

Appendix B

Boring Logs with Well Construction Diagrams

Client: PPG Industries

Site: Site 114

Site Location: Jersey City, NJ

Geologist: D. Sero

Drilling Company: Advanced Drilling Inc

Driller: Craig Conner

Drilling Date: 12/1/2006

Well Completion Date: 12/18/2006

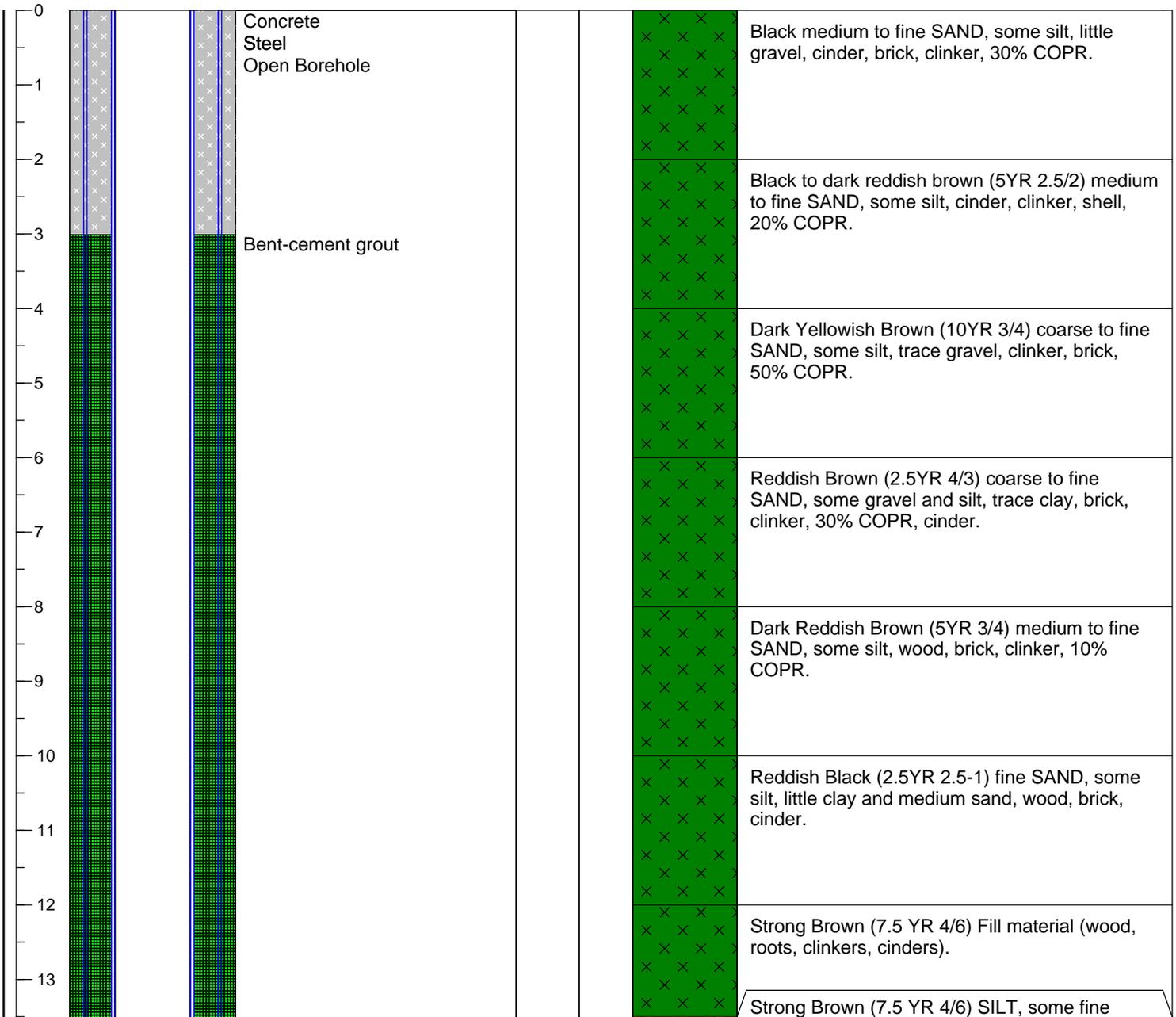
Elevation: 14.15

State Plane Coordinates: X: 683259 Y: 610821.8

Drilling Method: Water Rotary

114-MW4D

Depth (ft)	Well Construction Diagram	Well Construction Description and Sample Information	PID (ppm)	Blows/6"	Lithology	Lithologic Description
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NOTES: Coordinates are provided in New Jersey State Plane NAD 1983

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Client: PPG Industries

Site: Site 114

Site Location: Jersey City, NJ

Geologist: D. Sero

Drilling Company: Advanced Drilling Inc

Driller: Craig Conner

Drilling Date: 12/1/2006

Well Completion Date: 12/18/2006

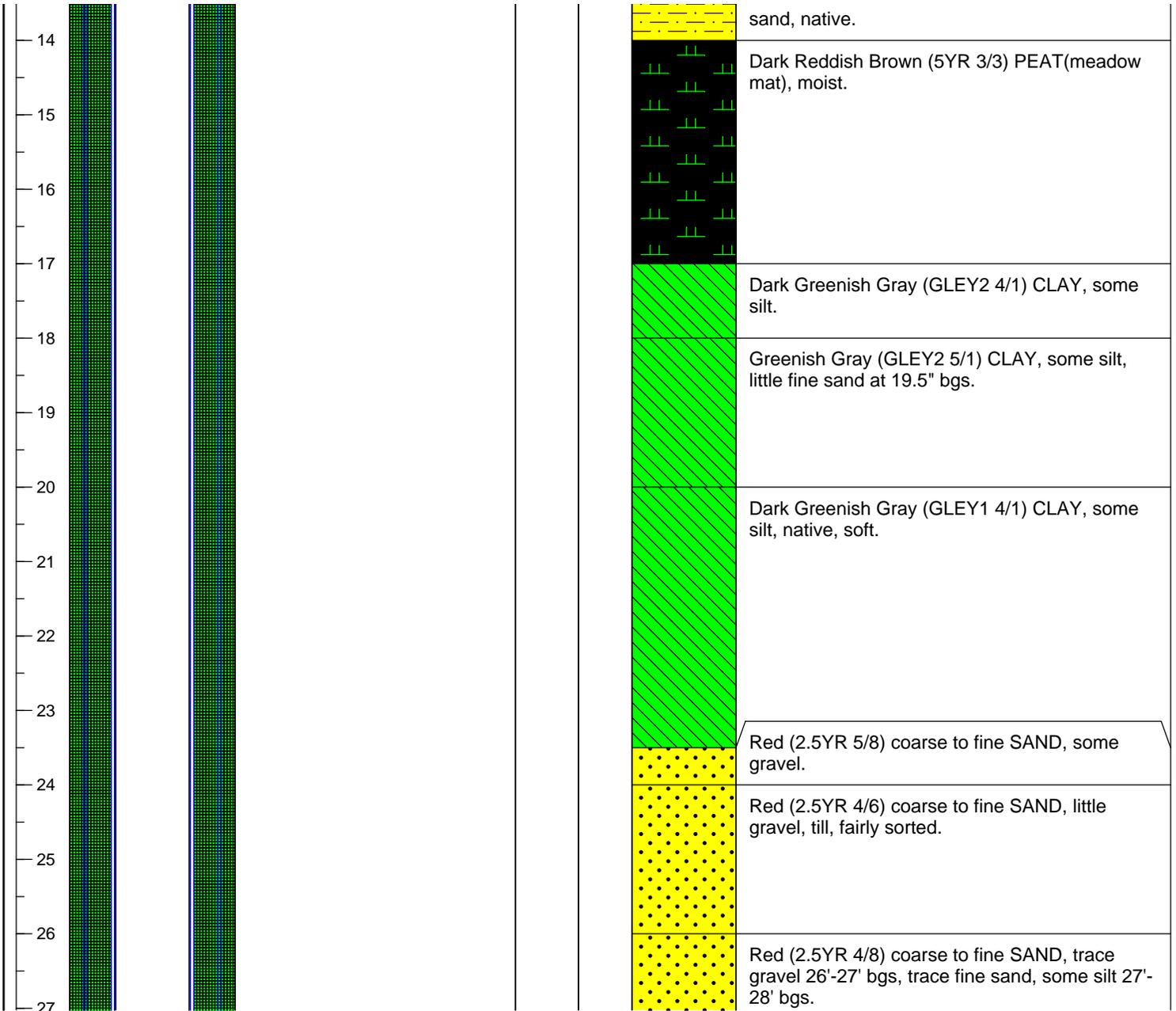
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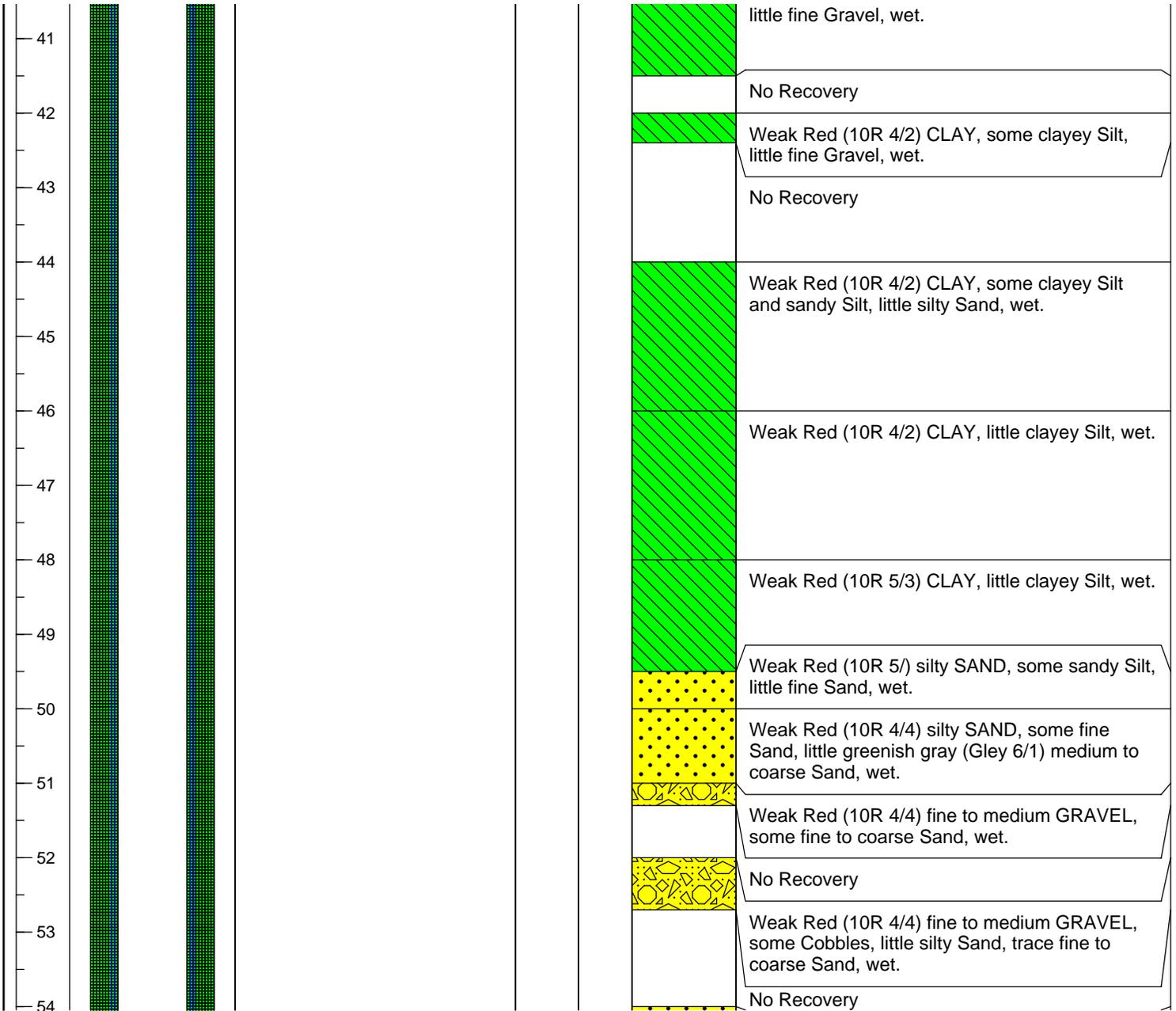
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55						Weak Red (10R 4/4) fine to coarse SAND, some fine to coarse Gravel, little medium Gravel and Cobbles, wet.
56						No Recovery
57						Weak Red (10R 4/4) fine to coarse SAND, some silty Sand and fine to coarse Gravel, little medium Gravel and Cobbles, wet.
58						No Recovery
59						Weak Red (10R 4/4) fine to coarse SAND, some fine to coarse Gravel, little medium Gravel and Cobbles, wet.
60						No Recovery
61						Weak Red (10R 4/4) fine to coarse SAND, some fine to coarse Gravel, little medium Gravel and Cobbles, wet.
62						No Recovery
63						No Sample
64						No Sample
65						
66						No Sample, direct drilled, inferred Weak Red (10R 4/4) fine to coarse SAND, some fine to coarse Gravel, little Cobbles, wet.
67						

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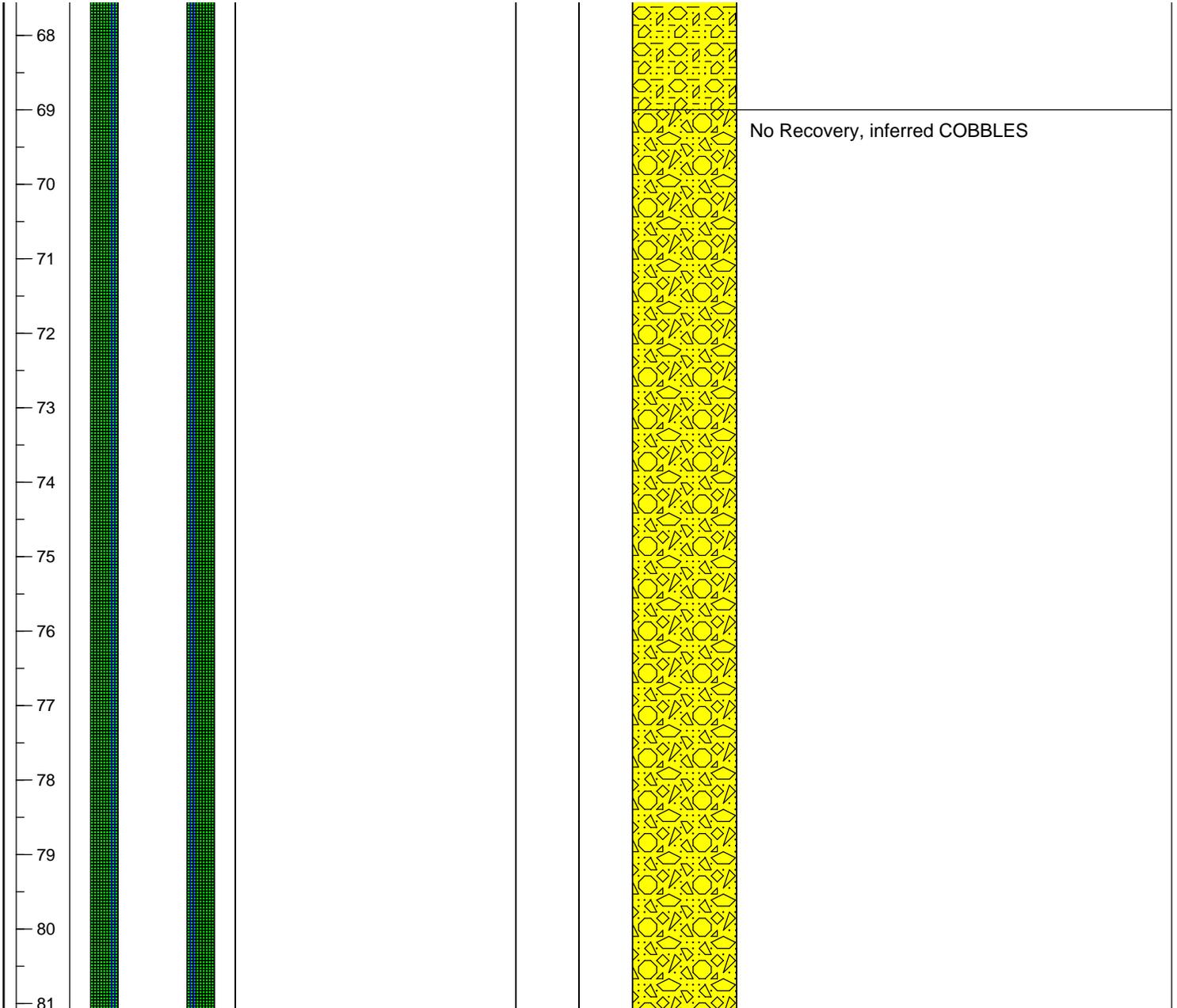
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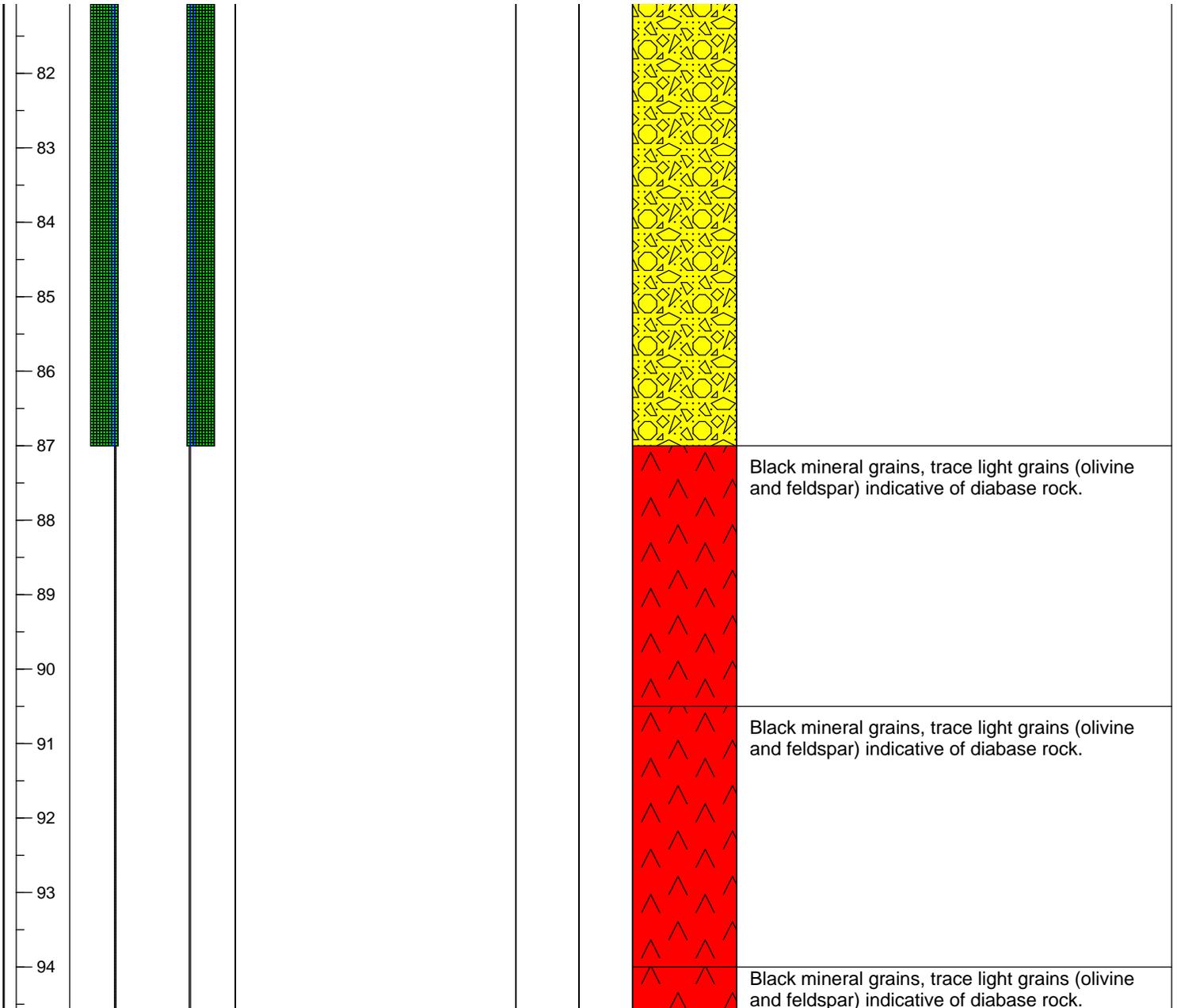
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------------	---------------------------	--	-----------	----------	-----------	------------------------

95						
96						
97						
98						
99						
100						
101						
102						Diabase rock chips, dark green to black with trace light minerals.
103						
104						
105						
106						Diabase rock chips, dark green to black with trace light minerals.
107						End of Boring at 107 ft.

