER: 140 lbs. FALL: 30 in.

GROUND WATER OBSERVATION
DATE: 01/08/98 DEPTH: CASING OUT STABILIZATION PER. Upon Completion

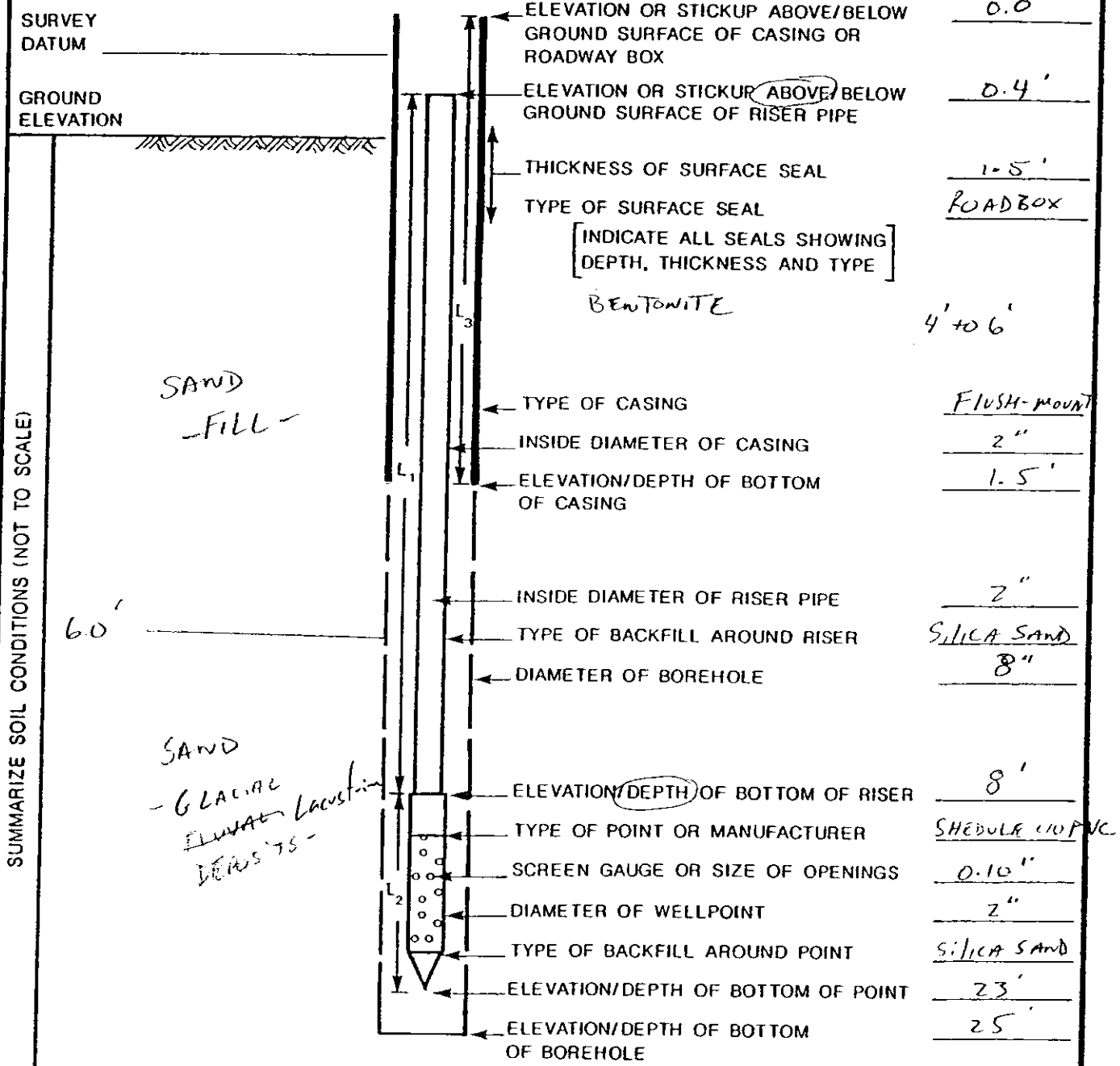
P.	S./#	DEPTH	PEN	REC	BLOWS/6"	ST/CH	SAMPLE DESCRIPTION
-	S-1	0'-2'	24"	12"	15-17-13	-14	0'-0.3' ASPHALT
-	S-2	2'-4'	24"	18"	14-16		S-1: Dark brown coarse to fine SAND, little fine gravel.
-	S-3	4'-6'	24"	9"	16-18		-FILL-
-	S-4	6'-8'	24"	19"	19-21	6'	
-	S-5	8'-10'	24"	10"	19-24		Dense, brown coarse to fine SAND, little fine gravel.
-	S-6	10'-12'	24"	20"	25-16		
-	S-7	12'-14'	24"	12"	24-21		-GLACIOLACUSTRINE DEPOSITS-
-	S-8	15'-17'	24"	12"	26-32	13'	S-7: Top 6"- dense brown coarse to fine sand.
-	S-9	20'-22'	24"	20"	32-27		bottom 6" - very dense, brown fine SAND
-					9-16		-GLACIUOLACUSTRINE DEPOSITS-
-					18-17		
-					13-15	20'	S-9: Top 6"- medium dense brown SILT.
-					19-20		-GLACIOLACUSTRINE DEPOSITS-
-							Bottom 14"- Medium dense, brown coarse to fine SAND, little fine gravel. -GL.LACUSTRINE DEPOSITS-
-							Bottom of exploration at 25' OW installed at 25'