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Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.77 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610821.8
Date Started Drilling: 11/8/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683258.9
Date Finished Drilling: 11/11/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 125 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.1 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1						See Previous Boring Log for 114-MW4D.	<p>8-inch steel protective casing (stick up)</p> <p>Riser set in grout</p> <p>Grout: 0-87 ft bgs</p> <p>6-inch steel threaded casing: 0-87 ft bgs</p>	
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
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23								
24								
25								
26								
27								
28								
29								
30								
31								
32								

PPG WITH WELL CONSTRUCTION - - 3/10/22 12:00

Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
RQD = rock quality designation

Comments:

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33								
34								
35								
36								
37								
38								
39								
40								
41								
42								
43								
44								
45								
46								
47								
48								
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50								
51								
52								
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54								
55								
56								
57								
58								
59								
60								
61								
62								
63								
64								

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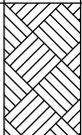
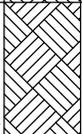
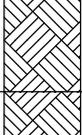
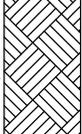
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
66								
67								
68								
69								
70								
71								
72								
73								
74								
75								
76								
77								
78								
79								
80								
81								
82								
83								
84								
85								
86								
87								
88								6-inch open borehole in rock: 87-107 ft bgs
89								
90								
91								
92								
93								
94								
95								
96								
97								

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Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
98								
99								
100								
101								
102								
103								
104								
105								
106								
107								
108	2.66 / 3	0	NA	BEDROCK		DIABASE, highly to moderately weathered, fine to medium grained, weak to medium strong rock, vertical healed fracture with calcite and epidote (107-109 ft bgs), broken rock at 109-109.3 ft bgs, mechanical fractures throughout. Recovery = 88%; RQD = 88% (good rock).		5-inch open borehole in rock: 107-125 ft bgs
109								
110								
111	3.17 / 5	0	NA	BEDROCK		DIABASE, highly to moderately weathered, fine to medium grained, weak-medium-strong rock, broken rock throughout, 60 degree fracture at 111 ft bgs, vertical fracture at 114 ft bgs. Recovery = 63%; RQD = 0% (poor rock).		
112								
113								
114								
115								
116	3.33 / 5	0	NA	BEDROCK		DIABASE, highly to moderately weathered, fine to medium grained, weak-medium-strong rock, broken rock throughout, vertical fracture at 115 ft bgs, 60 degree fractures at 117 ft bgs and 119 ft bgs. Recovery = 67%; RQD = 13% (poor rock)		
117								
118								
119								
120								
121	0 / 5	-	-	BEDROCK		No Recovery. 120 to 125 ft bgs: Lockatong Formation based on borehole geophysical logging. Three feet of rock in bottom of well, open borehole to 122 ft bgs.		
122								
123								
124								
125								

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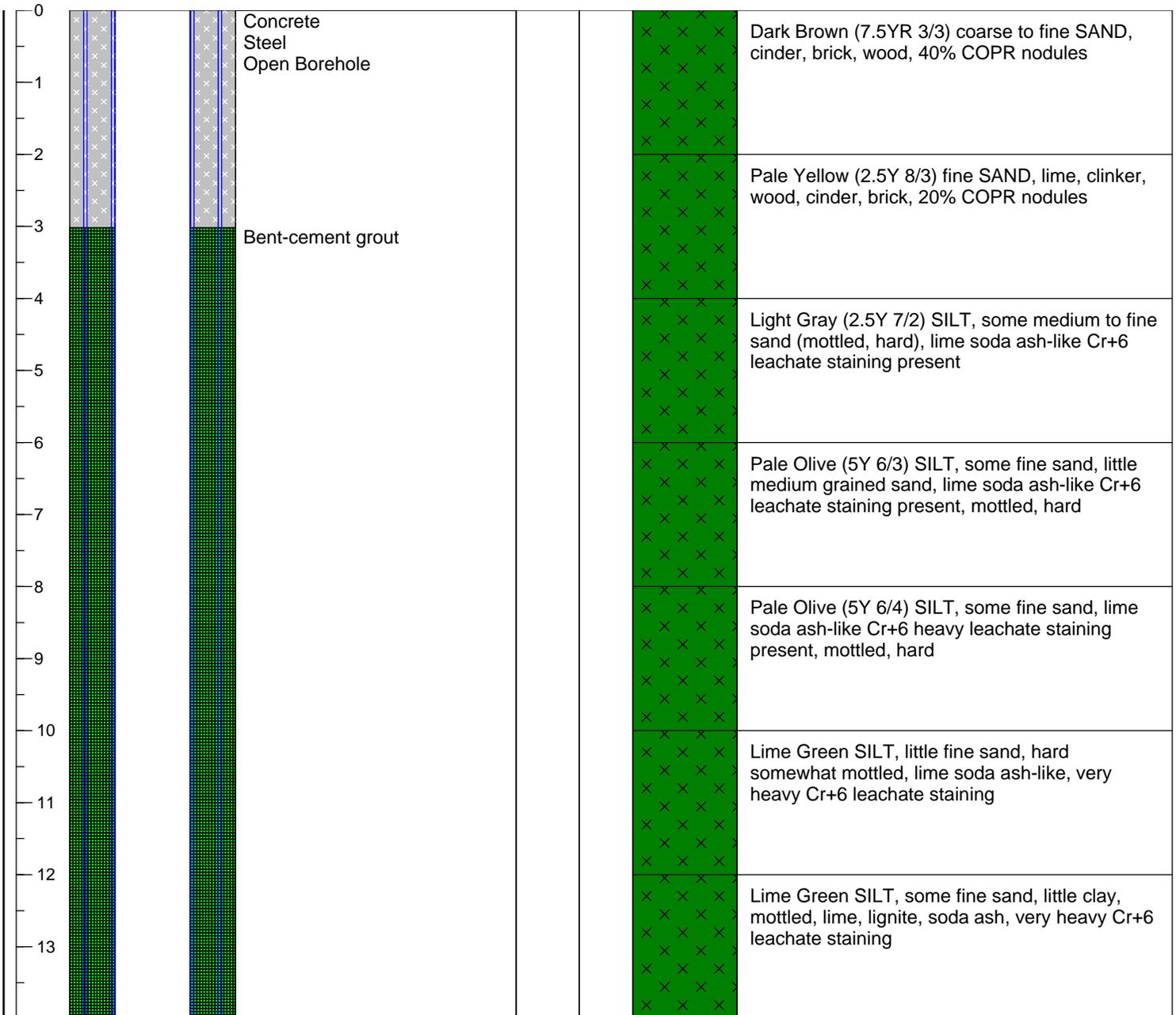
Elevation: 13.90

State Plane Coordinates: X: 683683.3 Y: 611298.4

Drilling Method: Mud and Air Rotary

114-MW6D

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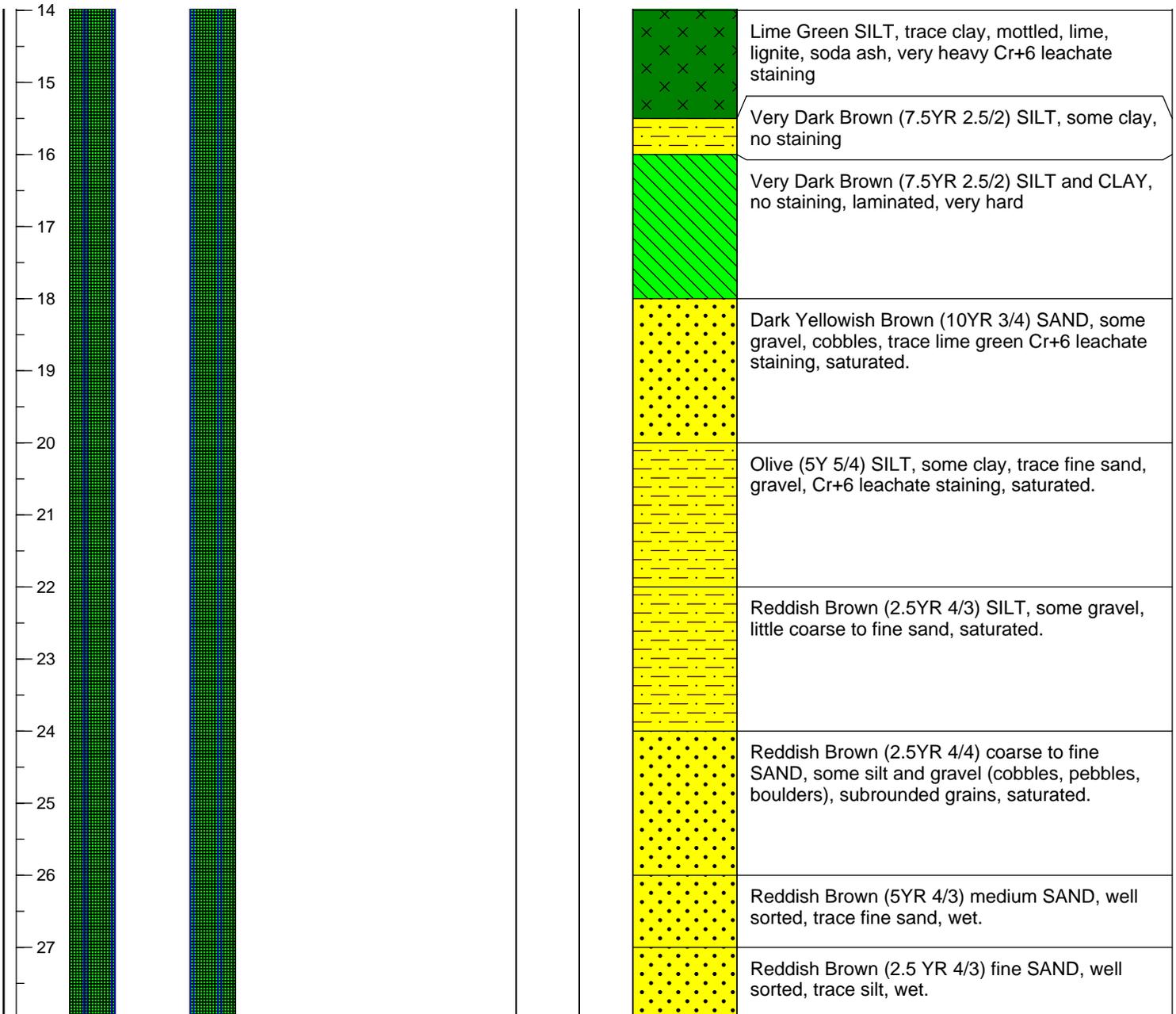
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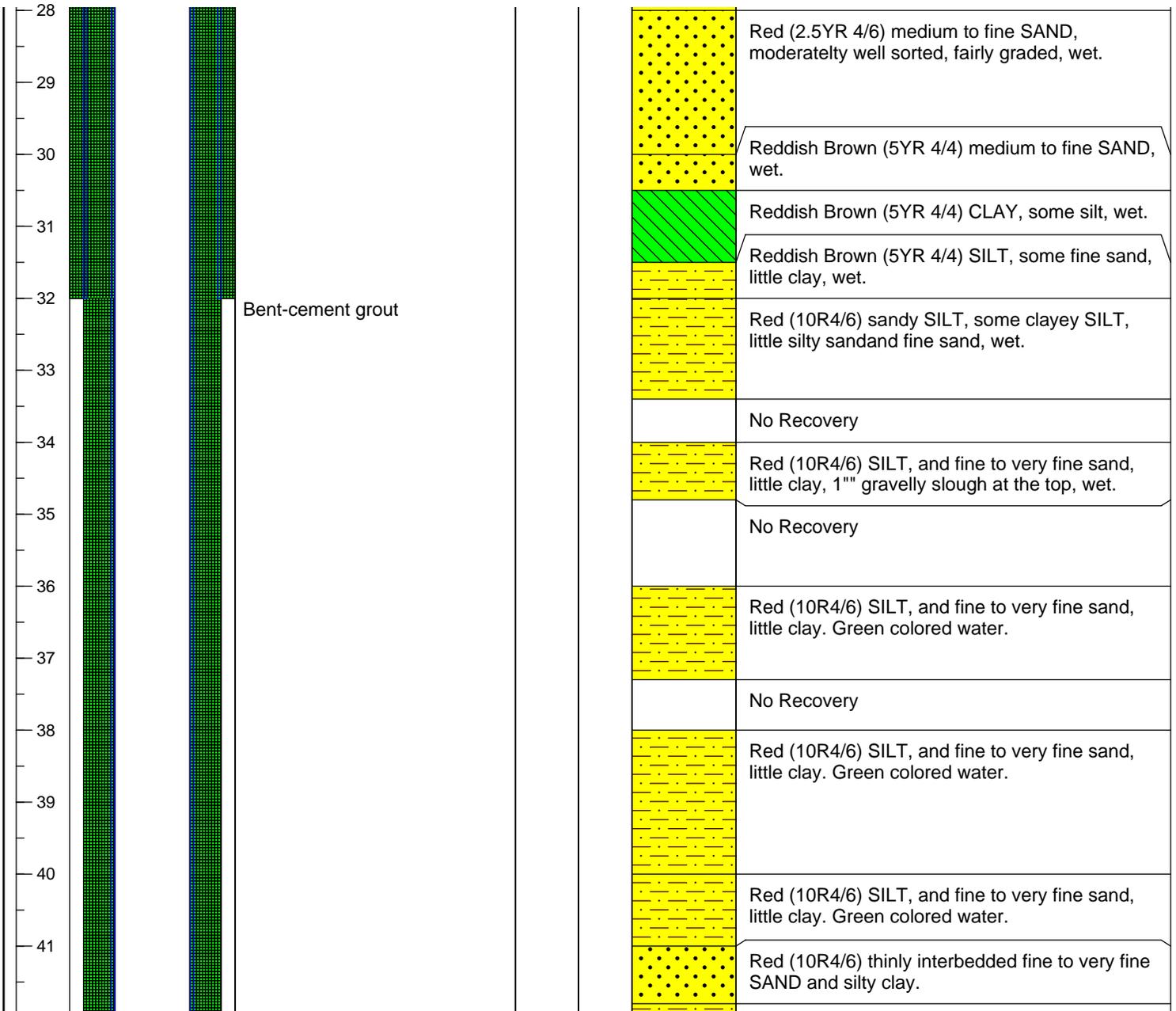
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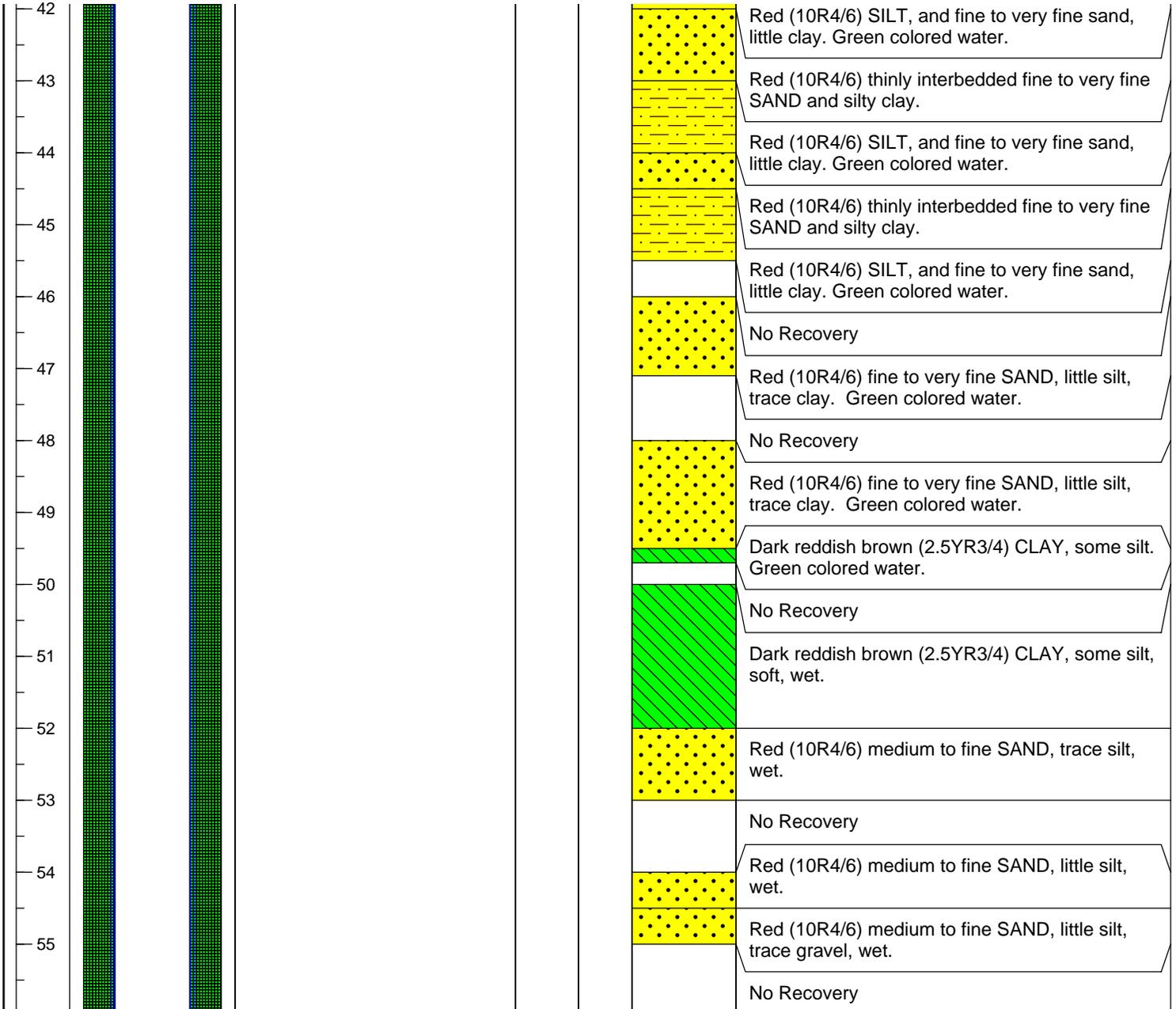
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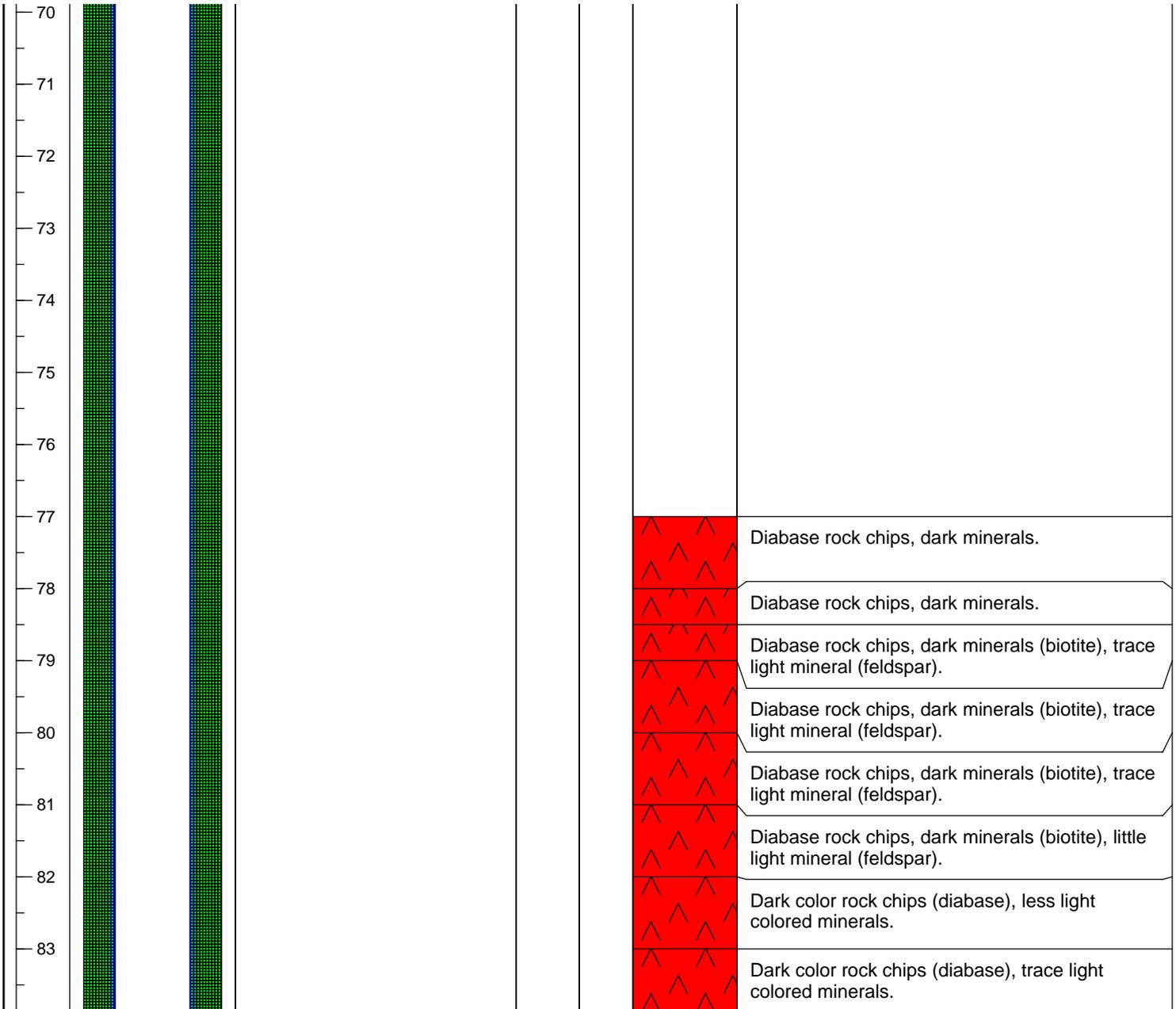
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84						Dark color rock chips (diabase), trace light colored minerals.
85						Dark color rock chips (diabase), trace light colored minerals.
86						Dark color rock chips (diabase), trace light colored minerals.
87						Diabase rock chips, dark minerals (biotite), trace light mineral (feldspar).
88						Diabase rock chips, dark minerals (biotite), trace light mineral (feldspar).
89						
90						
91						Diabase rock chips, dark minerals (biotite), trace light mineral (feldspar). Overall, black angular fine gravel-sized pieces.
92						
93						
94						Diabase rock chips, little gray siltstone.
95						Black, gray and green rock chips similar to diabase, little to trace gray to green siltstone-type material.
96						
97						Dark colored rock chips, larger than diabase chips, gray to brown siltstone.

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Drilling Method: Mud and Air Rotary

114-MW6D

Depth (ft)	Well Construction Diagram	Well Construction Description and Sample Information	PID (ppm)	Blows/6"	Lithology	Lithologic Description
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98						
99						Diabase rock chips, Black angular pieces with trace large pieces of orthoclase feldspar.
100						
101						Diabase rock chips, Black angular pieces with trace large pieces of orthoclase feldspar.
102						
103						Diabase rock chips, Black angular pieces with trace large pieces of orthoclase feldspar.
104						
105						
106						Diabase rock chips, Black angular pieces with trace large pieces of orthoclase feldspar.
107						Large (approximately 1 inch) piece of diabase retrieved from rock chips.
108						
109						
110						Large (approximately 1 inch) piece of diabase retrieved from rock chips.
111						End of Boring at 111 ft.

NOTES: Coordinates are provided in New Jersey State Plane NAD 1983

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Client: PPG Industries

Site: Site 114

Site Location: Jersey City, NJ

Geologist: D. Sero

Drilling Company: Advanced Drilling Inc

Driller: Craig Conner

Drilling Date: 11/29/2006

Well Completion Date: 12/15/2006

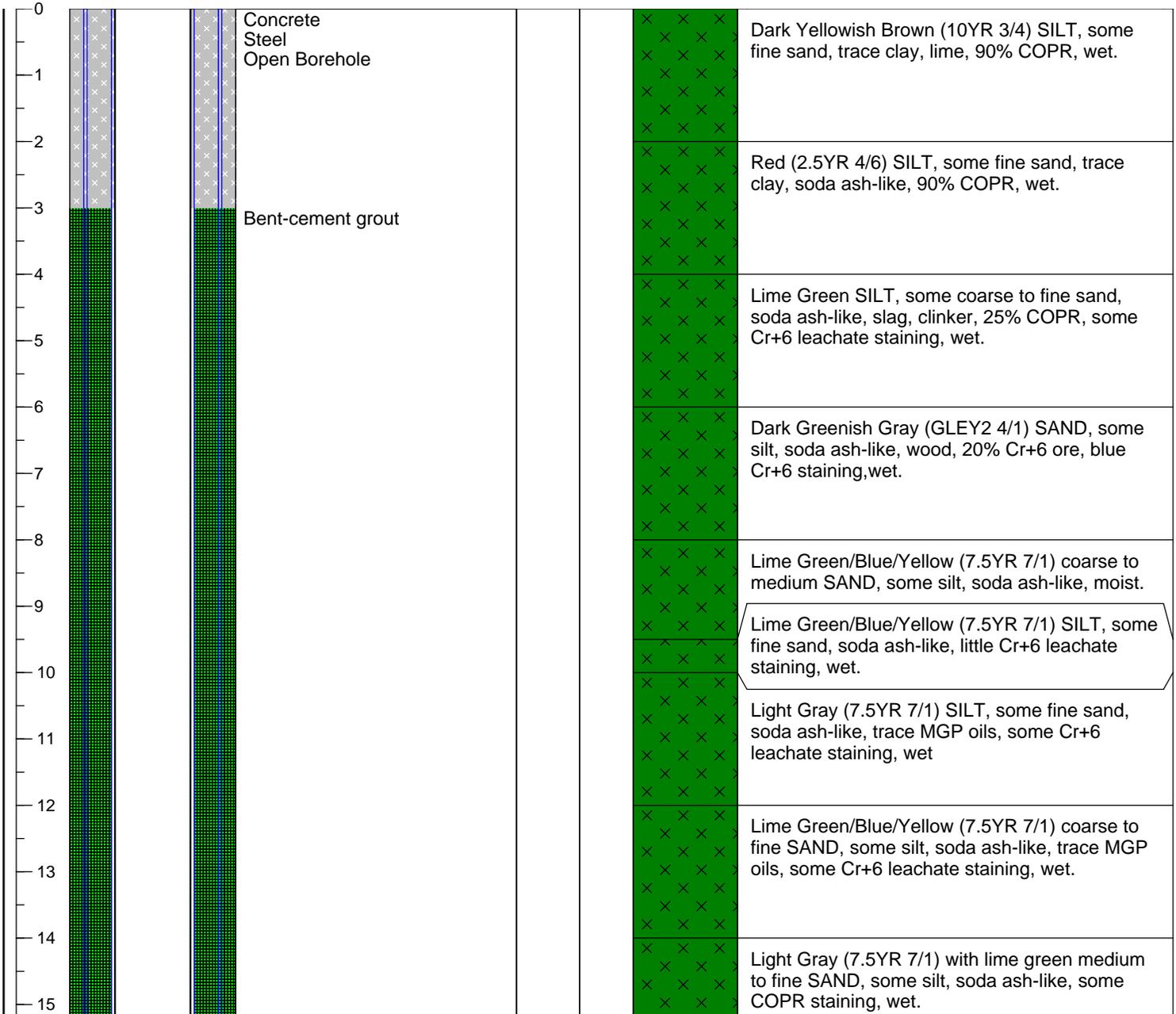
Elevation: 13.68

State Plane Coordinates: X: 683329.2 Y: 611189.3

Drilling Method: Air Rotary

114-MW7D

Depth (ft)	Well Construction Diagram	Well Construction Description and Sample Information	PID (ppm)	Blows/6"	Lithology	Lithologic Description
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Client: PPG Industries

Site: Site 114

Site Location: Jersey City, NJ

Geologist: D. Sero

Drilling Company: Advanced Drilling Inc

Driller: Craig Conner

Drilling Date: 11/29/2006

Well Completion Date: 12/15/2006

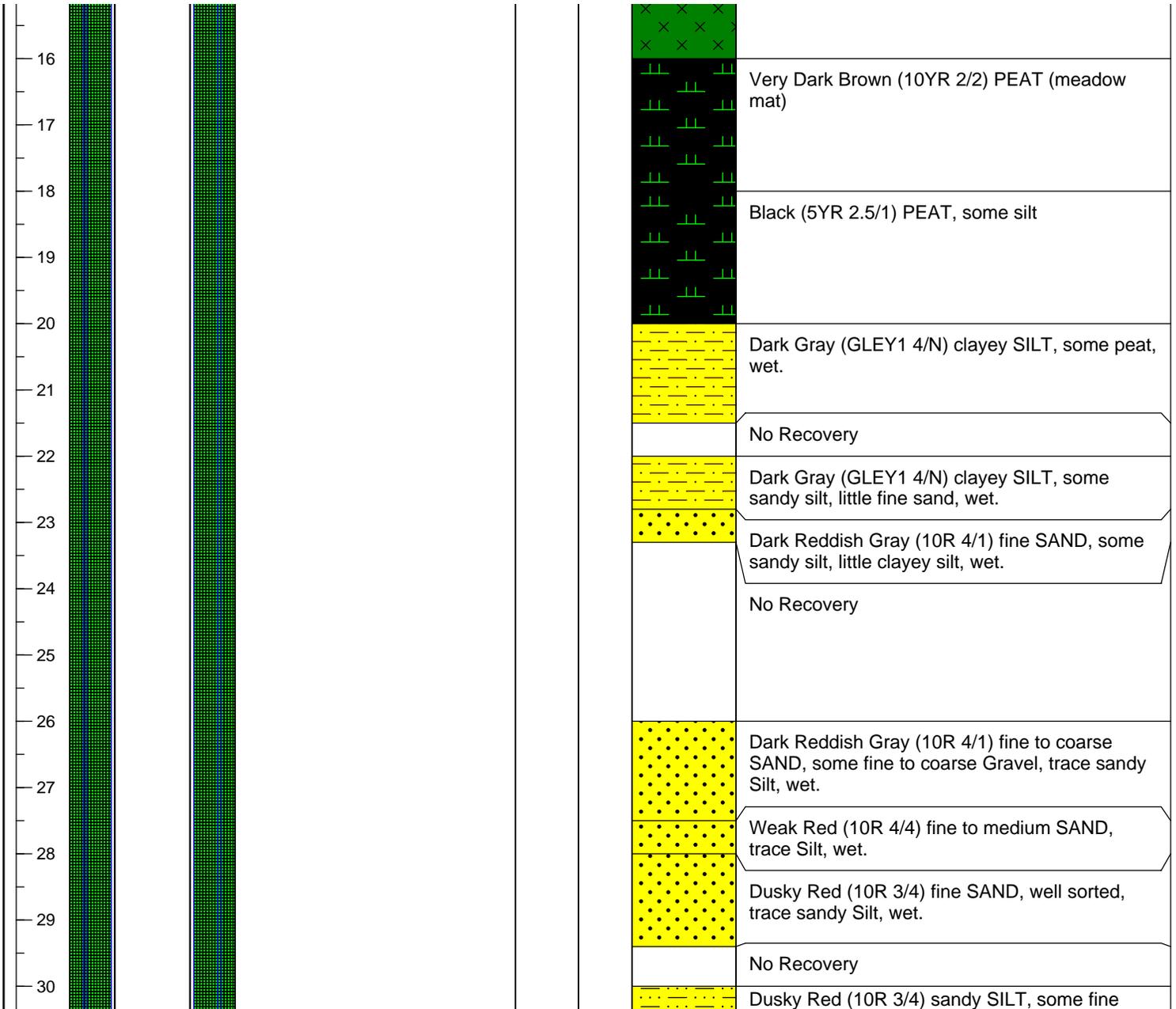
Elevation: 13.68

State Plane Coordinates: X: 683329.2 Y: 611189.3

Drilling Method: Air Rotary

114-MW7D

Depth (ft)	Well Construction Diagram	Well Construction Description and Sample Information	PID (ppm)	Blows/6"	Lithology	Lithologic Description
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Client: PPG Industries

Site: Site 114

Site Location: Jersey City, NJ

Geologist: D. Sero

Drilling Company: Advanced Drilling Inc

Driller: Craig Conner

Drilling Date: 11/29/2006

Well Completion Date: 12/15/2006

Elevation: 13.68

State Plane Coordinates: X: 683329.2 Y: 611189.3

Drilling Method: Air Rotary

Depth (ft)	Well Construction Diagram	Well Construction Description and Sample Information	PID (ppm)	Blows/6"	Lithology	Lithologic Description
------------	---------------------------	--	-----------	----------	-----------	------------------------

31						Sand, trace fine Gravel, wet.
32						
33						
34		Bent-cement grout				No Recovery
35						
36						
37						
38						
39						Dusky Red (10R 3/4) fine SAND, some silty Sand, little clayey Silt, wet.
40						No Recovery
41						Dusky Red (10R 3/4) fine SAND, some sandy Silt, little clayey Silt, trace silty Sand, wet.
42						No Recovery
43						Weak Red (10R 4/4) silty SAND, some clayey Silt, little sandy Silt and fine Sand, wet.
44						No Recovery
45						Weak Red (10R 4/4) sandy SILT, some silty Sand, little clayey silt and fine sand, wet.

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Client: PPG Industries

Site: Site 114

Site Location: Jersey City, NJ

Geologist: D. Sero

Drilling Company: Advanced Drilling Inc

Driller: Craig Conner

Drilling Date: 11/29/2006

Well Completion Date: 12/15/2006

Elevation: 13.68

State Plane Coordinates: X: 683329.2 Y: 611189.3

Drilling Method: Air Rotary

114-MW7D

Depth (ft)	Well Construction Diagram	Well Construction Description and Sample Information	PID (ppm)	Blows/6"	Lithology	Lithologic Description
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Client: PPG Industries

Site: Site 114

Site Location: Jersey City, NJ

Geologist: D. Sero

Drilling Company: Advanced Drilling Inc

Driller: Craig Conner

Drilling Date: 11/29/2006

Well Completion Date: 12/15/2006

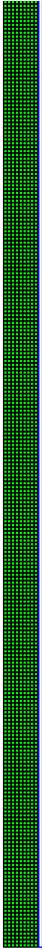
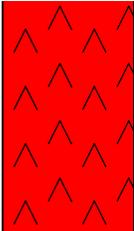
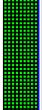
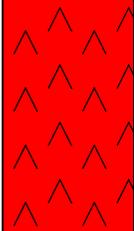
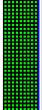
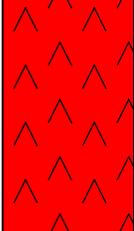
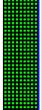
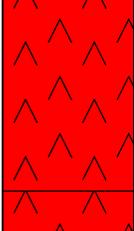
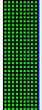
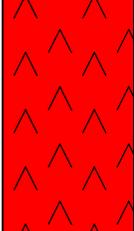
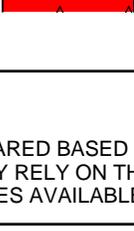
Elevation: 13.68

State Plane Coordinates: X: 683329.2 Y: 611189.3

Drilling Method: Air Rotary

114-MW7D

Depth (ft)	Well Construction Diagram	Well Construction Description and Sample Information	PID (ppm)	Blows/6"	Lithology	Lithologic Description
------------	---------------------------	--	-----------	----------	-----------	------------------------

61						olivine.
62						COBBLES
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						

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Client: PPG Industries

Site: Site 114

Site Location: Jersey City, NJ

Geologist: D. Sero

Drilling Company: Advanced Drilling Inc

Driller: Craig Conner

Drilling Date: 11/29/2006

Well Completion Date: 12/15/2006

Elevation: 13.68

State Plane Coordinates: X: 683329.2 Y: 611189.3

Drilling Method: Air Rotary

114-MW7D

Depth (ft)	Well Construction Diagram	Well Construction Description and Sample Information	PID (ppm)	Blows/6"	Lithology	Lithologic Description
------------	---------------------------	--	-----------	----------	-----------	------------------------

76						
77						Black rock chips, indicative of diabase.
78						
79						Black rock chips, indicative of diabase.
80						
81						Black rock chips with trace light mineral grains, indicative of diabase.
82						
83						Black rock chips with trace light mineral grains, indicative of diabase.
84						
85						Black rock chips with trace light mineral grains, indicative of diabase.
86						
87						Black rock chips with trace light mineral grains, indicative of diabase.
88						
89						Black rock chips with trace light mineral grains, indicative of diabase.
90						End of Boring at 90 ft.

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Client: PPG Industries

Drilling Date: 1/2/2007

Site: Site 114

Well Completion Date: 1/5/2007

Site Location: Jersey City, NJ

Elevation 16.78

Geologist: M.Merdinger, P. Kelly

State Plane Coordinates X: 610610.7 Y: 683366.7

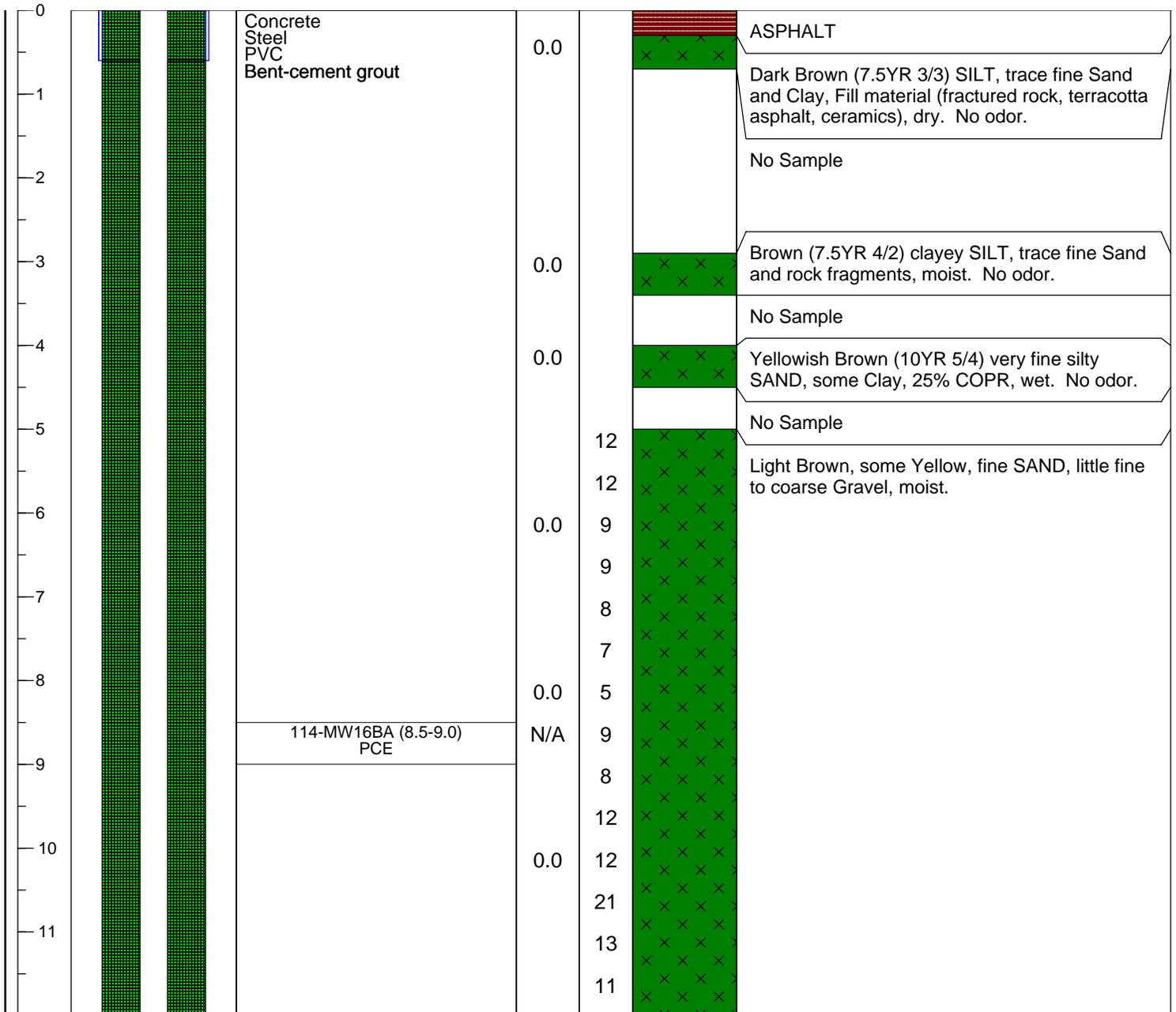
Drilling Company: Advanced Drilling Inc

Driller A. Heiliy

Drilling Method: Split spoon

114-MW16B

Depth (ft)	Well Construction Diagram	Well Construction Description and Sample Information	PID (ppm)	Blows/6"	Lithology	Lithologic Description
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Client: PPG Industries

Drilling Date: 1/2/2007

Site: Site 114

Well Completion Date: 1/5/2007

Site Location: Jersey City, NJ

Elevation 16.78

Geologist: M.Merdinger, P. Kelly

State Plane Coordinates X: 610610.7 Y: 683366.7

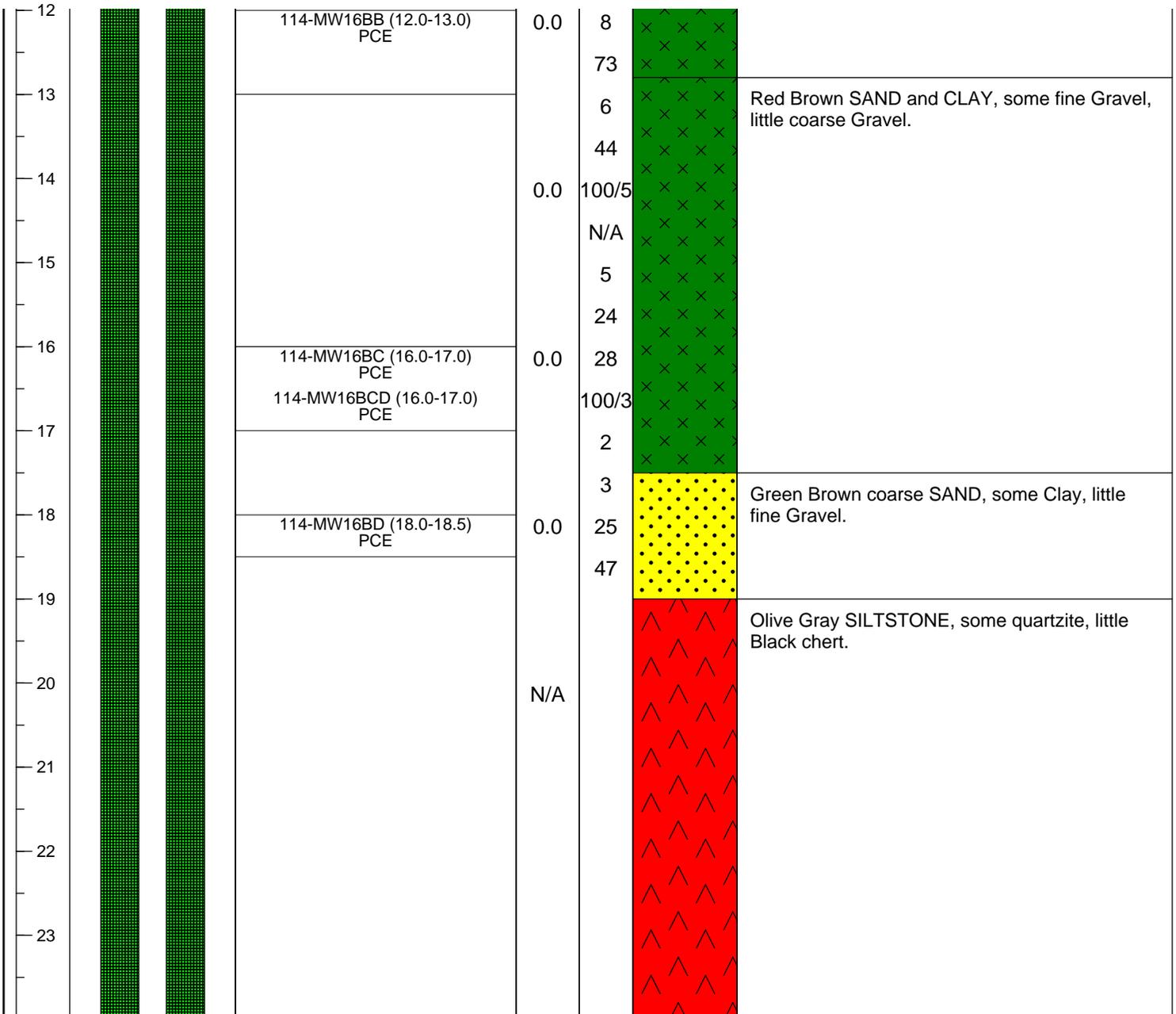
Drilling Company: Advanced Drilling Inc

Driller A. Heiliy

Drilling Method: Split spoon

114-MW16B

Depth (ft)	Well Construction Diagram	Well Construction Description and Sample Information	PID (ppm)	Blows/6"	Lithology	Lithologic Description
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Client: PPG Industries