ELLER: K. Smith HELPER: S. Cooley INSPECTOR: _____

**GROUNDWATER
OBSERVATION WELL REPORT**

WELL NO. HA-103
 FILE NO. 12069-041
 BORING NO. HA-103
 LOCATION SEE PLAN
 INSTALLATION DATE JAN 9, 1998
 H&A REP J. M'CAUGHLIN

PROJECT FORMER RATHCON PLANT
 LOCATION WAYLAND, MA
 CLIENT CONGRESS GROUP VENTURES
 CONTRACTOR NEW HAMPSHIRE BORING
 DRILLER KEN SMITH



SUMMARIZE SOIL CONDITIONS (NOT TO SCALE)

[FIGURES REFER TO: EL. _____ DEPTH _____]

$$\left[\frac{1.5'}{\text{LENGTH OF CASING (L}_3\text{)}} \right] \left[\frac{8'}{\text{LENGTH OF RISER PIPE (L}_1\text{)}} + \frac{15'}{\text{LENGTH OF POINT (L}_2\text{)}} \right] = \frac{25'}{\text{PAY LENGTH}}$$

+ 2' S.I.T TRAP

Boring #: HA104 Project: FORMER RAYTHEON FACILITY Project #: 12069-041
Project Address: City: WAYLAND State: MA Zip:
Date Start: 01/09/98 Date End: 01/09/98 Location: See Plan

Casing Sampler Casing Sampler
TYPE : H-S-A S/S SIZE: 4 1/4 in. I.D. 1 3/8 in. I.D.
Diameter: 140 lbs. FALL: 30 in.

GROUNDWATER OBSERVATION
DATE DEPTH CASING STABILIZATION PER.
01/09/98 OUT Upon Completion

P.	S. /#	DEPTH	PEN	REC	BLOWS/S"	ST/CH	SAMPLE DESCRIPTION
-	S-1	0' -2'	24"	15"	13-17-22	-17	0' -0.3' ASPHALT
-	S-2	2' -4'	24"	15"	25-31 34-28		S-1: Dense, brown coarse to fine SAND, little fine gravel.
-	S-3	4' -6'	24"	16"	8-9 9-11	4'	-FILL-
-	S-4	6' -8'	24"	18"	19-17 14-17		S-3: Medium dense, brown fine SAND, little silt, occasional piece of coarse sand and fine gravel.
-	S-5	8' -10'	24"	17"	10-9 12-18		S-4: Same, except dense
-	S-6	10' -12'	24"	15"	14-25 18-20		S-5: Same, except medium dense
-	S-7	12' -14'	24"	14"	12-15 17-13		S-6: Same, except dense
-	S-8	14' -16'	24"	20"	17-17 14-16		S-7: Same, except dense
-	S-9	16' -18'	24"	20"	15-16 16-18		S-8: Same, except dense.
-	S-10	20' -22'	24"	16"	5-7 7-14		S-9: Same except dense -GLACIOLACUSTRI BEDS ITS- S-10: Same, except loose.
-	-11	25' -27'	24"	19"	2-2 5-10		
						28'	Bottom of exploration at 28' DW installed at 28'