Site: Site 114

Site Location: Jersey City, NJ

Geologist: M.Merdinger, P. Kelly

Drilling Company: Advanced Drilling Inc

Driller: A. Heiliy

Drilling Date: 1/2/2007

Well Completion Date: 1/5/2007

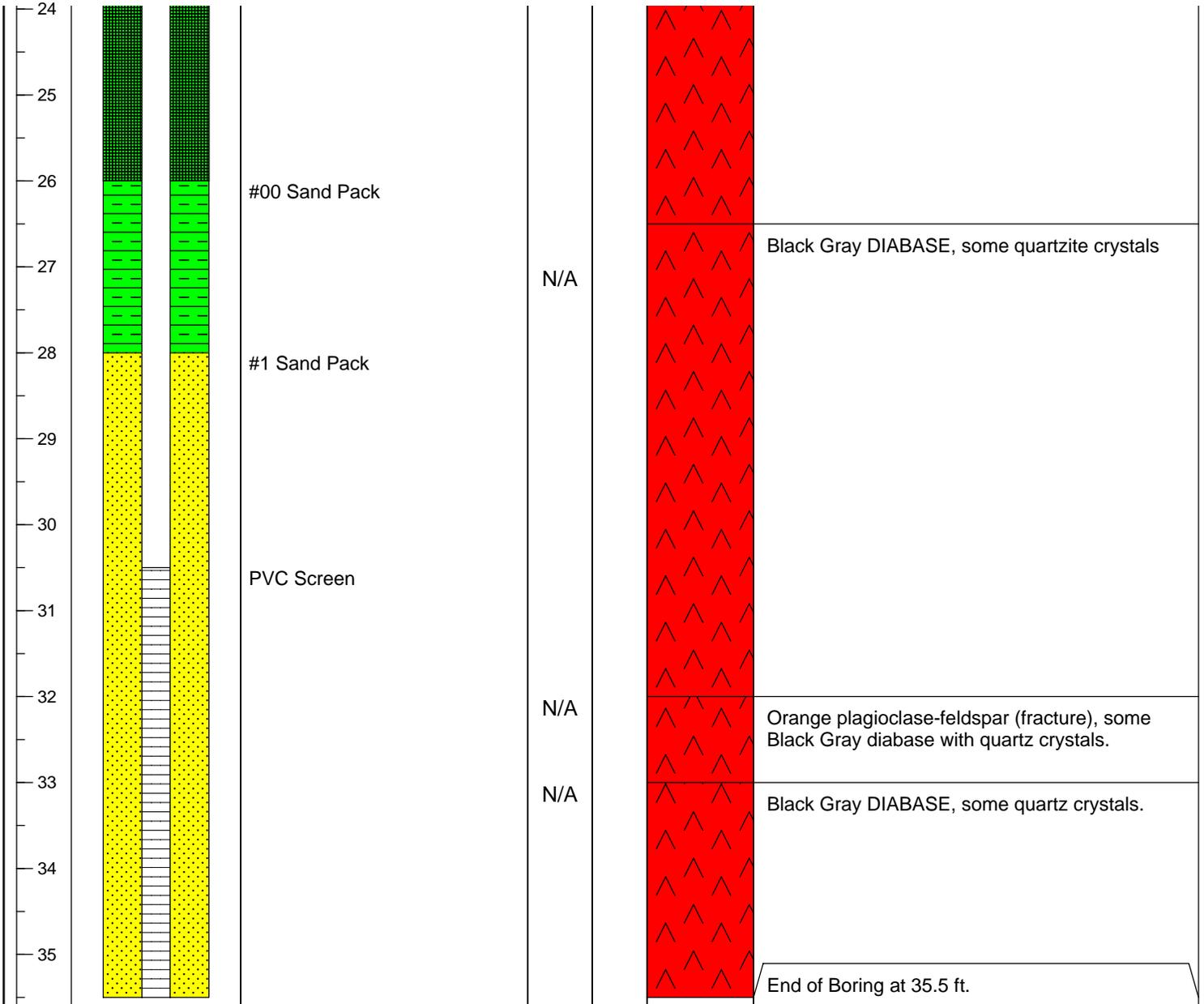
Elevation: 16.78

State Plane Coordinates: X: 610610.7 Y: 683366.7

Drilling Method: Split spoon

114-MW16B

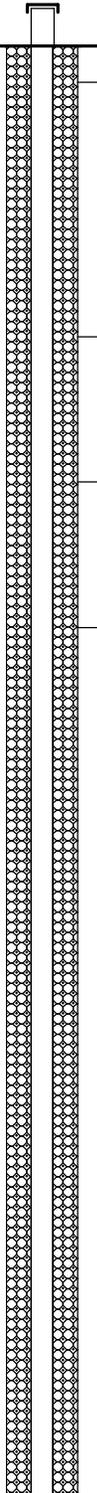
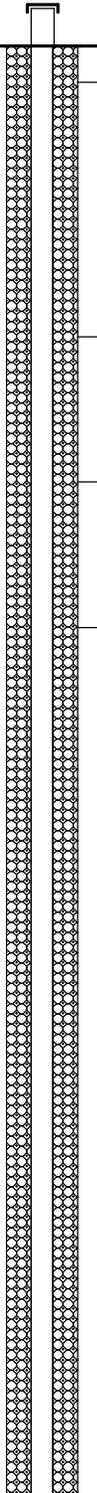
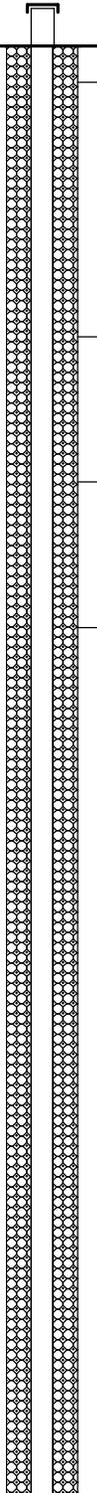
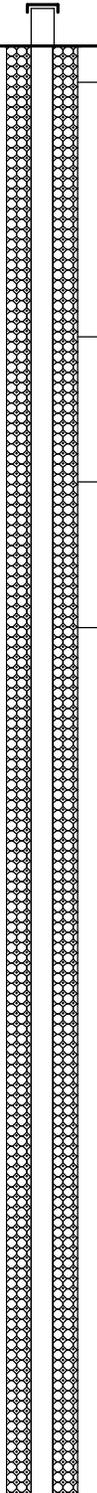
Depth (ft)	Well Construction Diagram	Well Construction Description and Sample Information	PID (ppm)	Blows/6"	Lithology	Lithologic Description
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Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.64 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic/Water Rotary	Coordinates (NJSPNAD83) x: 611077.5
Date Started Drilling: 12/1/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683544.4
Date Finished Drilling: 12/11/2020	Core Size: 6 in. sonic, 2 in. rock core	Boring Total Depth: 105 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1	0 / 5	0	DRY TO MOIST	FILL		Soft dig to 5 ft bgs. Brown-gray well graded GRAVEL, some silty sand, very dense (Dense Graded Aggregate [DGA]), dry to moist.		8-inch steel protective casing (stick up)
2			MOIST	FILL		Gray fine to coarse GRAVEL, trace to little silty sand, dense (DGA), moist.		Riser set in grout
3	3 / 5	0	WET	FILL		Gray fine to coarse GRAVEL, trace sand, well graded (DGA), wet.		Grout: 0-80 ft bgs
4			WET	FILL		Gray fine to medium SAND, trace silt, poorly sorted, medium dense, micaceous (DGA), wet.		
5			WET	FILL		Gray SILT, little coarse gravel, soft, micaceous (DGA), wet.		
6	4 / 5	0	DAMP TO WET	FILL		Gray SILT, trace fine to coarse gravel, soft, micaceous (DGA), damp to wet.		6-inch steel threaded casing: 0-80 ft bgs
7			WET	FILL		Gray SILT, trace fine to coarse gravel, soft, micaceous (DGA), wet.		
8	4.5 / 5	0	MOIST	OH		Gray organic CLAY, trace brown fibers (5%), trace silt, stiff, moist.		
9			WET	FILL		Gray SILT, trace fine to coarse gravel, soft, micaceous (DGA), wet.		

PPG WITH WELL CONSTRUCTION - - 25/21 13:06

Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.64 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic/Water Rotary	Coordinates (NJSPNAD83) x: 611077.5
Date Started Drilling: 12/1/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683544.4
Date Finished Drilling: 12/11/2020	Core Size: 6 in. sonic, 2 in. rock core	Boring Total Depth: 105 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

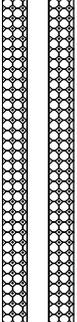
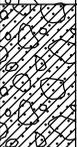
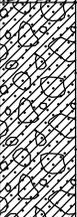
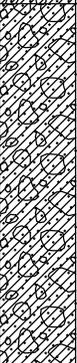
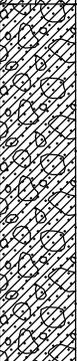
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
21	2.5 / 5	0	WET	GP		Gray coarse GRAVEL, little fine to coarse sand, poorly sorted, loose, wet.		
22-24			WET	SW		Red brown fine to coarse SAND, some fine to coarse gravel, trace silt, loose, wet.		
25	2.5 / 5	0	WET	SM		Reddish brown fine SAND, some silt, poorly graded, trace gravel, loose.		
26-29			WET	ML		Reddish brown SILT, some fine to medium sand, soft, wet. Slight yellow coloration to water.		
30	4.5 / 5	0	WET	SM		Reddish brown fine SAND, some silt, poorly graded, medium dense, wet. Slight yellow coloration to water.		
31-34			DAMP TO MOIST	CL		Reddish brown to gray CLAY, trace silt, medium stiff, damp to moist. Slight yellow coloration to water.		
35	4.5 / 5	0	WET	ML		Reddish brown SILT, little fine sand, medium stiff, wet. Slight yellow coloration to water.		
36-39								

PPG WITH WELL CONSTRUCTION - - 25/21 13:06

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 RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.64 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic/Water Rotary	Coordinates (NJSPNAD83) x: 611077.5
Date Started Drilling: 12/1/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683544.4
Date Finished Drilling: 12/11/2020	Core Size: 6 in. sonic, 2 in. rock core	Boring Total Depth: 105 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
41-44	4 / 5	0	MOIST	CL		Reddish brown CLAY, trace silt, medium stiff, moist. Slight yellow coloration to water.		
45			WET	GP		Gray coarse GRAVEL, poorly sorted, dense, wet.		
46-47			WET	SW		Reddish brown fine to coarse SAND, trace to little gravel, medium dense, wet (Basal Till).		
48-49	4 / 5	0	WET	SP		Reddish brown fine to medium SAND, little fine to coarse gravel, very dense, wet (Basal Till).		
50-54	4 / 5	0	WET	SP		Reddish brown fine to medium SAND, some fine to coarse gravel, little silt, very dense, wet (Basal Till).		
55-59	4.5 / 5	0	WET	SP		Reddish brown fine to medium SAND, some fine to coarse angular gravel, little silt, very dense, wet (Basal Till).		

PPG WITH WELL CONSTRUCTION - - 25/21 13:06

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 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
 RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.64 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic/Water Rotary	Coordinates (NJSPNAD83) x: 611077.5
Date Started Drilling: 12/1/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683544.4
Date Finished Drilling: 12/11/2020	Core Size: 6 in. sonic, 2 in. rock core	Boring Total Depth: 105 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
61	3 / 5	0	WET	SW		Reddish brown fine to coarse SAND, little fine to coarse angular gravel, poorly graded, very dense, wet (Basal Till).		
62			WET	SP		Reddish brown fine to medium SAND, some fine to coarse gravel, little silt, poorly graded, very dense, wet (Basal Till).		
63	4 / 5	0	WET	SW		Reddish brown fine to coarse SAND, some fine to coarse gravel, little silt, very dense, wet (Basal Till).		
64			NA	BEDROCK		Gray mudstone. Highly weathered, rock in clay matrix, fine-grained, laminated, weak rock, crushed fracture spacing (Lockatong formation).		
65	4.4 / 5	0	NA	BEDROCK		Gray mudstone (Argillite). Unweathered, fine-grained, laminated, strong rock, moderate fracture spacing. Vertical fracture at approximately 73 to 75 ft bgs, calcite-filled (Lockatong formation). Recovery = 83%; RQD = 75% (fair-good rock).		
66			NA	BEDROCK		Gray mudstone (Argillite). Unweathered, fine-grained, laminated, strong rock, moderate fracture spacing. Vertical fracture at approximately 75 to 76 ft bgs, and 79.5 to 80 ft bgs. Healed calcite vein at 77 to 78 ft bgs (Lockatong formation). Recovery = 97%; RQD = 77% (good rock).		
67	4.8 / 5	0	NA	BEDROCK				
68			NA	BEDROCK				
69								
70								
71								
72								
73								
74								
75								
76								
77								
78								
79								

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.64 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic/Water Rotary	Coordinates (NJSPNAD83) x: 611077.5
Date Started Drilling: 12/1/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683544.4
Date Finished Drilling: 12/11/2020	Core Size: 6 in. sonic, 2 in. rock core	Boring Total Depth: 105 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

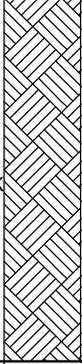
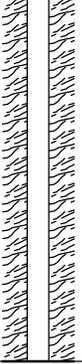
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
81-85	4.6 / 5	0	NA	BEDROCK		Gray mudstone (Argillite). Unweathered, fine-grained, laminated, strong rock, wide fracture spacing. Vertical fracture throughout core. Calcite in fracture, rough joint alteration, some fractures healed. (Lockatong formation). Recovery = 93%; RQD = 90% (good - excellent rock).		5 7/8" open borehole in rock: 80-105 ft bgs
86-90	4.8 / 5	0	NA	BEDROCK		Gray mudstone (Argillite). Unweathered, fine-grained, laminated, strong rock, wide fracture spacing, with few noticeable fractures, some healed (Lockatong formation). Recovery = 97%; RQD = 97% (excellent rock).		
91-95	5 / 5	0	NA	BEDROCK		Gray mudstone (Argillite). Unweathered, fine-grained, laminated, strong rock, wide fracture spacing (Lockatong formation). Small healed vertical fracture at 93 ft bgs. Recovery = 100%; RQD = 100% (excellent rock).		
96-100	5 / 5	0	NA	BEDROCK		Gray mudstone (Argillite). Unweathered, fine-grained, laminated, strong rock, wide fracture spacing (Lockatong formation). Vertical fracture from 99 to 100 ft bgs. Recovery = 100%; RQD = 100% (excellent rock).		

PPG WITH WELL CONSTRUCTION - - 25/21 13:06

Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
 RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.64 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic/Water Rotary	Coordinates (NJSPNAD83) x: 611077.5
Date Started Drilling: 12/1/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683544.4
Date Finished Drilling: 12/11/2020	Core Size: 6 in. sonic, 2 in. rock core	Boring Total Depth: 105 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

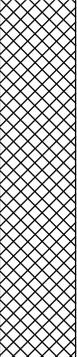
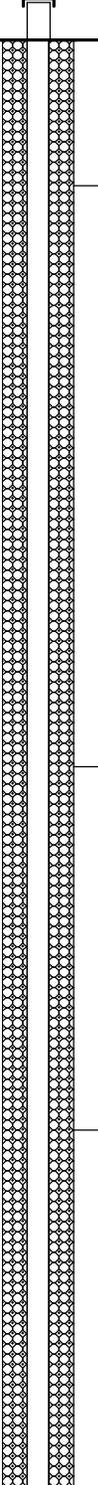
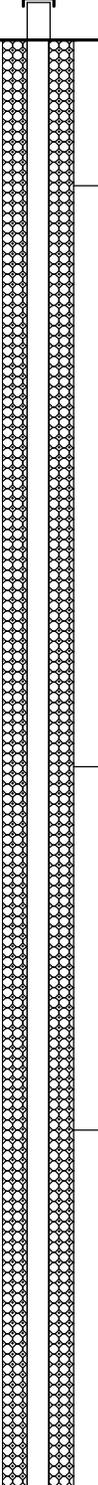
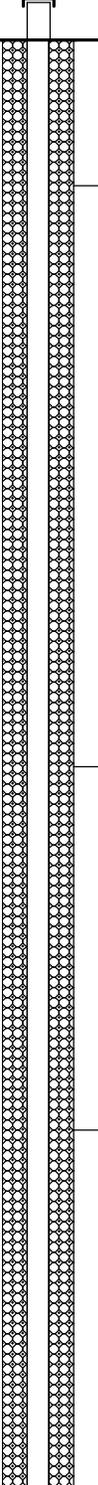
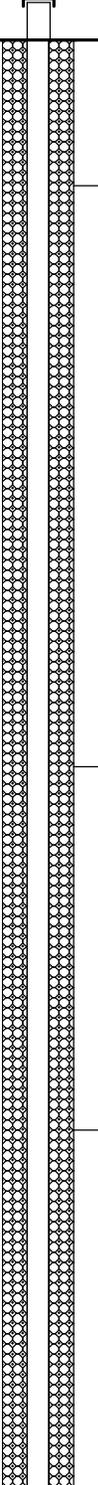
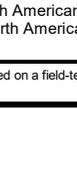
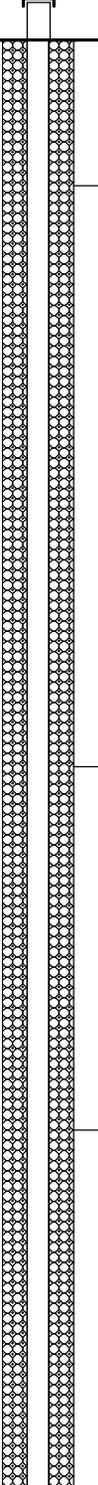
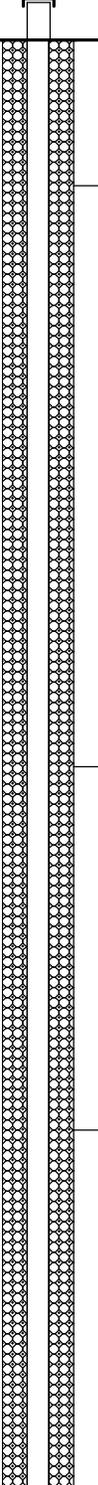
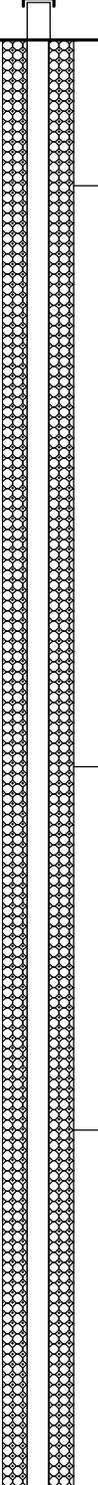
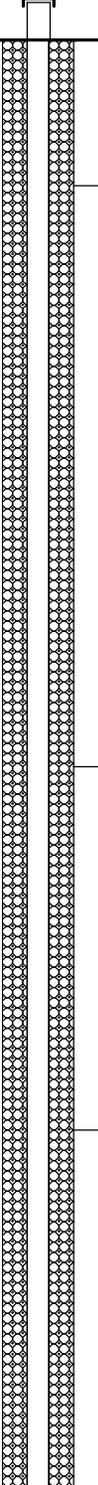
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
101-105	5 / 5	0	NA	BEDROCK		Gray mudstone (Argillite). Unweathered, fine-grained, laminated, strong rock, wide fracture spacing (Lockatong formation). Fractures at 103 ft bgs (at 5 deg) clay coated, and 103.4 ft bgs (at 15 deg) clay coated. Recovery = 100%; RQD = 100% (excellent rock). End of boring at 105 ft bgs.		

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RQD = rock quality designation

Comments:

PPG WITH WELL CONSTRUCTION - - 25/21 13:06

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.08 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611157.6
Date Started Drilling: 7/9/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683435.6
Date Finished Drilling: 7/14/2020	Core Size: 3 in	Boring Total Depth: 55 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1	3 / 5	0	DRY	FILL		Soft dig to 5 ft bgs. Grayish brown (2.5Y 5.2) well graded GRAVEL, some silty sand (DGA), micaceous, very dense, dry.		Riser set in grout
2								
3								
4	3.8 / 5	0	WET	FILL		Gray, well graded GRAVEL, little fine to coarse sand and little silt, wet (FILL).		
5								
6								
7	4.5 / 5	0	WET	FILL		Dark yellowish brown (10YR 4/4) poorly graded SAND with some silt, little fine to coarse gravel, wet (FILL).		Grout: 0 - 43.5 ft bgs
8								
9								
10	4 / 5	0	DRY	FILL		Dark yellowish brown (10YR 4/4) poorly graded SAND with some silt, little fine to coarse gravel, dry (FILL).		2-inch Schedule 40 PVC Riser: 0-46 ft bgs
11								
12								
13	4 / 5	0	WET	FILL		Sandy SILT with little fine to coarse gravel, DGA, medium dense, wet (FILL).		
14								
15								
16	4 / 5	0	DAMP	FILL		Brown (10YR 5/3) micaceous SILT, few sand, few fine to coarse gravel, loose, damp (FILL).		
17								
18								
19	4 / 5	0	DAMP	FILL		Micaceous SILT (DGA), few large gravel pieces, medium dense, damp (FILL).		
20								
21								
22	4 / 5	0	DAMP	FILL		Gray and brown micaceous SILT, few coarse gravel, loose, damp (FILL).		
23								
24								

PPG WITH WELL CONSTRUCTION - - 8/26/20 21:46

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.08 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611157.6
Date Started Drilling: 7/9/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683435.6
Date Finished Drilling: 7/14/2020	Core Size: 3 in	Boring Total Depth: 55 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks	
21	5 / 5	0	DAMP	FILL		Micaceous SILT (DGA), little subrounded fine to coarse gravel, medium dense, damp (FILL).			
22									
23	5 / 5	0	DAMP TO WET	SW		Reddish brown well graded SAND, little silt, little fine to coarse subrounded GRAVEL, medium dense, damp to wet.		22.5 ft: 25% fines (silt/clay)	
24									
25	5 / 5	0	WET	SP		Reddish brown poorly graded SAND, medium sand, loose, wet.			
26			WET	SP		Reddish brown poorly graded SAND with few silt, medium sand, some subrounded fine to coarse gravel, wet.			
27			WET	SP		Reddish brown fine SAND, grades into poorly graded sand with little silt, wet.			
28			WET	SM		Reddish brown poorly graded SAND with some silt, little fine to subrounded coarse gravel, wet.		28 ft: 30% fines (silt/clay)	
29	2.7 / 5	0	WET	CL		Reddish brown and gray CLAY, wet.			
30									
31			WET	SP		Reddish brown poorly graded SAND with little silt, loose, wet.		31 ft: 25% fines (silt/clay)	
32			WET	SM		Reddish brown poorly graded SAND with some silt, fine sand, wet.			
33	4 / 5	0	WET	SP		Reddish brown poorly graded SAND with few silt, wet.			
34									
35			WET	CL		Reddish brown sandy CLAY, loose, wet.			
36			WET	ML/CL		Reddish brown clayey SILT, little fine sand, clay laminae from 36-37 ft bgs (spaced 0.5 - 1 inch apart), wet.			
37			WET	ML		Reddish brown sandy SILT, medium dense, wet.	37 ft: 60% fines (silt/clay)		
38			WET	ML		Reddish brown sandy SILT, wet.	39 ft: 75% fines (silt/clay)		
39			WET	ML					

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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.08 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611157.6
Date Started Drilling: 7/9/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683435.6
Date Finished Drilling: 7/14/2020	Core Size: 3 in	Boring Total Depth: 55 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
41	2.5 / 5	0	WET	SW		Reddish brown well graded SAND, few silt, fine to medium sand, few coarse sand, loose, wet.		40 ft: 10-15% fines (silt/clay)
42			DAMP TO WET	SC		Reddish brown well graded SAND with some clay, fine to coarse sand, few to fine to coarse gravel, medium dense, damp to wet (TILL).		43 ft: 30% fines (silt/clay)
43			DAMP TO WET	CL/GC		Gray sandy CLAY, fine to coarse sand, some fine to coarse gravel (up to 3 inches in diameter), very dense, damp to wet (TILL).		Bentonite Seal: 43.5 - 45.5 ft bgs
44	3.5 / 5	0	DAMP TO WET	CL/GC		Brown (7.5YR 4/3) poorly graded SAND, few silt, wet (TILL).		44 ft: 60% fines (silt/clay)
45			WET	SP				45 ft: 5-10% fines (silt/clay)
46			WET	BEDROCK		Grey mudstone and siltstone, wet (Lockatong Formation). Weathered from 45.5-48 ft bgs, competent at 48 ft bgs. End of boring at 55 ft.		#0 Filter sand 45.5 - 48.5 ft bgs
47	2 / 5	0	WET	BEDROCK				2-inch Schedule 40 Screen: 46 - 47.5 ft bgs
48								Bentonite Seal: 48.5 - 55 ft bgs
49								
50								
51								
52								
53								
54								
55								