OPERATOR: K. Smith HELPER: S. Cooley INSPECTOR:

REMARKS:

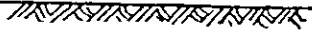
**GROUNDWATER
OBSERVATION WELL REPORT**

WELL NO. HA-104
 FILE NO. 12069-041
 BORING NO. HA-104
 LOCATION SEE PLAN
 INSTALLATION DATE JAN 9, 1998
 H&A REP. J. McLAUGHLIN

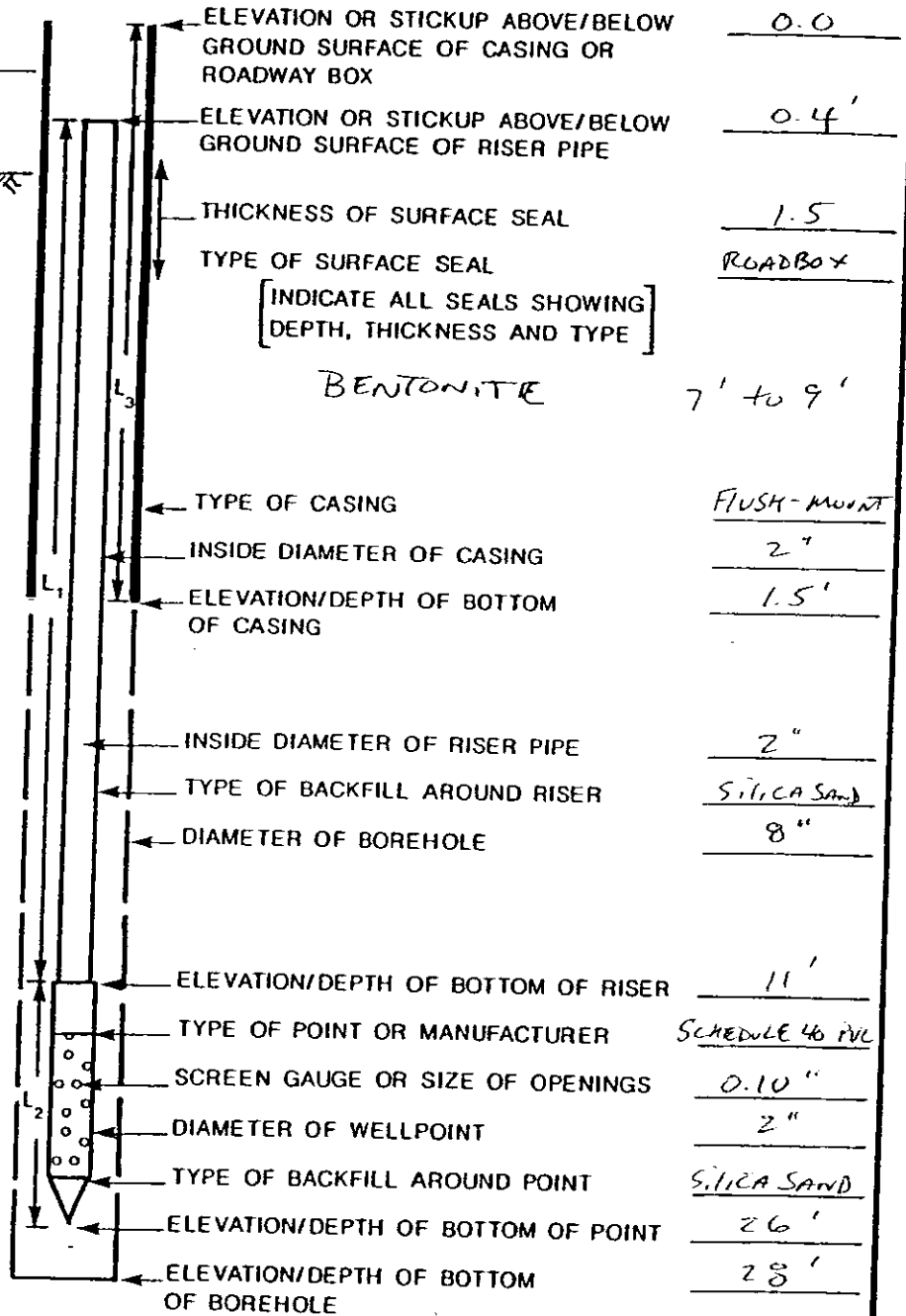
PROJECT FORMER RATHGON PLANT
 LOCATION WAYLAND, MA
 CLIENT CONGRESS GROUP VENTURES
 CONTRACTOR NEW HAMPSHIRE BORING
 DRILLER KEN SMITH