PPG WITH WELL CONSTRUCTION - - 8/26/20 21:46

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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 13.23 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611439.1
Date Started Drilling: 3/26/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683519.8
Date Finished Drilling: 3/27/2020	Core Size: 3 in	Boring Total Depth: 75 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 11.1 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1	5 / 10	0	DRY	FILL		Soft dig to 5 ft bgs; Gray angular fine to coarse GRAVEL, dry (FILL).		Riser set in grout
2						Dark yellowish brown (10YR 3/4) to black silty SAND with sub-angular fine to coarse gravel, compacted, dry (FILL).		
3			DRY	FILL				
4								
5			WET	FILL		Dark grayish brown (10YR 5/2) clayey SAND, little to some sub-rounded to sub-angular fine to coarse gravel, loose, wet (FILL).		
6							Grout: 0-65.5 ft bgs	
7	DRY	FILL		Dark grayish brown (10YR 5/2) clayey SAND, little to some sub-rounded to sub-angular fine to coarse gravel, compacted (FILL).				
8							2-inch Schedule 40 PVC riser: 0-68 ft bgs	
9	DRY	FILL		Dark grayish brown (10YR 5/2) clayey SAND, little to some sub-rounded to sub-angular fine to coarse gravel, loose, dry (FILL).				
10								
11	6.5 / 10	0	WET TO DRY	FILL		Dark gray (2.5Y 4/1) to black silty SAND with sub-angular fine to coarse gravel, wet (10' to 12') to dry (12' to 15') (FILL).		
12								
13								
14								
15			DRY	PT		Brown fibers in black organic material (PEAT), dry.		
16	DRY	CH		Dark reddish brown (10YR 5/3) fat CLAY, dry.				
17	DRY	SP		Dark reddish brown (10YR 5/3) poorly graded medium SAND, trace to few silt, dry.				
18								
19						Dark reddish brown (10YR 5/3) clayey SAND, little sub-rounded to sub-angular fine to coarse gravel, dry.		
			DRY	SC				

PPG WITH WELL CONSTRUCTION - - 9/14/20 21:31

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Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 13.23 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611439.1
Date Started Drilling: 3/26/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683519.8
Date Finished Drilling: 3/27/2020	Core Size: 3 in	Boring Total Depth: 75 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 11.1 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks		
21	5.5 / 10	0	WET	SP-SM		Reddish brown (10YR 4/4) poorly graded SAND with SILT, medium SAND, few SILT, loose, wet. Yellowish groundwater at 21.5' to 22.5'.				
22						Reddish brown (5YR 4/4) poorly graded SAND with silt, medium sand, some sub-rounded fine to coarse gravel, loose, wet.				
23				ML		Yellowish red (5YR 4/6) SILT, massive, wet.				
24						ML/CL				Yellowish red (5YR 4/6) laminated, interbedded SILT, CLAY, fine SAND, compacted, wet.
25										Reddish brown (5YR 4/4) SILT, loose, wet.
26	6 / 10	0	WET	ML		Yellowish red (5YR 4/6) sandy SILT, yellowish groundwater, loose, wet.		31 ft 55% fines (silt/clay)		
27						ML/CL				Yellowish red (5YR 4/6) interbedded fine SAND, SILT and CLAY, compact, wet.
28				ML						
29										
30	6 / 10	0	WET	ML						
31						ML/CL				
32				ML						
33						ML/CL				
34	ML									
35			ML/CL							
36	ML									
37			ML/CL							
38	ML									
39			ML/CL							
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41			ML/CL							
42	ML									
43			ML/CL							
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45			ML/CL							
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65			ML/CL							
66	ML									
67			ML/CL							
68	ML									
69			ML/CL							
70	ML									
71			ML/CL							
72	ML									
73			ML/CL							
74	ML									
75			ML/CL							

PPG WITH WELL CONSTRUCTION - - 9/14/20 21:31

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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 13.23 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611439.1
Date Started Drilling: 3/26/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683519.8
Date Finished Drilling: 3/27/2020	Core Size: 3 in	Boring Total Depth: 75 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 11.1 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks	
41	7.3 / 10	0	WET	SM		Yellowish red (5YR 4/6) silty SAND, fine sand, loose, wet, yellowish groundwater.		41 ft: 20% fines (silt/clay)	
42						Reddish brown (5YR 5/4) SILT, loose, wet.		45 ft: 90% fines (silt/clay)	
43									
44	6.5 / 10	0	WET	ML		Reddish brown (5YR 5/4) laminated SILT and CLAY.		50 ft: 15-20% fines (silt/clay)	
45									
46									
47	6.5 / 10	0	N/A	ML/CL		Reddish brown (2.5YR 4/4) silty SAND, fine sand, wet, yellow groundwater.		54 ft: 20% fines (silt/clay)	
48									
49									
50	6.5 / 10	0	WET	SM		Reddish brown (2.5YR 4/4) silty SAND, fine sand, wet, yellow groundwater.		55 ft: 70% fines (silt/clay)	
51									
52									
53	6.5 / 10	0	WET	SM		Reddish brown (2.5YR 4/4) silty SAND, fine sand, wet, yellow groundwater.			
54									
55									
56	6.5 / 10	0	WET	ML/CL		Reddish brown (2.5YR 4/4) sandy SILT, fine SAND and CLAY laminae, yellow groundwater.			
57									
58									
59									

PPG WITH WELL CONSTRUCTION - - 9/14/20 21:31

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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 13.23 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611439.1
Date Started Drilling: 3/26/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683519.8
Date Finished Drilling: 3/27/2020	Core Size: 3 in	Boring Total Depth: 75 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 11.1 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks	
61	7.5 / 10	0	WET	SP-SM		Reddish brown poorly graded SAND with silt, fine to medium sand, trace coarse sand.		61 ft: 10% fines (silt/clay)	
62			MOIST	CL/ML		Yellowish red (5YR 4/6) sandy CLAY and sandy silt, silt and clay laminae.		62.5 ft: 70% fines (silt/clay)	
63						Reddish brown SILT with fine sand.		63 ft: 80% fines (silt/clay)	
64	7.5 / 10	0	MOIST	ML		Reddish brown (5YR 5/4) clayey SAND, some sub-rounded to sub-angular fine to coarse gravel, dry (TILL).		Bentonite Seal: 65.5-67.5 ft bgs	
65									Light gray sandstone, wet (Stockton Formation). End of boring at 75 ft.
66									
67	5 / 5	0	DRY	SC-GC		Light gray sandstone, wet (Stockton Formation). End of boring at 75 ft.		2-inch Schedule 40 PVC well screen: 68-69 ft bgs	
68								#0 Filter Sand: 67.5-70 ft bgs	
69									
70	5 / 5	0	WET	BEDROCK				Bentonite Seal: 70-75 ft bgs	
71									
72									
73									
74									
75									

PPG WITH WELL CONSTRUCTION - - 9/14/20 21:31

Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.55 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610949.9
Date Started Drilling: 6/30/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683210.4
Date Finished Drilling: 7/1/2020	Core Size: 3 in	Boring Total Depth: 75 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 12.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks	
0 - 1	5 / 5	0	DRY	FILL		Soft dig to 5 ft bgs. Gray coarse angular GRAVEL, dry (FILL).			
1 - 2						Brown (10YR 4/3) SAND with little silt, little subangular to angular fine to coarse gravel, several subangular cobbles, very dense, dry (FILL).			
2 - 3	3.8 / 5	0	DRY	FILL		Light olive brown (2.5Y 5/3) well graded GRAVEL, subrounded to subangular, silty fine to coarse sand, wet (FILL).		Riser set in grout	
3 - 4									
4 - 5									
5 - 6	3.8 / 5	0	WET	FILL		Dark gray (2.5Y 4/1) SAND with little silt, few subrounded fine to coarse gravel, dry (FILL).		Grout: 0-66 ft bgs	
6 - 7									
7 - 8	5 / 10	0	DRY	FILL		Gray SILT, trace fine to coarse gravel, dense, dry (FILL).		2-inch Schedule 40 PVC Riser: 0-68.5 ft bgs	
8 - 9									
9 - 10									
10 - 11	5 / 10	0	DRY	FILL		Strong brown (7.5YR 4/6) fine SAND with little silt, dried plant roots, dense.		11.5 ft: 25% fines (silt/clay)	
11 - 12									
12 - 13	5 / 10	0	DAMP	SP		Black and dark brown (10YR 3/3) organic CLAY with brown fibers (top of meadow mat), damp.			
13 - 14									
14 - 15	5 / 10	0	DAMP	OH		Gray SILT, dense, damp.			
15 - 16									
16 - 17	5 / 10	0	DAMP	ML					
17 - 18									
18 - 19	5 / 10	0	DAMP	ML					
19 - 20									

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Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.55 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610949.9
Date Started Drilling: 6/30/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683210.4
Date Finished Drilling: 7/1/2020	Core Size: 3 in	Boring Total Depth: 75 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 12.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
21	6 / 10	0.1	WET	ML		Gray SILT, loose to medium dense, wet.		
22			WET	SP		Grayish brown (10YR 5/2) poorly graded medium SAND, little fine sand, trace coarse sand and silt, loose, wet.		21 ft: 1-5% fines (silt/clay)
23			WET	SP		Reddish brown (5YR 5/4) poorly graded SAND with few silt, fine sand, loose to medium dense, wet. Yellow-tinged soils noted in the middle of the core after drying.		22.5 ft: 10% fines (silt/clay)
24			WET	ML		Reddish brown sandy SILT, wet.		23 ft: 60% fines (silt/clay)
25			WET	SP		Dark reddish brown (5YR 3/4) with gray to black mottling, poorly graded fine SAND, loose to medium dense, wet.		25.5 ft: 5% fines (silt/clay)
26	6 / 10	0	WET	SP		Black and brown (7.5YR 4/2) and dark reddish brown (5YR 3/2) poorly graded SAND with trace silt, wet.		
27			WET	ML		Mottled black and reddish brown SILT, loose to medium dense, wet.		31 ft: 5% fines (silt/clay)
28			WET	CL		Reddish brown, with layers of light reddish brown CLAY, medium dense, wet.		
29			WET	CL				

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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.55 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610949.9
Date Started Drilling: 6/30/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683210.4
Date Finished Drilling: 7/1/2020	Core Size: 3 in	Boring Total Depth: 75 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 12.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
41-44						Reddish brown and gray varves with interbedded layering of SILT and CLAY, wet.		
45-49	9 / 10	0	WET	CL/ML				
50-51			WET	CL		Reddish brown CLAY, possible fracturing, filled with medium sand, soft, wet.		
51-52			WET	CL		Dark reddish brown and lighter reddish brown CLAY varves, fine sand laminae, wet.		
52-58	6.5 / 10	0	WET TO DAMP	SP		Dark reddish brown with black mottling, poorly graded SAND with little silt, fine sand, trace coarse sand, wet to damp.		53 ft 25% fines (silt/clay)
58-59			DAMP	SP		Reddish brown fine to medium SAND with little silt, little subrounded fine to coarse gravel, loose, damp.		
59-60			DAMP TO DRY	ML		Reddish brown and greenish gray sandy SILT with little embedded fine to coarse gravel, dense, damp to dry (TILL).		

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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.55 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610949.9
Date Started Drilling: 6/30/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683210.4
Date Finished Drilling: 7/1/2020	Core Size: 3 in	Boring Total Depth: 75 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 12.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
61-65	4.5 / 10	0	WET	SP		Reddish brown poorly graded SAND with little silt, few medium grained sand, loose, wet.		61.5 ft: 10% fines (silt/clay)
66-67			WET	CL		Reddish brown CLAY with little sand, little fine to coarse gravel, loose, wet (TILL).		Bentonite Seal: 66-68 ft bgs
68-70			DAMP	CL		Gray sandy CLAY with embedded pieces of rock, very dense, damp (TILL). Grey mudstone and siltstone, wet (Lockatong Formation). Weathered from 68-72.5 ft bgs. Competent from 72.5-75 ft bgs. End of boring at 75 ft bgs.		#0 Filter sand: 68-70.5 ft bgs 2-inch Schedule 40 PVC screen: 68.5-70 ft bgs
71-75	3.5 / 5	0	WET	BEDROCK				Bentonite Seal: 70.5-75 ft bgs

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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.70 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic/Water Rotary	Coordinates (NJSPNAD83) x: 610903.9
Date Started Drilling: 12/23/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683215.5
Date Finished Drilling: 1/4/2021	Core Size: 6 in. sonic, 2 in. rock core	Boring Total Depth: 112.5 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 12.7 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1	0 / 5	0	DRY	FILL		Soft dig to 5 ft bgs. Gray fine to coarse GRAVEL, some fine to coarse sand, trace silt, dense, dry.		8-inch steel protective casing (stick up)
2			WET	FILL		Gray COBBLES, some fine to coarse sand, dense (Dense Graded Aggregate [DGA]), wet.		
3			WET	FILL		Gray fine to coarse GRAVEL, some fine to coarse sand, trace silt, dense (DGA), wet.		
4	3 / 5	0	MOIST TO WET	FILL		Gray fine to coarse SAND, some silt, trace subangular gravel, dense (DGA), moist to wet.		Riser set in grout
5			MOIST TO WET	FILL		Gray fine to coarse SAND, some gravel, little silt, dense (DGA), moist to wet.		
6			MOIST TO WET	FILL		Gray fine to coarse SAND, some silt, little coarse gravel, dense (DGA), wet.		
7	4.5 / 5	0	MOIST TO WET	FILL		Gray fine SAND, some silt, little coarse gravel, dense (DGA), wet.		Grout: 0-85 ft bgs
8			MOIST TO WET	FILL		Gray fine to coarse SAND, some gravel, little silt, dense (DGA), moist to wet.		
9			MOIST TO WET	FILL		Gray organic CLAY, some brown fibers (40%), trace silt, stiff, moist.		
10	5 / 5	0	MOIST	OH		Gray organic CLAY, some brown fibers (40%), trace silt, stiff, moist.		6-inch steel threaded casing: 0-85 ft bgs
11			MOIST	OH		Gray organic CLAY, some brown fibers (40%), trace silt, stiff, moist.		
12			MOIST TO WET	ML		Gray SILT, little fine sand, trace fine to medium gravel, dense, moist to wet.		

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.70 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic/Water Rotary	Coordinates (NJSPNAD83) x: 610903.9
Date Started Drilling: 12/23/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683215.5
Date Finished Drilling: 1/4/2021	Core Size: 6 in. sonic, 2 in. rock core	Boring Total Depth: 112.5 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 12.7 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
21	3 / 5	0	WET	SM		Reddish brown fine to coarse SAND, some silt, little fine to medium gravel, dense, wet.		
22			WET	SW		Reddish brown fine to coarse SAND, trace silt, trace subrounded coarse gravel, dense, wet.		
23	4 / 5	0	WET	SW		Reddish brown fine to coarse SAND, trace silt, trace coarse gravel, dense, wet.		
24			WET	SP		Reddish brown fine SAND, trace silt, medium dense, wet.		
25	4.5 / 5	0	WET	SP		Reddish brown fine SAND, trace silt, medium dense, wet.		
26			WET	SM		Reddish brown fine SAND, some silt, trace clay, medium dense, wet.		
27			WET	SP		Reddish brown fine SAND, little silt, medium dense, wet.		
28	3.5 / 5	0	WET	SM		Reddish brown fine SAND, some silt, medium dense, wet. Slight yellow coloration to water.		
29			MOIST	CL		Gray CLAY, little fine sand stringers, trace silt, medium stiff, moist.		

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Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.70 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic/Water Rotary	Coordinates (NJSPNAD83) x: 610903.9
Date Started Drilling: 12/23/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683215.5
Date Finished Drilling: 1/4/2021	Core Size: 6 in. sonic, 2 in. rock core	Boring Total Depth: 112.5 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 12.7 ft NAVD88

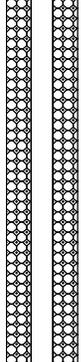
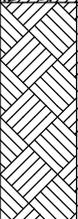
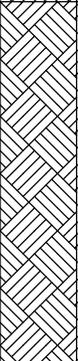
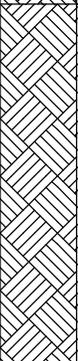
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
41-44	1 / 5	0	MOIST	CL		Gray CLAY, trace silt, trace fine sand stringers, medium stiff, moist.		
45-47	5 / 5	0	MOIST	CL		Gray CLAY, trace silt, trace fine sand stringers, medium stiff, moist.		
48-49			MOIST	CL		Gray CLAY, interbedded with fine to medium sand, trace silt, medium stiff, moist.		
50-51			WET	ML		Red brown SILT, some fine sand, stiff, wet.		
52-54	5 / 5	0	WET	ML/CL		Red brown SILT and CLAY, trace fine sand, stiff, wet.		
55-56			WET	CL		Gray CLAY, trace silt, stiff, wet.		
57-58			WET	SM		Reddish brown fine SAND, some silt, medium dense, wet (Basal Till).		
59-60	4 / 5	0	WET	SM		Reddish brown fine SAND, some silt, trace medium to coarse gravel, trace cobbles, very dense, wet (Basal Till).		
61-62						Reddish brown fine to medium SAND, some silt, little fine to coarse angular gravel, trace cobbles, very dense, wet (Basal Till).		

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 RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.70 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic/Water Rotary	Coordinates (NJSPNAD83) x: 610903.9
Date Started Drilling: 12/23/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683215.5
Date Finished Drilling: 1/4/2021	Core Size: 6 in. sonic, 2 in. rock core	Boring Total Depth: 112.5 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 12.7 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
61-65	3.5 / 5	0	WET	SM		Reddish brown fine to coarse SAND, some silt, little fine to coarse gravel, trace cobbles, very dense, wet (Basal Till).		
65-67			WET	SW		Reddish brown fine to coarse SAND, trace silt, medium dense, wet (Basal Till).		
67-70	3 / 5	0	NA	BEDROCK		Gray mudstone (Argillite), unweathered, fine grained, laminated, rock broken by sonic drill, strong rock (Lockatong formation).		Top of bedrock: 67 ft bgs
70-75	4.17 / 5	0	NA	BEDROCK		Gray mudstone (Argillite), unweathered, fine grained, laminated, medium strong, broken rock with one vertical fracture at approximately 73.5 to 75 ft bgs (Lockatong formation). Recovery = 83%; RQD = 0% (very poor rock).		
75-79	5 / 5	0	NA	BEDROCK		Gray mudstone (Argillite), unweathered, laminated, very strong rock, very wide fracture spacing, highly fractured and broken rock at approximately 75 to 76 ft bgs, competent rock at approximately 76 to 80 ft bgs with mechanical fractures (Lockatong formation). Recovery = 100%; RQD = 77% (good rock).		

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Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.70 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic/Water Rotary	Coordinates (NJSPNAD83) x: 610903.9
Date Started Drilling: 12/23/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683215.5
Date Finished Drilling: 1/4/2021	Core Size: 6 in. sonic, 2 in. rock core	Boring Total Depth: 112.5 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 12.7 ft NAVD88

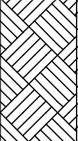
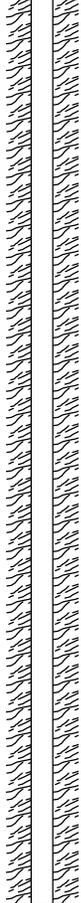
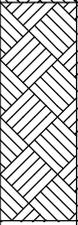
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
81-85	5 / 5	0	NA	BEDROCK		Gray mudstone (Argillite), unweathered, laminated, very strong rock, very wide fracture spacing, 80 degree fractures at 80.2 to 82 ft bgs, calcite-filled, 60 degree fractures at approximately 80 to 80.1 ft bgs, 60 degree fractures at approximately 83 to 83.2 ft bgs, calcite-filled (Lockatong formation). Recovery = 100%; RQD = 83% (good rock).		
85-86	0 / 2	0	NA	BEDROCK		Roller bit the boring to clear broken rock pieces left behind from the sonic rig casing installation.		
86-89	4 / 4	0	NA	BEDROCK		Gray mudstone (Argillite), unweathered, laminated 20%, very strong rock, very wide fracture spacing, numerous mechanical fractures (Lockatong formation). Recovery = 100%; RQD = 100% (excellent rock).		5 7/8" open borehole in rock: 85-112.5 ft bgs
89-91			NA	BEDROCK		Gray mudstone (Argillite), unweathered, laminated 20%, very strong rock, very wide fracture spacing, numerous mechanical fractures (Lockatong formation). Recovery = 100%; RQD = 100% (excellent rock).		
91-97	5.25 / 6	0	NA	BEDROCK		Gray mudstone (Argillite), unweathered, laminated strong rock, weak rock at approximately 91.5 to 92 ft bgs and 93.8 to 95 ft bgs, numerous mechanical fractures (possible highly fractured) (Lockatong formation). Recovery = 88%; RQD = 63% (fair rock).		
97-99	5 / 5	0	NA	BEDROCK		Grey mudstone (Argillite), unweathered, laminated at 0 to 10 degrees, very strong rock, very wide fracture spacing. 0 degree fracture at approximately 97.8 to 97.9 ft bgs (Lockatong formation). Recovery = 100%; RQD = 98% (excellent rock).		

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Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.70 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic/Water Rotary	Coordinates (NJSPNAD83) x: 610903.9
Date Started Drilling: 12/23/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683215.5
Date Finished Drilling: 1/4/2021	Core Size: 6 in. sonic, 2 in. rock core	Boring Total Depth: 112.5 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 12.7 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
101	5 / 5	0	NA	BEDROCK				
102						Grey mudstone (Argillite), unweathered, laminated at 0 to 10 degrees, very strong rock, very wide fracture spacing. 10 degree fractures at approximately 103.5 to 103.6 ft bgs, 10 degree fractures at approximately 105.2 to 105.3 ft bgs (Lockatong formation). Recovery = 100%; RQD = 97% (excellent rock).		
103								
104	5 / 5	0	NA	BEDROCK				
105								
106								
107								
108	0 / 3	0	NA	BEDROCK		No recovery - core barrel lost a portion of the diamond bit down the hole and this left the core in the hole. Boring reamed to 112.5 ft bgs. End of boring at 112.5 ft bgs.		
109								
110								
111								
112								

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Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 12.51 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611371.2
Date Started Drilling: 6/17/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683296.6
Date Finished Drilling: 6/18/2020	Core Size: 3 in	Boring Total Depth: 80 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 11.2 ft NAVD88

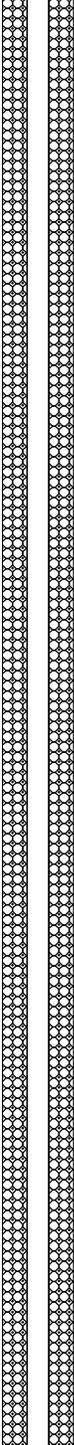
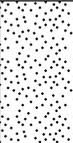
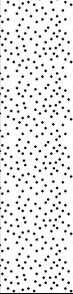
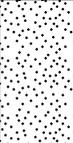
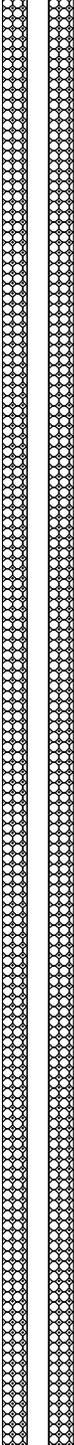
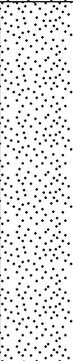
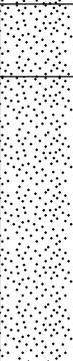
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1	5 / 5	0	DRY	FILL		Soft dig to 5 ft bgs; Yellowish brown (10YR 5/4) silty SAND, little subangular fine to coarse gravel, dense, dry (FILL).		Riser set in grout
2								
3								
4								
5								
6	1 / 5	0	WET	FILL		Dark grayish brown (2.5Y 4/2) well graded GRAVEL, fine to coarse subangular gravel with little silty sand, wet (FILL).		Grout: 0-69.5 ft bgs
7								
8								
9								
10								
11	6 / 10	0	WET	FILL		Very dark gray silty SAND, fine to coarse gravel (FILL), wet.		2-inch Schedule 40 PVC riser: 0-72.5 ft
12								
13			WET	OH		Black (5YR 2.5/1) CLAY with brown fibers (meadow mat), black grades into brown (7.5YR 4/2), several large rounded gravel (up to 2 inches in diameter), brown fibers grade into trace to few fibers at 15 ft bgs, wet.		
14								
15								
16	WET	SC		Mottled reddish brown (2.5YR 4/2) and brown (7.5YR 4/2) with few spots of grayish green (5GY 6/1) clayey SAND with little fine to coarse gravel, medium dense to loose, wet.				
17								
18								
19								

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Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 12.51 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611371.2
Date Started Drilling: 6/17/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683296.6
Date Finished Drilling: 6/18/2020	Core Size: 3 in	Boring Total Depth: 80 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 11.2 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
21	6 / 10	5.3 (20'-5.3)	WET	SW		Reddish brown (5YR 5/3) well graded SAND with little silt, fine to coarse sand, little to some fine to coarse gravel, loose, wet. MGP sheen and odor.		20.5 ft: 25% fines (silt/clay)
22-23			WET	SP		Light reddish brown (2.5YR 3/3) poorly graded SAND with few silt, medium sand, trace coarse sand, loose, wet.		23 ft: 10% fines (silt/clay)
24-28			WET	SP		Reddish brown (5YR 4/4) poorly graded SAND with little silt, mostly medium sand, trace coarse sand, loose, wet.		28 ft: 20% fines (silt/clay)
29-30	8 / 10	0	WET	SP		Reddish brown poorly graded SAND with few silt, fine to medium sand, loose, wet.		30 ft: 10% fines (silt/clay)
31-35			WET	SP		Reddish brown poorly graded SAND with few silt, fine to medium sand, loose, wet.		38 ft: 10% fines (silt/clay)
36-39			WET	SP		Reddish brown poorly graded SAND with few silt, mostly fine sand, loose, wet.		

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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 12.51 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611371.2
Date Started Drilling: 6/17/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683296.6
Date Finished Drilling: 6/18/2020	Core Size: 3 in	Boring Total Depth: 80 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 11.2 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks		
41	6.8 / 10	0	WET	SP/ML		Reddish brown poorly graded SAND, grades into silt, loose, wet.				
42			WET	CL		Reddish brown (2.5YR 5/3) CLAY varves, laminae, dense, wet.				
43			WET	CL/ML		Gray and reddish brown interbedded CLAY and SILT varves, laminae, MGP odor, wet.				
44			WET	SP		Reddish brown fine SAND stringer with strong MGP odor, loose, wet.				
45			WET	SP		Reddish brown poorly graded SAND, mostly fine sand, trace silt, loose, wet.				
46			WET	CL/ML		Reddish brown and gray CLAY and SILT laminae, few fine sand laminae, dense, wet.				
47	6 / 10	0	WET	SP		Reddish brown (5YR 4/4) poorly graded SAND with little silt, mostly fine sand, wet.			45.5 ft: 5% fines (silt/clay)	
48			WET	CL/ML		Reddish brown and gray CLAY and SILT laminae, few fine sand laminae, dense, wet.				
49			WET	SP		Reddish brown (5YR 4/4) poorly graded SAND with little silt, mostly fine sand, wet.				50 ft: 25% fines (silt/clay)
50			WET	SP		Reddish brown (5YR 4/4) poorly graded SAND with little silt, mostly fine sand, wet.				
51			WET	SP		Reddish brown (5YR 4/4) poorly graded SAND with little silt, mostly fine sand, wet.				
52			WET	SP		Reddish brown (5YR 4/4) poorly graded SAND with little silt, mostly fine sand, wet.				
53	WET	SP		Reddish brown (5YR 4/4) poorly graded SAND with little silt, mostly fine sand, wet.						
54	WET	SP		Reddish brown (5YR 4/4) poorly graded SAND with little silt, mostly fine sand, wet.						
55	WET	SM-SC		Reddish brown (5YR 4/4) poorly graded SAND with some silt/clay and fine gravel embedded, dense, wet.	55 ft: 30% fines (silt/clay)					
56	WET	SM-SC		Reddish brown SAND with some silt/clay, wet.						
57	WET	SM-SC		Reddish brown SAND with some silt/clay, dense, wet.						
58	WET TO DAMP	SM-SC		Reddish brown SAND with some silt/clay, dense, wet.						
59	WET	SP		Reddish brown (5YR 4/1) poorly graded SAND with few						

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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 12.51 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611371.2
Date Started Drilling: 6/17/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683296.6
Date Finished Drilling: 6/18/2020	Core Size: 3 in	Boring Total Depth: 80 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 11.2 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
61	6 / 10	0	WET	SP		silt, fine sand, loose, wet.		61 ft: 5-10% fines (silt/clay)
62			WET	SW		Reddish brown (5YR 4/4) well graded SAND with little silt, mostly fine sand, some subangular to subrounded coarse gravel (up to 2 inches in diameter), medium dense to loose, wet.		62.5 ft: 20% fines (silt/clay)
63			WET	SW		Reddish brown well graded SAND with some silt, fine to coarse sand, few embedded gravel, dense, damp to wet (TILL).		65 ft: 35% fines (silt/clay)
64			DAMP TO WET	SM		Gray clayey/silty SAND, very dense, damp (TILL).		
65			DAMP	SC/SM		Reddish brown (5YR 4/4) poorly graded SAND with some silt, fine sand, loose, damp.		
66			DAMP	SM		Reddish brown and gray clayey/silty SAND with several large pieces of gravel, damp (TILL).		
67	5 / 10	0	DAMP	SC/SM		Gray bedrock (Stockton Formation), wet. Weathered from 74-77.5 ft bgs. Competent from 77.5-80 ft bgs. End of boring at 80 ft bgs.		70 ft bgs: 70% fines (silt/clay)
68			DAMP	SM		Bentonite Seal: 69.5-71.5 ft bgs		
69			DAMP	SC/SM		#0 Filter Sand: 71.5-76.5 ft bgs		
70			DAMP	SC/SM		2-inch Schedule 40 PVC well screen: 72.5-76 ft bgs		
71	NA	BEDROCK				Bentonite Seal: 76.5-80 ft bgs		
72								
73								
74								
75								
76								
77								
78								
79								

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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 10.43 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611371.2
Date Started Drilling: 1/30/2024	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 683296.6
Date Finished Drilling: 2/1/2024	Core Size: 6 inches	Boring Total Depth: 90 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 10.8 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1-2	10 / 10	0	wet	FILL		Soft dig to 5 ft Poorly graded gravel with sand, fine to coarse, angular, 35-45% fine to coarse sand Light brown loose gravel with fine to coarse sand. Wet [FILL] - 5YR 5/6 (yellowish red / light brown), wet, loose - no odor, no staining		Annular Seal (Bent Cement Grout) (0-87 ft bgs) Riser (Schedule 40 PVC) (0-82 ft bgs)
3-4						Well-graded sand with gravel (SW), fine to coarse, subangular, 35-45% fine to coarse gravel, Trace silt [FILL] - 10YR 5/2 (grayish brown), wet, loose - no odor, no staining		
5-6	5 / 5	4	moist	FILL		Poorly graded sand with gravel (SP), medium to coarse, angular, 25-35% fine to coarse gravel, Trace silt [FILL] - 10YR 4/1 (dark gray), moist, loose - hydrocarbon odor, MGP staining		Outer casing (10-inch Steel) (0-45 ft bgs) Inner Casing (6-inch Steel) (0-80 ft bgs)
7-8						Lean clay with gravel (CL), 20-30% fine to coarse gravel, Wood fibers at 13 [NATIVE] - 2.5YR 2.5/3 (dark reddish brown), moist, medium dense - hydrocarbon odor, no staining		
9-10	5 / 5	54	moist	SW		Well-graded sand with gravel (SW), fine, subangular, 20-30% fine to coarse gravel, Staining from 17-20. Trace coarse sand. [NATIVE] - 10R 5/1 (reddish gray), moist, loose - hydrocarbon odor, hydrocarbon staining		
11-12						Poorly graded gravel with sand (GP), subrounded, 20-30% medium to coarse sand [NATIVE] - 2.5YR 3/3 (dark reddish brown), moist, loose		

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Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 10.43 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611371.2
Date Started Drilling: 1/30/2024	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 683296.6
Date Finished Drilling: 2/1/2024	Core Size: 6 inches	Boring Total Depth: 90 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 10.8 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
21	5 / 5	7.7	moist	SP		- hydrocarbon odor, hydrocarbon staining Poorly graded sand with gravel (SP), fine to medium, angular, 20-30% gravel, Trace coarse sand. Minor staining [NATIVE] - 2.5YR 4/3 (reddish brown), moist, loose - hydrocarbon odor, hydrocarbon staining		
22			wet	GM		Silty gravel with sand (GM), fine to coarse, rounded, 20-30% medium to coarse sand and silt, Very strong odor. Sheens. [NATIVE] - 2.5YR 4/4 (reddish brown), wet, loose - hydrocarbon odor, DNAPL		
23	5 / 5	7.7	moist	SP		Poorly graded sand (SP), fine, angular, Trace pebbles. Grain size trends more medium from 33-37 [NATIVE] - 2.5YR 4/3 (reddish brown), moist, very loose - hydrocarbon odor, no staining		
24								
25	5 / 5	5	moist	SP		Poorly graded sand (SP), fine to medium, angular, Trace pebbles [NATIVE] - 2.5YR 2.5/3 (dark reddish brown), moist, very loose - no odor, no staining		
26								
27	5 / 5	0	moist	SP				
28								
29	5 / 5	0	moist	SP				
30								
31	5 / 5	0	moist	SP				
32								
33	5 / 5	0	moist	SP				
34								
35	5 / 5	0	moist	SP				
36								
37	5 / 5	0	moist	SP				
38								
39	5 / 5	0	moist	SP				
40								

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Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 10.43 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611371.2
Date Started Drilling: 1/30/2024	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 683296.6
Date Finished Drilling: 2/1/2024	Core Size: 6 inches	Boring Total Depth: 90 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 10.8 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
41	5 / 5	0	moist	SP				
42			wet	CH		Fat clay (CH), Varying throughout [NATIVE] [Transition Zone] - 2.5YR 4/3 (reddish brown), wet, very dense - no odor, no staining		
43	5 / 5	0						
44								
45			moist	CL		Lean clay with sand (CL), 20-30% fine sand [NATIVE] [Transition Zone] - 2.5YR 4/4 (reddish brown), moist, medium dense - no odor, no staining		
46	5 / 5	0				Sandy fat clay (CH), 35-45% fine sand and silt, Very saturated. [NATIVE] [Transition Zone] - 10YR 5/2 (grayish brown), wet, dense - no odor, no staining - 10-inch steel casing set to 45 ft bgs		
47								
48								
49								
50	10 / 10	0	wet	CH				
51								
52								
53								
54								
55								
56			wet	CL		Lean clay with sand (CL), 20-30% fine sand [NATIVE] [Transition Zone] - 2.5YR 4/3 (reddish brown), wet, medium dense - no odor, no staining		
57								
58			wet	CH		Fat clay (CH), 5-15% silt, Trace very fine sand [NATIVE] [Transition Zone] - 10YR 4/3 (brown), wet, very dense - no odor, no staining		
59			moist	ML		Silt with sand (ML), 20-30% fine sand [NATIVE] - 2.5YR 6/3 (light reddish brown), moist, loose - no odor, no staining		

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Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 10.43 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611371.2
Date Started Drilling: 1/30/2024	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 683296.6
Date Finished Drilling: 2/1/2024	Core Size: 6 inches	Boring Total Depth: 90 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 10.8 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks				
81	10 / 10	0		BEDROCK		mineralization noted from 81-82 [NATIVE] - 10YR 4/1 (dark gray), very hard - no odor, no staining - 6-inch steel casing set to 80 ft bgs		Sand Pack (#0 Sand) (80-87 ft bgs)				
82			Screen (Schedule 40 PVC) (82-87 ft bgs)									
83												
84												
85												
86												
87												
88								wet	BEDROCK	Bedrock (Lockatong Formation), competent. Bluish gray mudstone with white hydrothermal mineralization. Greenish gray banding at 88-90. [NATIVE] - 10B 5/1 (bluish gray), wet, very hard - no odor, no staining - borehole caving in, cleared to 87 ft bgs and set well at bottom of hole. Borehole filled with rock debris from 87 to 90 ft bgs.	Borehole filled with rock debris (87-90 ft bgs)	
89												
90												

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Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 12.87 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611340.1
Date Started Drilling: 6/25/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 682895.5
Date Finished Drilling: 6/29/2020	Core Size: 3 in	Boring Total Depth: 125 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 11.0 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1	5 / 5	0	DRY	FILL		Soft dig to 5 ft bgs; Gray angular fine to coarse GRAVEL (DGA), dry (FILL).		
2			DRY	FILL		Light yellowish brown (10YR 6/4) poorly graded SAND with little silt, little fine to coarse gravel, dry (FILL).		
3	2.5 / 5	0.2	DRY	FILL		Olive brown (2.5Y 4/3) silty GRAVEL with sand, fine to coarse subangular gravel with sand, little silt, loose, wet (FILL).		Riser set in grout
4			DRY	FILL				
5			DRY	FILL				
6	6 / 10	1.2	WET	FILL		Black to dark gray SAND with some silt, embedded little angular fine to coarse gravel, wet.		Grout: 0-117 ft bgs
7			WET	FILL				
8			WET	FILL				
9			WET	FILL				
10	6 / 10	1.2	WET	FILL		Black to dark gray SAND with some silt, embedded little angular fine to coarse gravel, wet.		2-inch Schedule 40 PVC riser: 0-119.5 ft bgs
11			WET	FILL				
12			WET	FILL				
13			WET	FILL				
14	6 / 10	1.2	DAMP	OH		Mostly brown fibers embedded in black organic CLAY, strong odor (meadow mat), damp.		
15			DAMP	ML		Gray SILT with few brown fibers, damp.		
16			DAMP	ML		Gray SILT with few brown fibers, damp.		
17			DAMP	ML		Gray SILT with few brown fibers, damp.		
18	6 / 10	1.2	DAMP	CL-ML		Brown (10YR 5/3) to gray (10YR 5/1) layers (varves), CLAY, SILT and fine SAND, damp.		
19			DAMP	CL-ML		Brown (10YR 5/3) to gray (10YR 5/1) layers (varves), CLAY, SILT and fine SAND, damp.		

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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 12.87 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611340.1
Date Started Drilling: 6/25/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 682895.5
Date Finished Drilling: 6/29/2020	Core Size: 3 in	Boring Total Depth: 125 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 11.0 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks				
21	5 / 10	Varies	WET	ML		Reddish brown to gray clayey SILT, medium density, wet.						
22			WET	SP		Reddish brown poorly graded SAND, medium sand, few coarse sand, few silt, few fine to coarse subrounded to subangular gravel, 1-inch thick clay lens at 21.8 ft bgs, wet.		21.5 ft: 5-10% fines (silt/clay)				
23			WET	SP		Reddish brown poorly graded SAND, medium sand, trace coarse sand, trace silt, wet.		23 ft: 1-5% fines (silt/clay)				
24												
25												
26	5.5 / 10	Varies	WET	SP		Reddish brown poorly graded SAND with few silt, medium sand, trace coarse sand, loose to medium density, wet.			25 ft: 10% fines (silt/clay)			
27												
28												
29												
30												
31	5.5 / 10	Varies	WET	SP		Reddish brown poorly graded SAND with few silt, medium sand, trace coarse sand, wet.						
32								WET	SP		Reddish brown poorly graded SAND with few silt, fine sand, few medium sand, wet. MGP odor and sheen on soils from 31.5 ft bgs, soil stained to dark brown (7.5YR 3/2).	31 ft: 10% fines (silt/clay)
33								WET	SP		Reddish brown poorly graded SAND with few silt, fine sand, little medium sand, wet.	
34												
35												
36	5.5 / 10	Varies	WET	SP		Reddish brown (5YR 4/4) SAND with little silt, wet. Yellow tinge on soil surface after drying.						
37												
38												
39			WET	SP				39 ft: 20% fines (silt/clay)				

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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 12.87 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611340.1
Date Started Drilling: 6/25/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 682895.5
Date Finished Drilling: 6/29/2020	Core Size: 3 in	Boring Total Depth: 125 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 11.0 ft NAVD88

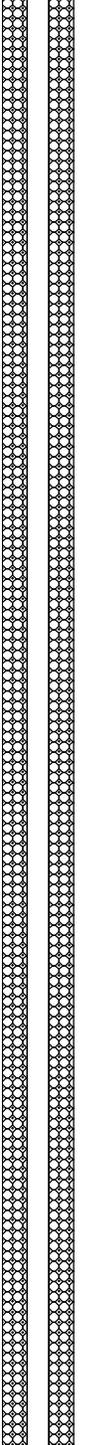
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks								
41	5 / 10	0	WET	SP		Reddish brown poorly graded SAND with little silt, fine sand, few medium sand, trace coarse sand, loose, wet. Yellow groundwater observed at 40 ft bgs.		41 ft: 20% fines (silt/clay)								
42						WET		SP/ML		Reddish brown poorly graded SAND with little silt, grades into mostly silt, loose to medium dense, wet.						
43										WET	SP		Reddish brown poorly graded SAND with few silt, fine to medium sand, wet.			
44													WET	SP		Reddish brown poorly graded SAND with few silt, medium sand, wet. Yellow tinge on soils in 40-50 ft run after drying.
45																WET
46	WET	ML		Reddish brown sandy SILT, yellow groundwater, wet.												
47				WET	CL/ML		Reddish brown and gray lean CLAY, varves consist of contorted laminae, CLAY and SILT, medium stiff, damp.									
48							53.5 ft: 30% fines (silt/clay)									
49	6 / 10	0	DAMP	CL/ML												
50																
51																
52																
53																
54																
55																
56																
57																
58																
59																

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Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611340.1
Date Started Drilling: 6/25/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 682895.5
Date Finished Drilling: 6/29/2020	Core Size: 3 in	Boring Total Depth: 125 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 11.0 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
61	8.5 / 10	0	WET	CL		Reddish brown sandy CLAY, soft to firm, wet.		
62						Reddish brown CLAY, varves and laminae, firm, wet.		
63			WET	CL				
64								
65								
66								
67						Gray and Reddish brown CLAY and SILT, laminae, varves, firm, wet.		
68			WET	CL				
69								
70								
71	8 / 10	0	WET	CL		Reddish brown lean CLAY, wet.		
72								
73			WET	ML-CL		Reddish brown and gray interbedded SILT and CLAY varves (gray clay varves are generally 1/4-inch thick), with fine sand laminae, one layer up to 1 inch thick, medium soft, wet.		
74								
75			WET	ML		Reddish brown SILT with few interbedded gray clay varves, wet.		
76								
77			WET	ML		Reddish brown SILT, wet.		
78								
79			WET	CL		Reddish brown lean CLAY with little fine sand, wet.		

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Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 12.87 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611340.1
Date Started Drilling: 6/25/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 682895.5
Date Finished Drilling: 6/29/2020	Core Size: 3 in	Boring Total Depth: 125 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 11.0 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
81	7.5 / 10	0	WET	ML		Reddish brown SILT, soft, wet.		
82			WET	ML		Reddish brown SILT, medium dense, wet.		
83			WET	ML		Sandy SILT with fine to coarse gravel (up to 3 inches in diameter), medium dense, wet.		
84								
85			WET	ML		Reddish brown SILT, medium dense, wet.		
86			WET	SP		Reddish brown SAND with little silt, fine sand, medium dense, wet.		
87			WET	SP		Reddish brown poorly graded SAND, fine to medium sand, medium dense, wet.		
88	WET	SP		Reddish brown poorly graded SAND, fine sand, medium dense, wet.				
89								
90								
91								
92	6.5 / 10	0	WET	SP		Reddish brown poorly graded SAND with few silt, fine sand, one thin layer of medium sand, wet.		92 ft: 10% fines (silt/clay)
93			WET	SP		Reddish brown poorly graded SAND with few silt, fine sand, wet. Unidentifiable odor at 91 ft bgs (PID = 9 ppm).		
94			WET	SP		Reddish brown poorly graded SAND with few silt, fine sand, trace coarse sand, trace gravel, wet.		
95			DAMP TO DRY	ML/GM		Gray sandy SILT, fine sand, some fine to coarse gravel (diameter up to 1/4-inch), very dense, damp to dry (TILL).		
96								
97								
98								
99								

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Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611340.1
Date Started Drilling: 6/25/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 682895.5
Date Finished Drilling: 6/29/2020	Core Size: 3 in	Boring Total Depth: 125 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 11.0 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
101	4.5 / 5	0	DAMP	SM		Pinkish gray (7.5YR 6/1) silty SAND, fine sand, few silt, few fine to coarse gravel, very dense, damp (TILL).		
102			DAMP	SM/SC		Gray silty/clayey SAND, fine sand, subangular fine to coarse gravel, very dense, damp (TILL).		
103			DRY TO DAMP	GW		Gray powder (pulverized rock) with some subangular and subrounded fine to coarse gravel, loose, dry to damp (TILL).		
104			DRY TO DAMP	GM		Angular gray rock pieces with some fine sandy SILT, loose, dry to damp (TILL).		
105			DRY TO DAMP	ML		Gray sandy SILT, fine sand with little embedded subangular fine to coarse gravel, very dense, dry to damp (TILL).		
106	4 / 5	0	DAMP	GP-GM		Gray sandy SILT, interbedded with large gravel, very dense, damp. Solid core sections of till (sizes of up to 2 inch, 3 inch and 6 inch in length) (TILL).		
107			DAMP	GW		Gray powder (pulverized rock) with fine to coarse GRAVEL (up to 3 inches in diameter), loose, damp (TILL).		
108			DAMP	ML/SM		Very dark grayish brown (10YR 4/3) sandy SILT with subrounded to subangular fine to coarse gravel, very dense, damp (TILL).		
109	4 / 5	0	WET	GW		Black fine to coarse GRAVEL, little silt, loose, wet (TILL).		
111			WET	CL		Gray sandy CLAY with little fine to coarse gravel, loose, wet.		
112			DAMP	CL		Gray sandy CLAY with few subrounded coarse gravel, very hard, dense, damp (TILL).		
113						Gray subrounded coarse GRAVEL, one large gravel piece (1.5 inch in diameter), little silt, loose, damp (TILL).		
114			DAMP	GP		Gray coarse SAND, fine to coarse gravel, little silt or clay, loose, wet (TILL).		
116	6 / 10	0	WET	SP		Fine SAND with some silt, few medium to coarse rock pieces, loose, soft, wet.	116 ft: 35% fines (silt/clay)	
117			WET	SM		Reddish gray (5YR 5/2) SAND with silt, dense, wet (TILL).	Bentonite seal: 117-119 ft bgs	
118			WET	ML		Reddish brown (5YR 5/3) sandy SILT, trace coarse sand, trace gravel, medium stiff, wet.	118 ft: 75% fines (silt/clay)	
119			DAMP	CL		Gray sandy CLAY, some fine to coarse rock pieces, very dense, damp (TILL).	#0 Filter sand: 119-122 ft bgs	
			NA	BEDROCK		Gray bedrock (Stockton Formation), weathered, wet.		