SURVEY DATUM _____

GROUND ELEVATION _____



SUMMARIZE SOIL CONDITIONS (NOT TO SCALE)



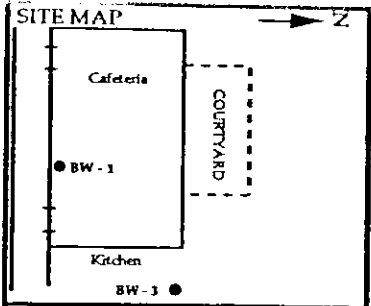
[FIGURES REFER TO: EL. _____ (DEPTH) _____]

$$\left[\frac{1.5'}{\text{LENGTH OF CASING (L}_3\text{)}} \right] \left[\frac{11'}{\text{LENGTH OF RISER PIPE (L}_1\text{)}} + \frac{15'}{\text{LENGTH OF POINT (L}_2\text{)}} \right] = \frac{28'}{\text{PAY LENGTH}}$$

+ 2' S. + TRAP

DRILLING LOG for Well #: BW-1

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
BOSTON, MA 02114



Project: Raytheon Project Number: EC9610-01
 Client: Raytheon Log By: Steven Sacco
 Drilling Co.: Environmental Drilling Driller: Duane Stevens
 Date Started: 3 December 1996 Date Finished: 3 December 1996
 Location: Wayland, Massachusetts Drilling Method: 4.25" I.D Hollow Stem Auger
 Screen Diameter: 2" Length: 10' Slot Size: 0.010"
 Casing Diameter: 2" Length: 12.5' Type: PVC
 Boring Depth: 23' Well Depth: 22.5' Boring Diam.: ≈ 8"
 Surface Elev.: _____ MP: grade Depth to GW: ≈ 15'
 MP Elev.: _____

NOTES
Wells located inside facility.

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) Initial/2 hr	Lab Samp. # & Anal.
1			FILL	21 - 27 31 - 45	1"	1" Fill: Medium brown, medium to fine SAND, some Silt; rock in bottom of spoon; no odor or staining; dry.	S - 1 0 - 2'	ND/ND	
2			SAND	34 - 31 24 - 24	20"	20" Medium brown, fine SAND, some Silt; no odor or staining; dry.	S - 2 2 - 4'	ND/ND	
3			SAND	13 - 19 29 - 31	2"	2" Medium brown, fine SAND, some Silt, little Gravel; rock in bottom of spoon; no odor or staining; dry.	S - 3 4 - 6'	ND/ND	
4			SILT & SAND	9 - 21 18 - 17	18"	18" Medium brown, fine SAND, some Silt; no odor or staining; dry.	S - 4 6 - 8'	ND/ND	
5			SAND	18 - 21 22 - 19	20"	8" Medium brown, SILT, some Gravel; 12" medium brown, fine SAND, little coarse Sand; no odor or staining; dry.	S - 5 8 - 10'	ND/ND	
6			SAND & SILT	17 - 21 22 - 35	15"	3" Medium brown, SILT; 9" medium brown, fine SAND, little Silt; 3" medium brown, fine SAND and Gravel; no odor or staining; dry.	S - 6 10 - 12'	ND/ND	
7			SILT	38 - 32 31 - 35	12"	2" Medium brown, fine SAND and GRAVEL; 10" medium brown, SILT, little Clay; no odor or staining; dry.	S - 7 12 - 14'	ND/ND	8260 8100 8080
8			SILT	10 - 21 33 - 31	16"	16" Medium brown, dense SILT, some Clay; no odor or staining; moist to wet.	S - 8 14 - 16'	ND/ND	
9			SILT	34 - 31 29 - 31	20"	6" Medium brown, coarse SAND and SILT; 14" medium brown, dense SILT, little Clay; no odor or staining; wet.	S - 9 16 - 18'	ND/NA	
10			SAND			Cuttings: Medium brown, very fine SAND, some coarse Sand; no odor or staining; wet.			
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

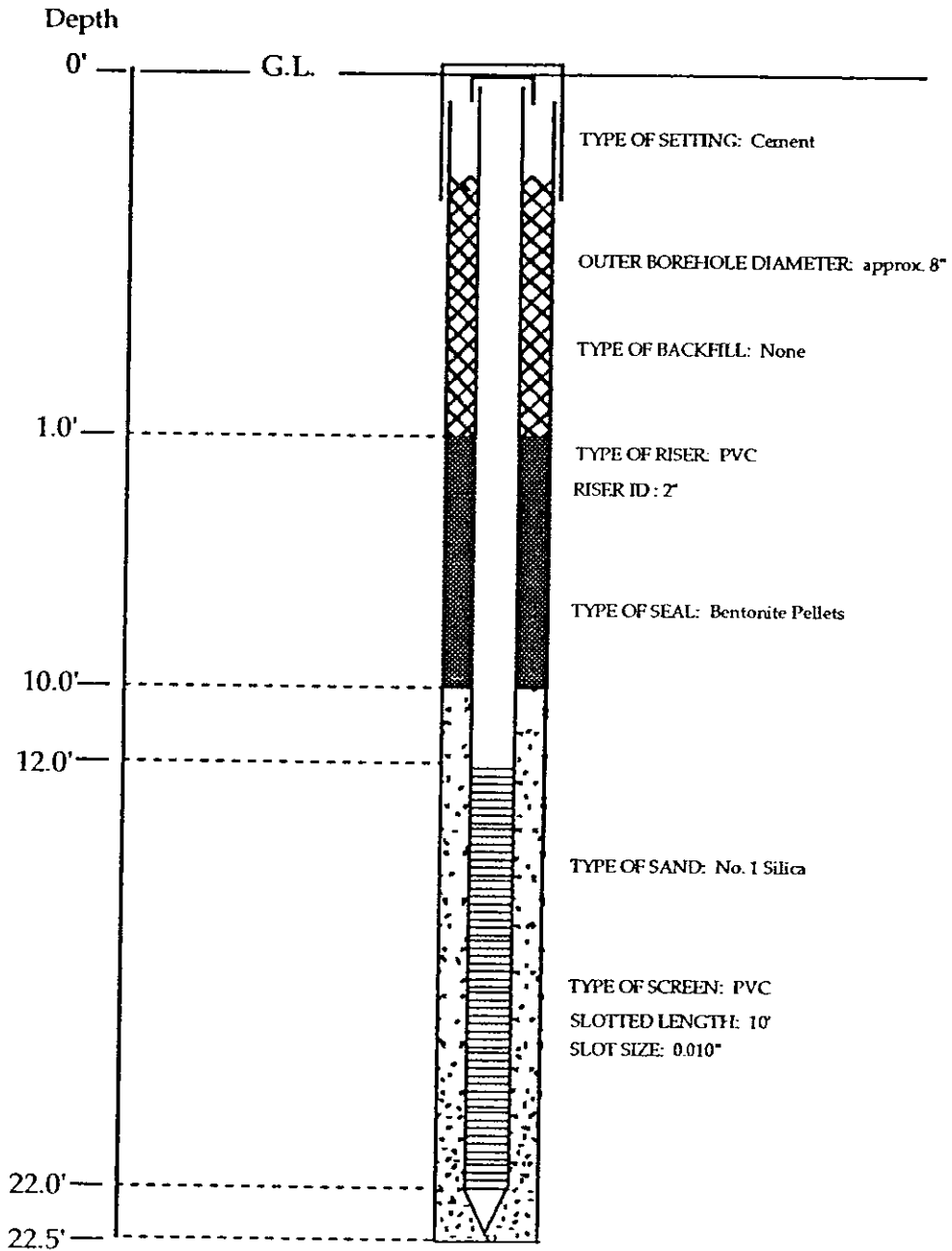
Key to Well Construction		Key to Geologic Symbols	
Sandpack	Well Screen	Till	Silt
Bentonite Seal	Cement	Clay	Silty Sand
Grout	Silty Clay	Sand	Gravel
		Sandy Gravel	Bedrock (Fine-Grain)
		Bedrock (Coarse-Grain)	



ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
BOSTON, MA 02114

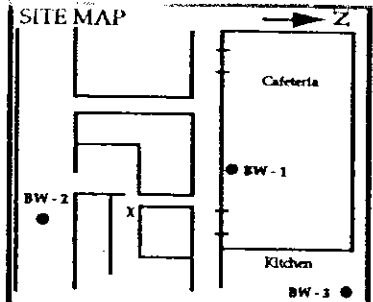
Well Number: BW-1
Project: Raytheon
Project number: EC9610-01
Date Installed: 3 December 1996

Monitoring Well Installation Diagram



DRILLING LOG for Well #: BW-2

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
ERM BOSTON, MA 02114



Project: Raytheon Project Number: EC9610-01
 Client: Raytheon Log By: Steven Sacco
 Drilling Co.: Environmental Drilling Driller: Duane Stevens
 Date Started: 4 December 1996 Date Finished: 4 December 1996
 Location: Wayland, Massachusetts Drilling Method: 4.25" I.D Hollow Stem Auger
 Screen Diameter: 2" Length: 10' Slot Size: 0.010"
 Casing Diameter: 2" Length: 12.0' Type: PVC
 Boring Depth: 23' Well Depth: 22.0' Boring Diam.: ≈ 8"
 Surface Elev.: _____ MP: grade Depth to GW: ≈ 15'
 MP Elev.: _____