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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 12.87 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611340.1
Date Started Drilling: 6/25/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 682895.5
Date Finished Drilling: 6/29/2020	Core Size: 3 in	Boring Total Depth: 125 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 11.0 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
121						End of boring at 125 ft bgs.		2-inch Schedule 40 PVC screen: 119.5-121.5 ft bgs Bentonite seal: 122-125 ft bgs
122	6 / 10	0	NA	BEDROCK				
123								
124								
125								

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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 10.20 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611340.1
Date Started Drilling: 1/23/2024	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 682895.6
Date Finished Drilling: 1/29/2024	Core Size: 6 inches	Boring Total Depth: 125 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 10.6 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1-5	5 / 5	0	moist	FILL		Soft dig to 5 ft bgs Poorly graded sand with gravel, medium, angular, 35-45% coarse gravel, Grey gravel with tan/brown sand (clean fill) [FILL] - 10YR 5/2 (grayish brown), moist, loose - no odor, no staining	Annular Seal (Bentonite Cement Grout) (0-110 ft bgs)	
5-9	2.5 / 5	0.2	moist	FILL		Poorly graded sand with gravel, fine, angular, 35-45% coarse gravel, Grey staining, faint odor [FILL] - 10YR 4/1 (dark gray), moist, loose - hydrocarbon odor, hydrocarbon staining	Riser (Schedule 40 PVC) (0-115 ft bgs)	
9-13			moist	CL		Lean clay (CL), 20-30% silt, Trace gravel, faint odor [NATIVE] - 5YR 5/4 (reddish brown), moist, dense - hydrocarbon odor, no staining	Outer Casing (10-inch Steel) (0-60 ft bgs)	
13-19	6 / 10	2.8	moist	PT		Peat, Wood fibers throughout, strong swamp odor. Meadow mat [NATIVE] - 10YR 3/2 (very dark grayish brown), moist, very dense - peaty odor, no staining	Inner Casing (6-inch Steel) (0-115 ft bgs)	

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Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 10.20 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611340.1
Date Started Drilling: 1/23/2024	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 682895.6
Date Finished Drilling: 1/29/2024	Core Size: 6 inches	Boring Total Depth: 125 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 10.6 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
21	5 / 10	0	moist	CL		Sandy lean clay (CL), 35-45% fine to medium sand Trace silt. Faint odor [NATIVE] - 10YR 3/2 (very dark grayish brown), moist, dense - hydrocarbon odor, hydrocarbon staining		
22			moist	SC		Clayey sand (SC), fine to medium, angular, 35-45% clay, Sandy clay, moist [NATIVE] - 5YR 4/4 (reddish brown / moderate brown), moist, medium dense - no odor, no staining		
23			moist	SW		Well-graded sand (SW), fine to coarse, subangular, Trace silt and pebbles [NATIVE] - 2.5YR 5/3 (reddish brown), moist, loose - hydrocarbon odor, no staining		
24			moist	SP		Poorly graded sand (SP), medium to coarse, angular, No fines, trace pebbles [NATIVE] - 2.5YR 4/3 (reddish brown), moist, loose - no odor, no staining		
25	5.5 / 10	0	moist	SP		Poorly graded sand (SP), fine, angular, <10% silt, DNAPL at 38 ft bgs. Very strong odor. [NATIVE] - 2.5YR 5/4 (reddish brown), moist, loose - hydrocarbon odor, DNAPL		
26			moist	SP				
27			moist	SP				
28			moist	SP				
29								
30								
31								
32								
33								
34								
35								
36								
37								
38								
39								

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Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 10.20 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611340.1
Date Started Drilling: 1/23/2024	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 682895.6
Date Finished Drilling: 1/29/2024	Core Size: 6 inches	Boring Total Depth: 125 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 10.6 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
41	5 / 10	0	moist	SP		<p>Poorly graded sand with silt (SW-SM), fine, angular, 5-15% silt, Strong odor, sheen at 41' [NATIVE]</p> <ul style="list-style-type: none"> - 10R 6/6 (light red / moderate reddish orange), wet, loose - hydrocarbon odor, hydrocarbon staining <p>Silt with sand (ML), 20-30% sand [NATIVE]</p> <ul style="list-style-type: none"> - 10R 6/6 (light red / moderate reddish orange), wet, loose - no odor, no staining <p>Sandy silt (ML), 30-40% fine sand. Varve features. [NATIVE]</p> <ul style="list-style-type: none"> - 10R 6/6 (light red / moderate reddish orange), moist, loose - no odor, no staining 		
42								
43								
44								
45								
46	6 / 10	0	wet	SW-SM				
47			wet	ML				
48								
49								
50								
51			moist	ML				
52								
53								
54								
55								
56						<p>Fat clay (CH), 20-30% silt, wet, [NATIVE] [Transition Zone]</p> <ul style="list-style-type: none"> - 10YR 7/4 (very pale brown / grayish orange), wet, very dense - no odor, no staining - 10-inch steel casing set to 60 ft bgs 		
57								
58	wet	CH						
59								

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Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 10.20 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611340.1
Date Started Drilling: 1/23/2024	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 682895.6
Date Finished Drilling: 1/29/2024	Core Size: 6 inches	Boring Total Depth: 125 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 10.6 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
61-65	8.5 / 10	0	wet	CH				
66-67			wet	CL		Lean clay with sand (CL), 20-30% fine sand [NATIVE] [Transition Zone] - 10YR 5/2 (grayish brown), wet, medium dense - no odor, no staining		
67-68			wet	CH		Fat clay (CH), 5-15% silt [NATIVE] [Transition Zone] - 10YR 5/2 (grayish brown), wet - no odor, no staining		
68-70			wet	CLS		Sandy lean clay (CL), 35-45% fine sand Trace silt [NATIVE] [Transition Zone] - 10R 3/4 (dusky red / dark reddish brown), wet, medium dense - no odor, no staining		
71-72			wet	CH		Fat clay (CH), <10% silt [NATIVE] [Transition Zone] - 10R 3/4 (dusky red / dark reddish brown), wet, very dense - no odor, no staining		
73-75	8 / 10	0	wet	CLS		Sandy lean clay (CL), 35-45% fine sand Trace silt. Interbedded sand lens [NATIVE] [Transition Zone] - 10R 3/4 (dusky red / dark reddish brown), wet, dense - no odor, no staining		
75-77			moist	CH		Fat clay (CH), <10% silt, Trace fine sand at 77' and 79' [NATIVE] [Transition Zone] - 10YR 5/2 (grayish brown), moist, very dense - no odor, no staining		
78-79			moist	CL		Lean clay with sand (CL), 20-30% fine sand 5-15% silt [NATIVE] [Transition Zone] - 10R 3/4 (dusky red / dark reddish brown), moist, medium dense - no odor, no staining		

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Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 10.6 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
81	7.5 / 10	0	moist	CL				
82			wet	ML		Silt with sand (ML), 20-30% fine sand Very fine sand [NATIVE] - 10YR 4/3 (brown), wet, very soft - no odor, no staining		
83								
84			wet	CH		Fat clay with sand (CH), 20-30% fine sand Trace silt [NATIVE] - 10R 3/4 (dusky red / dark reddish brown), wet, dense - no odor, no staining		
85			moist	SC		Clayey sand (SC), fine to coarse, angular, 20-30% clay [NATIVE] - 10YR 3/3 (dark brown), moist, loose - no odor, no staining		
86			moist	SW-SC		Well-graded sand with clay and gravel (SW-SC), fine to coarse, angular, 20-30% coarse gravel and cobbles, 5-15% clay [NATIVE] - 10R 4/6 (red / moderate reddish brown), moist, medium dense - no odor, no staining		
87								
88								
89								
90								
91	6.5 / 10	0	moist	SP		Poorly graded sand (SP), fine, angular, <10% silt [NATIVE] - 10R 6/6 (light red / moderate reddish orange), moist, loose - no odor, no staining		
92								
93			moist	SW-SM		Poorly graded sand with silt and gravel (SW-SM), fine to coarse, angular, 35-45% cobbles and fine to coarse gravel, 5-15% silt, Increasing gravel/ cobbles with depth. Cobbles consist of angular to sub angular red sandstone and greywacke [NATIVE] [Basal Till] - 10R 4/6 (red / moderate reddish brown), moist - no odor, no staining		
94								
95								
96								
97								
98								
99								

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Comments:

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Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 10.6 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
101-104	4.5 / 5	0	moist	SW-SM				
104-110	4 / 5	0	moist	GM		Silty gravel with sand (GM), fine to coarse, angular, 35-45% silt and fine to coarse sand Abundant black angular rock fragments, mixed with sand and pebbles [NATIVE] [Basal Till] - 10YR 4/1 (dark gray), moist, hard - no odor, no staining		
110-115	4 / 5	0					Annular Seal (Bentonite Chips) (110-112 ft bgs) Sand Pack (#00 Sand) (112-113 ft bgs) Sand Pack (#0 Sand) (113-119 ft bgs)	
115-117			moist	BEDROCK		Bedrock (Stockton Formation), weathered. Light to moderate gray, medium grained sandstone. Calcareous mineralization vein (fizzed during HCl test) noted at 114.5 to 115'. Weathering decreases with depth. [NATIVE] - 10YR 4/2 (dark grayish brown / dark yellowish brown), moist, very hard - no odor, no staining	SCREEN (Schedule 40 PVC) (115-119 ft bgs)	
117-119	4 / 10	0	wet	BEDROCK		- 6-inch steel casing set to 115 ft bgs Bedrock (Stockton Formation), weathered. Core crushed during drilling processes. Very dark gray siltstone with sporadic white veins noted from 117 to 118.. Weathering decreases with depth [NATIVE] - 10YR 3/1 (very dark gray), wet, very hard - no odor, no staining		Borehole filled with rock debris (119-125 ft bgs)

PPG WITH WELL CONSTRUCTION - - 5/13/24 15:41

Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSNAD83 = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 10.20 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611340.1
Date Started Drilling: 1/23/2024	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 682895.6
Date Finished Drilling: 1/29/2024	Core Size: 6 inches	Boring Total Depth: 125 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 10.6 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
121-125	4 / 10	0		NR		No recovery, core fell to bottom of hole and could not be retrieved. Hole filled with rock fragments. Difficulty clearing and maintaining open hole. Cleared hole to 119 ft bgs and set well.		

PPG WITH WELL CONSTRUCTION - - 5/13/24 15:41

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 17.12 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610873.2
Date Started Drilling: 11/12/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683470.02
Date Finished Drilling: 11/29/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 135 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 14.3 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1	0 / 5	0	DRY TO MOIST	FILL		Soft dig to 5 ft bgs, brownish gray well graded GRAVEL, some silt, fine to coarse sand (DGA), very dense, dry to moist.	8-inch steel protective casing (stick up) Riser set in grout	
2			WET	FILL		Brownish gray fine to coarse GRAVEL, trace to little silty sand (DGA), dense, wet.		
3	3 / 5	0	WET	FILL		Brownish gray fine to coarse GRAVEL, trace to little silty sand (DGA), dense, wet.	Grout: 0-108 ft bgs 2-inch PVC casing: 0-110 ft bgs 6-inch steel threaded casing: 0-70 ft bgs	
4			WET	FILL		Gray silty fine to medium SAND, little fine to medium gravel, dense, wet.		
5			WET	FILL		Gray silty fine to medium SAND, little fine to medium gravel, dense, wet.		
6			WET	FILL		Gray silty fine to medium SAND, little fine to medium gravel, dense, wet.		
7	3 / 5	0	WET	FILL		Gray silty fine to medium SAND, little fine to medium gravel, dense, wet.		
8			WET	FILL		Gray silty fine to medium SAND, little fine to medium gravel, dense, wet.		
9			WET	FILL		Gray silty fine to medium SAND, little fine to medium gravel, dense, wet.		
10	5 / 5	0	WET	CL		Gray CLAY, some silt, little fine sand, trace fine to coarse gravel, soft, wet.		
11			WET	CL		Gray CLAY, some silt, little fine sand, trace fine to coarse gravel, soft, wet.		
12	3 / 5	0	DAMP	PT		Gray CLAY, trace silt, organic, fibrous (20% fibers), medium stiff, damp.		
13			WET	SW		Gray fine to coarse SAND, trace silt, loose, wet.		
14	5 / 5	0	WET	PT		Gray CLAY, trace silt, organic, fibrous (50%), medium stiff, wet.		
15			WET	CL		Gray CLAY, some silt, little fine sand, trace fine to coarse gravel, soft, wet.		
16	3 / 5	0	WET	CL		Gray CLAY, some silt, little fine sand, trace fine to coarse gravel, soft, wet.		
17			WET	SP		Gray to black fine SAND, trace silt, loose, odorous, poorly sorted, wet.		
18	4 / 5	0	WET	SP		Gray to black fine SAND, trace silt, loose, odorous, poorly sorted, wet.		
19			WET	SP		Reddish brown fine SAND, trace silt, loose, well sorted, wet.		
20	5 / 5	0	WET	SP		Reddish brown fine SAND, trace silt, loose, well sorted, wet.		
21			WET	SP		Reddish brown fine SAND, trace silt, loose, well sorted, wet.		

PPG WITH WELL CONSTRUCTION - - 3/15/22 14:04

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 17.12 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610873.2
Date Started Drilling: 11/12/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683470.02
Date Finished Drilling: 11/29/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 135 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 14.3 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
34	5 / 5	0	WET	SP				
35	5 / 5	0	WET	SP		Reddish brown fine SAND, trace silt, loose, well sorted, wet.		
36			DAMP	CL		Reddish brown CLAY, trace silt, trace fine sand, stiff, damp.		
37	4.5 / 5	0	DAMP	CL		Reddish brown CLAY, trace silt, trace fine sand, stiff, damp.		
38						Reddish brown fine SAND, trace silt, very loose, well sorted, wet. Yellow coloration to water.		
39	5 / 5	0	WET	SP		Reddish brown fine SAND, trace silt, very loose, poorly graded, wet. Yellow coloration to water.		
40			WET	SM		Reddish brown fine to medium SAND, some silt, little fine to medium subrounded gravel, very dense, wet (Basal Till).		
41	4 / 5	0	WET	SM		Reddish brown fine to medium SAND, some silt, little fine to coarse subangular to subrounded gravel, very dense, wet (Basal Till).		
42			WET	SM		Reddish brown fine to medium SAND, some silt, little fine to coarse subangular to subrounded gravel, very dense, wet (Basal Till).		
43	5 / 5	0	WET	SM		Reddish brown fine to medium SAND, some silt, little fine to coarse subangular to subrounded gravel, very dense, wet (Basal Till).		
44			WET	BEDROCK		Gray diabase, highly weathered, friable, medium grain size, very weak rock, wet.		
45	5 / 5	0	WET	BEDROCK		Gray diabase, highly weathered (rock in clay matrix),		

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Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 17.12 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610873.2
Date Started Drilling: 11/12/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683470.02
Date Finished Drilling: 11/29/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 135 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 14.3 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
67-68	5 / 5	0	WET	BEDROCK		friable, medium grain size, very weak rock, wet.		Bottom of 10-inch borehole at 70 ft bgs 5 7/8-inch diameter borehole in bedrock from 70 to 135 ft bgs
68-69								
69-70			NA	BEDROCK		Gray diabase, moderately weathered, medium grain size, very medium strong rock.		
70-71						Gray diabase, moderately weathered to highly weathered, medium grain size, weak rock, close fracture spacing. 50 degree fracture at approximately 71.5 to 71.7 ft bgs, calcite coated, fracture at approximately 72 to 72.5 ft bgs, broken clay disintegrated,		
71-72	4.67 / 5	0	NA	BEDROCK				
72-73								
73-74								
74-75								
75-76	4.17 / 5	0	NA	BEDROCK		Grey diabase, moderately weathered to highly weathered, medium grained, weak to very weak rock, close to very close fracture spacing, broken rock at approximately 75 to 77 ft bgs, 0 degree fracture at approximately 77.8 to 77.9 ft bgs, 70 degree fracture		
76-77								
77-78								
78-79								
79-80								
80-81	4.83 / 5	0	NA	BEDROCK		Gray diabase, moderately weathered, medium grained, weak to very weak rock, close to very close fracture spacing, 70 degree fracture at approximately 80.6 to 80.8 ft bgs, 70 degree fracture at approximately 81.2 to 81.3 ft bgs, 60 degree fracture at appro		
81-82								
82-83								
83-84								
84-85								
85-86	0.08 / 5	0	NA	BEDROCK		Gray diabase, moderately weathered to highly weathered, medium grained, weak to very weak rock, highly fractured, washed out rock at approximately 85 to 88 ft bgs, broken rock at approximately 88 to 90 ft bgs. Recovery = 0.02%; RQD = 0% (very poor rock).		
86-87								
87-88								
88-89								
89-90								
90-91								
91-92	1 / 7	0	NA	BEDROCK		Gray diabase, highly weathered, medium grained, weak to very weak rock, highly fractured, washed out at approximately 90 to 96 ft bgs, broken rock at approximately 96 to 97 ft bgs. Recovery = 14%; RQD = 0% (very poor rock).		
92-93								
93-94								
94-95								
95-96								
96-97								
97-98	2 / 3	0	NA	BEDROCK		Gray diabase, moderately to highly weathered, medium grained, weak to very weak rock, highly fractured, washed out at approximately 97 to 98 ft bgs, broken rock		

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 RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 17.12 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610873.2
Date Started Drilling: 11/12/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683470.02
Date Finished Drilling: 11/29/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 135 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 14.3 ft NAVD88

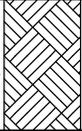
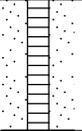
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks	
100	2 / 3	0	NA	BEDROCK		at approximately 98 to 100 ft bgs. Recovery = 67%; RQD = 0% (very poor rock).			
101-103	2 / 5	0	NA	BEDROCK		Gray diabase, moderately to highly weathered, medium grained, weak to very weak rock, highly fractured, washed out at approximately 100 to 103 ft bgs, broken rock at approximately 103 to 105 ft bgs. Recovery = 40%; RQD = 0% (very poor rock).			
104-106	3.5 / 5	0	NA	BEDROCK		Gray diabase, highly weathered, medium grained, highly fractured, pitted, discolored, washed out at approximately 105 to 106.5 ft bgs, broken rock at approximately 106.5 to 110 ft bgs. Recovery = 30%; RQD = 0% (very poor rock).		#00 Filter Sand: 108-109 ft bgs #0 Filter Sand: 109-135 ft bgs 2-inch diameter, 0.010-inch slot PVC screen 110-135 ft bgs	
107-110						Borehole drilled without soil/rock sampling from 109 to 135 ft bgs. Borehole collapsed several times. 2" PVC well screen set 110-135' bgs. Diabase based on borehole geophysical logging.			
111-113						NA			
114-117				BEDROCK		Lockatong Formation based on borehole geophysical logging.			
118-121									
122-125									NA
126-131									

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Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 17.12 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610873.2
Date Started Drilling: 11/12/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683470.02
Date Finished Drilling: 11/29/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 135 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 14.3 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
133			NA	BEDROCK				
134								
135								

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Comments:

PPG WITH WELL CONSTRUCTION - - 3/15/22 14:04

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.04 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSNAD83) x: 611139
Date Started Drilling: 6/15/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSNAD83) y: 683749.8
Date Finished Drilling: 6/16/2020	Core Size: 3 in	Boring Total Depth: 80 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 13.0 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1-5	5 / 5	0	DAMP TO DRY	FILL		Soft dig to 5 ft bgs. Gray fine to coarse GRAVEL, black fabric/black plastic encountered several inches below surface. Dark grayish brown (10YR 4/2) micaceous sand with little silt, fine sand, few fine to coarse subrounded gravel, loose, damp to dry (FILL).		Riser set in grout
5-10	5 / 5	0	WET	FILL		Grayish brown (10YR 5/2) silty SAND, few fine to coarse gravel, loose, with some medium dense pieces, wet (FILL).		Grout: 0-66.5 ft bgs
10-11	8.5 / 10	0	WET	FILL		Grayish brown (10YR 5/2) micaceous silty SAND, few fine to coarse gravel, loose to medium dense, wet (FILL).		2-inch Schedule 40 PVC riser: 0-69 ft bgs
11-12			WET	OH		Black organic CLAY with brown fibers, soft, wet.		
12-13			WET	OH		Black organic CLAY with brown fibers, decreasing amount of brown fibers, wet.		
13-14			WET	OH		Very dark gray (10YR 3/2) organic CLAY with increasing amount brown fibrous material, wet.		
14-15			WET	OH		Very dark gray (10YR 3/2) organic CLAY with few brown fibers, wet.		
15-16			WET	ML		Dark grayish brown (5YR 4/2) sandy SILT, wet.		
16-19			WET	SM		Dark grayish brown to dark reddish gray (5YR 4/2) silty SAND, few fine to coarse gravel, wet.		