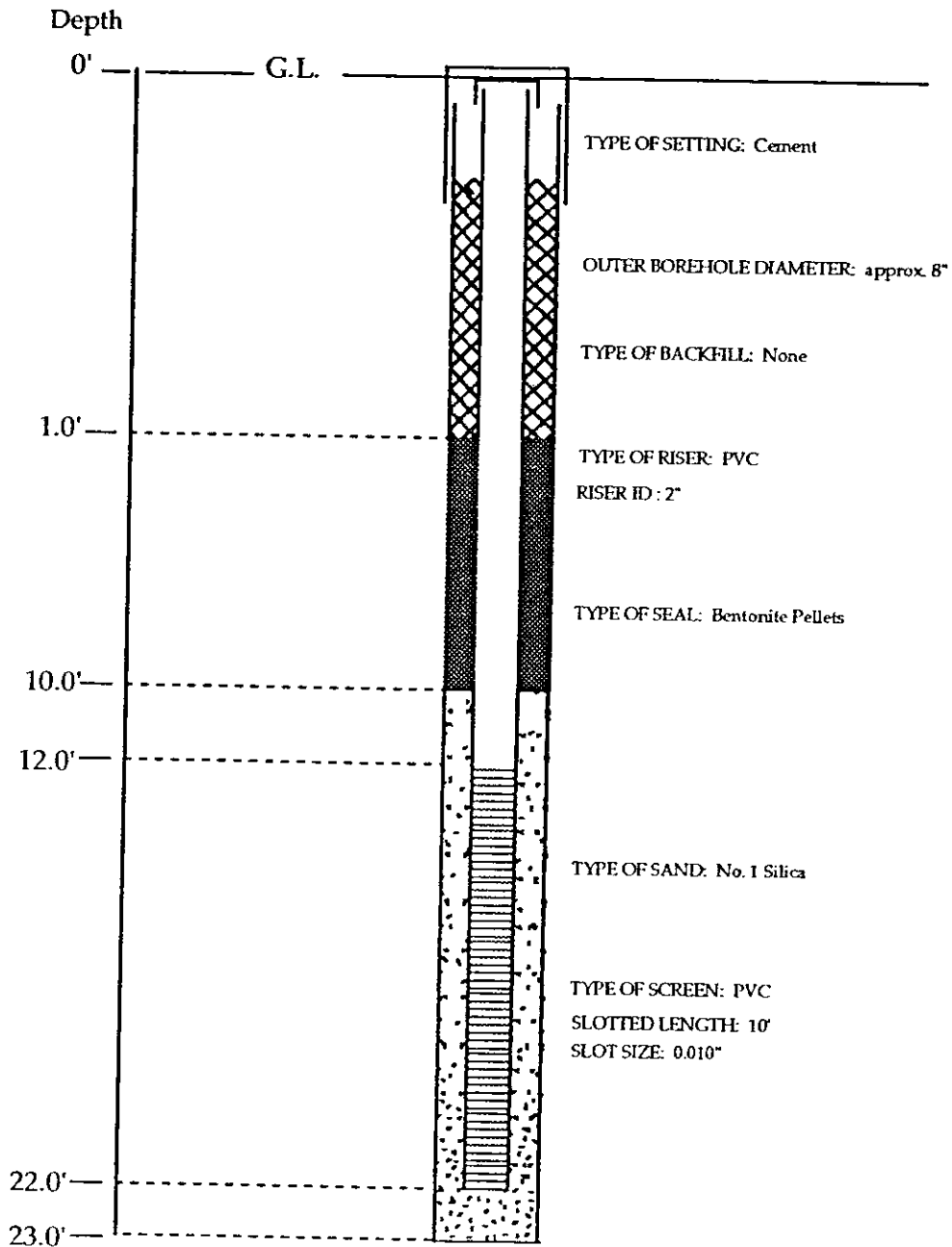
NOTES
Wells located inside facility. Original BW-2 was located approx. 30 north at point X.

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) Initial/2 hr	Lab Samp. # & Anal.
1			SAND	12 - 10 9 - 10	20"	20" Medium brown, very fine SAND and SILT; no odor or staining; dry.	S - 1 0 - 2'	ND/ND	
2			SILT	8 - 8 9 - 8	12"	12" Medium brown, SILT, little very fine Sand; no odor or staining; dry.	S - 2 2 - 4'	ND/ND	
3			SILT	6 - 8 9 - 12	18"	18" Medium brown, SILT, little very fine Sand; no odor or staining; dry.	S - 3 4 - 6'	ND/ND	
4			SAND & SILT	12 - 12 13 - 9	18"	18" Medium brown, very fine SAND, some Silt; no odor or staining; dry.	S - 4 6 - 8'	ND/ND	
5			SILT	12 - 15 15 - 16	12"	12" Medium brown, SILT, little very fine Sand; no odor or staining; dry.	S - 5 8 - 10'	ND/ND	
6			SILT	12 - 9 15 - 19	12"	12" Medium brown, SILT, little very fine Sand; no odor or staining; dry.	S - 6 10 - 12'	ND/ND	
7			SILT	14 - 16 14 - 18	16"	16" Medium brown, dense SILT, some Clay; no odor or staining; dry.	S - 7 12 - 14'	ND/ND	8260 8100 8080
8			SAND & SILT	20 - 25 30 - 31	14"	8" Medium brown, dense SILT, some Clay; 6" medium brown, fine SAND, some medium Sand and Gravel; no odor or staining; wet.	S - 8 14 - 16'	ND/NA	
9			SILT			Cuttings: Medium brown, SILT, little Clay; no odor or staining; wet.			
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
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22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

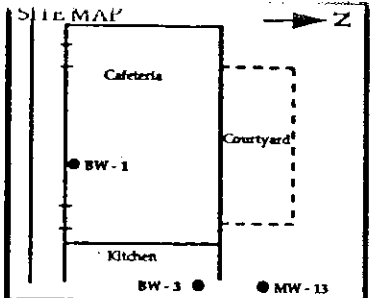
Key to Well Construction		Key to Geologic Symbols	
Sandpack	Well Screen	Till	Silt
Bentonite Seal	Cement	Clay	Silty Sand
Grout		Silty Clay	Sandy Gravel
			Gravel
			Bedrock (Fine-Grain)
			Bedrock (Coarse-Grain)

Monitoring Well Installation Diagram



DRILLING LOG for Well #: BW-3

ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
BOSTON, MA 02114



Project: Raytheon Project Number: EC9610-01
 Client: Raytheon Log By: Steven Sacco
 Drilling Co.: Environmental Drilling Driller: Duane Stevens
 Date Started: 4 December 1996 Date Finished: 4 December 1996
 Location: Wayland, Massachusetts Drilling Method: 4.25" I.D Hollow Stem Auger
 Screen Diameter: 2" Length: 10' Slot Size: 0.010"
 Casing Diameter: 2" Length: 12.5' Type: PVC
 Boring Depth: 23' Well Depth: 22.5' Boring Diam.: ≈ 8"
 Surface Elev.: _____ MP: grade Depth to GW: ≈ 16'
 MP Elev.: _____

NOTES
Wells located inside facility.

Depth	Well Log	Graphic Log	General Stratigraphy	Blowcounts per 6 inches	Rec.	Split Spoon Description/Soil Classification (Color, Texture, Structures)	Sample # & Depth	PID conc. (ppm) Initial/2 hr	Lab Samp. # & Anal.
1			FILL	4 - 4 4 - 4	8"	8" Fill: Medium brown, fine SAND, some Gravel; no odor or staining; dry.	S - 1 0 - 2'	ND/ND	
2			SAND & SILT	5 - 6 9 - 10	14"	8" Medium brown, medium SAND, some medium Gravel; 6" medium brown, SILT, little fine Sand; no odor or staining; dry.	S - 2 2 - 4'	ND/ND	
3				9 - 9 12 - 15	12"	12" Medium brown, very fine SAND, some Silt; no odor or staining; dry.	S - 3 4 - 6'	ND/ND	
4			SAND	15 - 16 12 - 11	18"	18" Medium brown, fine SAND, little Silt; no odor or staining; dry.	S - 4 6 - 8'	ND/ND	
5					7 - 9 7 - 8	18"	8" Medium brown, fine SAND, little medium Sand; 10" medium brown SILT, little Clay; no odor or staining; dry.	S - 5 8 - 10'	ND/ND
6			SAND & SILT	6 - 8 9 - 10	14"	14" Medium brown, fine SAND and SILT; no odor or staining; dry.	S - 6 10 - 12'	ND/ND	
7					10 - 14 14 - 16	16"	4" Medium brown, very fine SAND, some Silt; 6" medium brown, medium SAND and fine SAND; 6" brown, dense SILT, little Clay; no odor or staining; dry.	S - 7 12 - 14'	ND/ND
8			SAND	12 - 17 17 - 20	14"	14" Medium brown, fine SAND, little fine Sand; no odor or staining; moist to wet.	S - 8 14 - 16'	ND/NA	
9									
10			SAND			Cuttings: Medium brown, very fine SAND, some coarse Sand; no odor or staining; wet.			
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

Footnotes for Blowcounts
 (1) 140 LB. HAMMER
 (2) 300 LB. HAMMER
 (3) SLIDE HAMMER

Key to Well Construction

Sandpack
 Well Screen
 Bentonite Seal
 Cement
 Grout

Key to Geologic Symbols

Till
 Silt
 Sandy Gravel
 Bedrock (Fine-Grain)
 Clay
 Silty Sand
 Gravel
 Bedrock (Coarse-Grain)
 Silty Clay
 Sand
 Fill



ERM-NEW ENGLAND, INC.
205 PORTLAND STREET
BOSTON, MA 02114

Well Number: BW-3
Project: Raytheon
Project number: EC9610-01
Date Installed: 4 December 1996

Monitoring Well Installation Diagram