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.04 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611139
Date Started Drilling: 6/15/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683749.8
Date Finished Drilling: 6/16/2020	Core Size: 3 in	Boring Total Depth: 80 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 13.0 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks	
21	6 / 10	0	WET	SP		Dark reddish brown (2.5YR 3/3) poorly graded SAND with little silt, subangular medium sand, trace coarse sand, loose, wet. Pale yellow groundwater observed.		20 ft: 15% fines (silt/clay)	
22			WET	SP		Reddish brown (2.5YR 4/3) poorly graded SAND with little silt, fine sand, wet.		21 ft: 20% fines (silt/clay)	
23			WET	SP		Dark reddish brown (2.5YR 3/3) poorly graded SAND with little silt, wet. Pale yellow groundwater observed at 22.0 ft.		22 ft: 15% fines (silt/clay) 22.5 ft: 40% fines (silt/clay)	
24			WET	SP		Dark reddish brown (5YR 3/3) poorly graded SAND with some silt, fine sand, loose, wet.		Dark brown (7.5YR 3/3) and gray SILT and CLAY, laminated silt and clay layers, fine sand layers, easily breaks apart along horizontal laminae, soft to medium stiff, damp.	24.5 ft: 60% fines (silt/clay)
25			WET	ML					
26					DAMP	ML/CL			
31	6 / 10	0	WET	ML		Reddish brown (5YR 4/4) SILT with sand, fine sand, loose, wet.		31 ft: 55% fines (silt/clay)	
32			WET	ML		Reddish brown (5YR 4/4) SILT with sand, fine sand, loose, wet.			
33			WET	ML		Reddish brown (2.5YR 5/3) SILT with trace fine sand, wet.		33 ft: 55% fines (silt/clay)	
34									
35						35 ft: 95% fines (silt/clay)			
36			WET	ML		Reddish brown (2.5YR 5/3) SILT with faint varves, medium stiff, wet.			
37									
38			WET	ML					
39									

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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.04 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611139
Date Started Drilling: 6/15/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683749.8
Date Finished Drilling: 6/16/2020	Core Size: 3 in	Boring Total Depth: 80 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 13.0 ft NAVD88

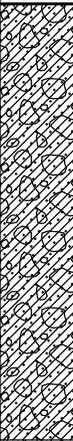
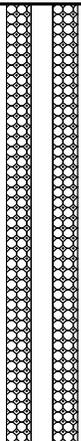
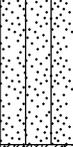
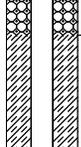
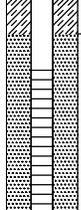
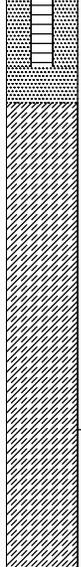
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
41	5.2 / 10	0	WET	SP		Reddish brown (5YR 4/3) poorly graded SAND, fine sand, loose, wet.		
			WET	SP		Reddish brown (5YR 4/3) poorly graded SAND with few silt, wet.		41 ft: 10% fines (silt/clay)
42	5.2 / 10	0	WET	SW		Reddish brown (5YR 4/3) well graded SAND with few silt, medium sand, few fine sand, few coarse sand, little fine to coarse gravel (up to 2" across), grades into sand with little silt at 45 ft bgs, wet.		
43								
44								
45	5.2 / 10	0	WET	SP		Reddish brown (5YR 4/3) poorly graded SAND with little silt, medium sand, few coarse sand, loose, wet.		45 ft: 20% fines (silt/clay)
46								
47	5.2 / 10	0	DRY TO DAMP	SM		Reddish brown (2.5YR 4/4) widely graded SAND with some silt, fine to angular coarse sand, few embedded fine to coarse gravel, very dense, dry to damp (TILL).		46.5 ft: 30% fines (silt/clay)
48								
49								
50	5.7 / 10	0	DAMP	SM		Reddish brown (5YR 4/4) SAND with some silt, trace coarse sand, few fine to coarse subrounded to subangular gravel embedded in matrix, compact (at 50 ft), dense to very dense, damp (TILL).		50 ft: 30% fines (silt/clay)
51								
52	5.7 / 10	0	DAMP	SM		Reddish brown (5YR 4/4) SAND with some silt, trace coarse sand, few fine to coarse subrounded to subangular gravel embedded in matrix, compact (at 50 ft), dense to very dense, damp (TILL).		
53								
54								
55	5.7 / 10	0	DAMP	SM		Reddish brown (5YR 4/4) SAND with some silt, trace coarse sand, few fine to coarse subrounded to subangular gravel embedded in matrix, compact (at 50 ft), dense to very dense, damp (TILL).		
56								
57	5.7 / 10	0	DAMP	SM		Reddish brown (5YR 4/4) SAND with some silt, trace coarse sand, few fine to coarse subrounded to subangular gravel embedded in matrix, compact (at 50 ft), dense to very dense, damp (TILL).		
58								
59	5.7 / 10	0	DAMP	SM		Reddish brown (5YR 4/4) SAND with some silt, trace coarse sand, few fine to coarse subrounded to subangular gravel embedded in matrix, compact (at 50 ft), dense to very dense, damp (TILL).		

PPG WITH WELL CONSTRUCTION - - 8/26/20 21:46

Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.04 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611139
Date Started Drilling: 6/15/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683749.8
Date Finished Drilling: 6/16/2020	Core Size: 3 in	Boring Total Depth: 80 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 13.0 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
61-66	7.5 / 10	0	DAMP TO DRY	SW		Reddish brown (5YR 4/4) well graded SAND with little silt, fine to coarse sand, little subangular to subrounded fine to coarse gravel, very dense, damp to dry (TILL).		60 ft: 25% fines (silt/clay)
66-68			DAMP	SM		Reddish brown (5YR 4/4) poorly graded SAND with little silt, fine to medium sand, trace gravel, loose, damp.		Bentonite Seal: 66.5-68.5 ft bgs 67 ft: 25% fines (silt/clay)
68-70			DAMP	SM		Reddish brown (5YR 4/3) widely graded SAND with some silt, fine to coarse sand, few fine to coarse gravel embedded, very dense, damp (TILL).		#0 Filter sand: 68.5-73.5 ft bgs 69 ft: 30% fines (silt/clay)
70-73						Grey mudstone and siltstone, wet (Lockatong Formation). Weathered from 71-73 ft bgs, competent at 73 ft bgs. End of boring at 80 ft.		2-inch Schedule 40 PVC well screen: 69-73 ft bgs
73-79	4 / 10	0		BEDROCK				Bentonite Seal: 73.5-80 ft bgs

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: SGS	Top of PVC Elevation: 12.3 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611381.9
Date Started Drilling: 6/23/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683046
Date Finished Drilling: 6/24/2020	Core Size: 3 in	Boring Total Depth: 100 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 10.8 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1 - 5	5 / 5	0	DRY	FILL		Soft dig to 5 ft bgs, Gray poorly graded fine SAND with little silt, little fine to coarse gravel (DGA), dry (FILL).		Riser set in grout
5 - 10	2.5 / 5	0	WET	FILL		Black to dark gray DGA, poorly graded SAND with little silt, some fine to coarse subangular gravel, loose (except for one 4-inch medium dense section), wet (FILL).		Grout: 0-90.5 ft bgs
10 - 16	9 / 10		MOIST	FILL		Black (10YR 2/1) silty SAND, few to little subangular to subrounded gravel, loose to medium dense, moist (FILL).		2-inch Schedule 40 PVC riser: 0-93 ft bgs
16 - 17			MOIST	OH		Black (10YR 2/1) silty CLAY with some brown fibers, medium stiff, moist.		
17 - 18			MOIST	CL		Dark gray (10YR 4/1) silty CLAY with few brown fibers, few embedded fine subrounded gravel, medium stiff, moist.		
18 - 19			DAMP	CL		Dark gray (10YR 4/1) silty CLAY with few brown fibers, few embedded fine subrounded gravel, medium stiff, damp. MGP sheen observed on soils.		
19 - 19.5			WET TO MOIST	SP		Brown (7.5YR 5/2) poorly graded SAND, fine sand, wet to moist. MGP sheen observed on soils.		

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Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: SGS	Top of PVC Elevation: 12.3 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611381.9
Date Started Drilling: 6/23/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683046
Date Finished Drilling: 6/24/2020	Core Size: 3 in	Boring Total Depth: 100 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 10.8 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
21	6.5 / 10	65	WET	SP		Brown (7.5YR 5/2) poorly graded SAND with few silt, loose between 22.5-24.2 ft bgs, medium dense between 24.2-25.2 ft bgs, wet. MGP sheen on soils between 20-22.5 ft bgs.		
22								
23			MOIST	SP		Brown (7.5YR 5/2) poorly graded SAND with little silt, fine sand, loose to medium dense, moist.		
24								
25	5 / 10	0	WET	SP		Reddish brown (5YR 4/4) poorly graded SAND with little silt, wet. Pale yellow groundwater observed in core.		
26								
27			WET	SP		Reddish brown (5YR 4/4) poorly graded SAND, fine to medium sand, wet.		
28								
29	5 / 10	0	WET	SP		Reddish brown (5YR 4/4) poorly graded SAND, fine to medium sand, wet.		
30								
31			WET	SP				
32								
33	WET	SP						
34								
35	WET	SP						
36								
37	WET	SP						
38								
39	WET	SP						
40								

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Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: SGS	Top of PVC Elevation: 12.3 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611381.9
Date Started Drilling: 6/23/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683046
Date Finished Drilling: 6/24/2020	Core Size: 3 in	Boring Total Depth: 100 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 10.8 ft NAVD88

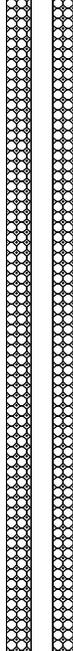
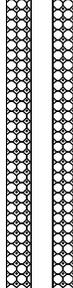
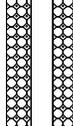
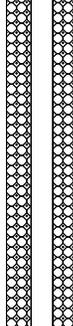
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
41	7.5 / 10	0	WET	SP		Reddish brown (5YR 4/4) poorly graded SAND with few silt, medium sand, trace coarse sand, trace subrounded fine to coarse gravel, wet. MGP sheen observed on soils.		41 ft: 10% fines (silt/clay)
42								
43								
44	7.5 / 10	0	WET	SP		Black stained poorly graded SAND with few silt, fine sand, wet.		
45								
46								
47	7.5 / 10	0	WET	SP		Reddish brown poorly graded SAND with few silt, medium sand, little fine sand, loose, wet. MGP sheen observed on soils.		51 ft: 10% fines (silt/clay)
48								
49								
50	8.8 / 10	7.1	MOIST	CL/ML		Dark reddish brown, gray and reddish brown (5YR 4/3) CLAY, SILT contorted laminae and varves, medium stiff, moist.		
51								
52								
53								
54	8.8 / 10	7.1	MOIST	CL/ML		Dark reddish brown, gray and reddish brown (5YR 4/3) CLAY, SILT contorted laminae and varves, medium stiff, moist.		
55								
56								
57								
58	8.8 / 10	7.1	MOIST	CL/ML		Dark reddish brown, gray and reddish brown (5YR 4/3) CLAY, SILT contorted laminae and varves, medium stiff, moist.		
59								

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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: SGS	Top of PVC Elevation: 12.3 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611381.9
Date Started Drilling: 6/23/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683046
Date Finished Drilling: 6/24/2020	Core Size: 3 in	Boring Total Depth: 100 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 10.8 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
61	7 / 10	0	WET	CL/ML/SP		Reddish brown and gray CLAY, SILT and fine SAND layers (up to 0.1' layers of fine sand), varves, medium stiff, wet.		
62								
63								
64								
65								
66	6.8 / 10	0	WET	ML		Reddish brown SILT, wet.		
67								
68								
69								
70								
71	6.8 / 10	0	WET	CL/ML		Reddish brown and gray CLAY and SILT varves, wet.		
72								
73								
74								
75								
76	6.8 / 10	0	WET	ML		Reddish brown clayey SILT, wet.		
77								
78								
79								
80								

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Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: SGS	Top of PVC Elevation: 12.3 ft NAVD88
Project Number: 60550261	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611381.9
Date Started Drilling: 6/23/2020	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683046
Date Finished Drilling: 6/24/2020	Core Size: 3 in	Boring Total Depth: 100 ft
Logged By: V. Thayer	Project Manager: Shannon Gleason	Depth to Water:
Physical Location: Site 114		Surface Elevation: 10.8 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks				
81	6 / 10	0	WET	SP		Reddish brown poorly graded SAND, few silt, mostly fine sand, wet.		81 ft: 10% fines (silt/clay)				
82			WET	SC		Reddish brown clayey SAND with little fine to coarse gravel, medium dense, wet.		83 ft: 40% fines (silt/clay)				
83			DAMP	SC		Gray clayey SAND with little embedded coarse subrounded gravel, very dense, damp (TILL).						
84	6 / 10	0	NA	SP		Reddish brown poorly graded SAND with few silt, fine sand.		90.5 ft: 10% fines (silt/clay)				
85									WET TO DAMP	GC/SC		Gray fine to coarse GRAVEL, with some clayey sand, very dense, wet from 92-92.5 ft bgs, damp from 92.5-93 ft bgs (TILL).
86									DAMP	BEDROCK		Gray bedrock (Stockton Formation), wet. Weathered from 93-96 ft bgs. Competent from 96-100 ft bgs. End of boring at 100 ft bgs.
87	6 / 10	0	DAMP	BEDROCK				Bentonite Seal: 90.5-92.5 ft bgs				
88									#0 Filter sand: 92.5-96.5 ft bgs			
89									2-inch Schedule 40 PVC well screen: 93-96 ft bgs			
90	6 / 10	0	DAMP	BEDROCK				Bentonite Seal: 96.5-100 ft bgs				
91												
92												

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments: Percentage of fines (silt/clay) shown are an estimated value based on a field-testing method.

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 16.2 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610941.2
Date Started Drilling: 11/3/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683423.4
Date Finished Drilling: 11/8/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 140 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1-2	0 / 5	0	DRY TO MOIST	FILL		Soft dig to 5 ft bgs, brown gray well graded GRAVEL, some silty sand, very dense (DGA), dry to moist.	8-inch steel protective casing (stick up) Riser set in grout	
2-4			WET	FILL		Gray fine to coarse GRAVEL, trace to little silty sand, dense (DGA), wet.		
4-5	1 / 5	0	WET	FILL		Gray fine to coarse SAND, little silt, trace cobbles, trace fine to coarse gravel, loose (DGA), wet.	Grout: 0-90 ft bgs 6-inch steel threaded casing: 0-90 ft bgs	
5-10								
10-15								
15-18	3 / 5	0	WET	FILL		Gray fine to coarse SAND, some silt, little fine to coarse angular gravel, loose to medium dense (DGA), wet.		
18-19								
19-20								
20-21	3 / 5	0	DAMP	PT		PEAT, fibrous, organic, 50% fibers, soft to medium stiff, damp.		
21-22			DAMP	CL		CLAY, organic, trace silt, medium stiff, damp Gray CLAY, trace silt, organic, medium stiff, damp.		
22-23			WET	SW		Reddish brown fine to coarse SAND, little fine to coarse, subrounded gravel, little silt, wet.		
23-24	4 / 5	0	WET	SM		Reddish brown fine SAND, some silt, poorly graded, trace gravel, loose, wet. Yellow coloration to water.		
24-25								
25-29	3 / 5	0	WET	ML		Reddish brown SILT, some fine to coarse sand, soft, wet.		
29-30								
30-31	3 / 5	0	WET	SM		Reddish brown fine to medium SAND, some silt, poorly graded, loose, wet. Yellow coloration to water.		
31-32								

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Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 16.2 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610941.2
Date Started Drilling: 11/3/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683423.4
Date Finished Drilling: 11/8/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 140 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
34	3 / 5	0	WET	SM				
35	4 / 5	0	WET	ML		Reddish brown SILT, some fine sand, soft, wet.		
36			WET	SM		Reddish brown fine to medium SAND, some silt, poorly graded, medium dense, wet. Yellow coloration to water.		
37			DAMP	CL		Reddish brown to gray CLAY, trace silt, medium stiff, damp.		
38	4 / 5	0	WET	SM		Reddish brown fine to medium SAND, some silt, poorly graded, medium dense, wet.		
39			DAMP	CL		Reddish brown CLAY, trace silt, medium stiff, damp.		
40	4 / 5	0	WET	ML		Reddish brown SILT, little fine sand, trace clay soft, wet.		
41			WET	ML		Reddish brown SILT, little fine sand, trace clay soft, wet.		
42			DAMP	CL		Reddish brown CLAY, trace silt, medium stiff, damp.		
43	4 / 5	0	WET	ML		Reddish brown SILT, little fine sand, trace clay soft, wet.		
44			WET	ML		Reddish brown SILT, little fine sand, trace clay soft, wet.		
45			DAMP	CL		Reddish brown CLAY, trace silt, medium stiff, wet.		
46	4 / 5	0	WET	SW		Reddish brown fine to coarse SAND, some fine to coarse angular gravel, little silt, poorly sorted (Basal Till), wet.		
47			WET	SW		Reddish brown fine to coarse SAND, some fine to coarse angular gravel, little silt, poorly sorted, dense (Basal Till), wet.		
48	4 / 5	0	WET	SP		Reddish Brown fine to medium SAND, trace silt, loose (Basal Till), wet. Yellow coloration to water.		
49			WET	SW		Reddish brown fine to coarse SAND, some fine to coarse angular gravel, little silt, poorly sorted, dense (Basal Till), wet.		
50			WET	SW		Reddish brown fine to coarse SAND, some fine to coarse subangular gravel, little silt, poorly sorted, dense (Basal Till), wet.		
51	4 / 5	0	WET	SW		Reddish brown fine to coarse SAND, some fine to coarse gravel, little silt, very dense (Basal Till), wet.		
52			WET	SW		Reddish brown fine to coarse SAND, some fine to coarse gravel, little silt, very dense (Basal Till), wet.		
53			WET	SW		Reddish brown fine to coarse SAND, some fine to coarse gravel, little silt, very dense (Basal Till), wet.		
54	3 / 5	0	WET	SW		Reddish brown fine to coarse SAND, some fine to coarse gravel, little silt, very dense (Basal Till), wet.		
55			WET	SW		Reddish brown fine to coarse SAND, some fine to coarse gravel, little silt, very dense (Basal Till), wet.		
56			WET	SW		Reddish brown fine to coarse SAND, some fine to coarse gravel, little silt, very dense (Basal Till), wet.		
57	4 / 5	0	WET	SW		Reddish brown fine to coarse SAND, some fine to coarse gravel, little silt, very dense (Basal Till), wet.		
58			WET	SW		Reddish brown fine to coarse SAND, some fine to coarse gravel, little silt, very dense (Basal Till), wet.		
59			WET	SW		Reddish brown fine to coarse SAND, some fine to coarse gravel, little silt, very dense (Basal Till), wet.		
60	4 / 5	0	WET	SW		Reddish brown fine to coarse SAND, some fine to coarse gravel, little silt, very dense (Basal Till), wet.		
61			WET	SW		Reddish brown fine to coarse SAND, some fine to coarse gravel, little silt, very dense (Basal Till), wet.		
62			WET	SW		Reddish brown fine to coarse SAND, some fine to coarse gravel, little silt, very dense (Basal Till), wet.		
63	4 / 5	0	WET	SW		Reddish brown fine to coarse SAND, some fine to coarse gravel, little silt, very dense (Basal Till), wet.		
64			WET	SW		Reddish brown fine to coarse SAND, some fine to coarse gravel, little silt, very dense (Basal Till), wet.		
65			WET	SW		Reddish brown fine to coarse SAND, some fine to coarse gravel, little silt, very dense (Basal Till), wet.		

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Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 16.2 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610941.2
Date Started Drilling: 11/3/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683423.4
Date Finished Drilling: 11/8/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 140 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

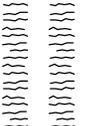
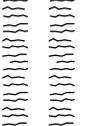
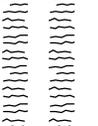
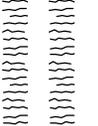
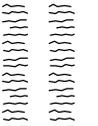
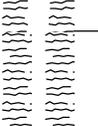
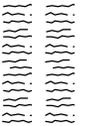
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
67-68	4 / 5	0	WET	SW		medium gravel, little silt, medium dense (Basal Till), wet. Reddish brown fine to coarse SAND, some fine to coarse subangular gravel, trace cobbles, trace silt, very dense (Basal Till), wet.		
69-70			WET	CL		Reddish brown CLAY, some silt, trace fine sand, medium stiff, wet.		
71-72	3 / 5	0	WET	SW		Reddish brown fine to coarse SAND, some fine to coarse subangular gravel, trace silt, trace cobbles, very dense (Basal Till) wet.		
73-74			WET	BEDROCK		Diabase boulder within Basal Till.		
75-76	4 / 5	0	WET	SM		Reddish brown fine to coarse SAND, little fine to coarse gravel, trace to little silt, very dense (Basal Till), wet.		
77-78			NA	BEDROCK		Gray mudstone (Argillite), highly weathered (rock in clay matrix), fine grained, laminated, weak rock (Lockatong formation).		
79-80			NA	BEDROCK		Gray mudstone (Argillite), highly weathered (rock in clay matrix), fine grained, laminated, strong rock (Lockatong formation).		
81-82	3.33 / 5	0	NA	BEDROCK		Gray mudstone (Argillite), unweathered, fine grained, laminated, strong rock, numerous vertical healed fractures, moderate fracture spacing (Lockatong formation). 80 degree calcite coated fracture at approximately 80.5 to 80.75 ft bgs, 40 degree calcite c		
83-84			NA	BEDROCK		Gray mudstone (Argillite), unweathered, pitted at approximately 85.6 to 87.6 ft bgs, laminated, strong rock, moderate fracture spacing, fine grained (Lockatong formation). 70 degree quartz coated fracture at approximately 85.0 to 85.6 ft bgs, 0 degree qua		
85-86	5 / 5	0	NA	BEDROCK		Gray mudstone (Argillite), unweathered, laminated, strong rock, very wide fracture spacing, fine grained, broken pieces at approximately 90-90.5 ft bgs, several mechanical breaks (Lockatong formation). Recovery = 100%; RQD = 88% (good rock).		
87-88	4.42 / 5	0	NA	BEDROCK		Gray mudstone (Argillite), unweathered, laminated, strong rock, very wide fracture spacing, fine grained, mechanical breaks only (Lockatong formation). Recovery = 100%; RQD = 100% (excellent rock).		
89-90			NA	BEDROCK				
91-92			NA	BEDROCK			6-inch open borehole in rock: 90-115 ft bgs	
93-94			NA	BEDROCK				
95-96			NA	BEDROCK				
97-98			NA	BEDROCK				

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 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
 RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 16.2 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610941.2
Date Started Drilling: 11/3/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683423.4
Date Finished Drilling: 11/8/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 140 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

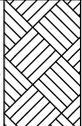
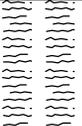
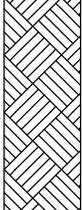
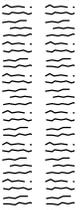
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
100	5 / 5	0	NA	BEDROCK				
101-103	5 / 5	0	NA	BEDROCK		Gray mudstone (Argillite), unweathered, 20% laminated, strong rock, very wide fracture spacing, fine grained, 20 degree fracture at approximately 101.8 to 102 ft bgs, numerous mechanical fractures (Lockatong formation). Recovery = 100%; RQD = 95% (excellent)		
104-110	4.92 / 5	0	NA	BEDROCK		Gray mudstone (Argillite), unweathered, 20% laminated, strong rock, very wide fracture spacing, fine grained (Lockatong formation), 20 degree fracture at approximately 105.7 to 105.8 ft bgs, 10 degree fracture at approximately 107.2 to 107.4 ft bgs, numerous		
111-115	4.17 / 5	0	NA	BEDROCK		Gray mudstone (Argillite), unweathered, 20% laminated, strong rock, very wide fracture spacing, fine grained, mechanical breaks only (Lockatong formation). Recovery = 97%; RQD = 97% (excellent rock).		
116-119	2.58 / 5	0	NA	BEDROCK		GRAY MUDSTONE (ARGILLITE), unweathered, 10-20 degree laminated, fine-grained strong rock, mechanical breaks throughout, vertical fractures at 116-116.5 ft bgs and 119-119.5 ft bgs. Lockatong Formation Recovery = 52%; RQD = 0% (very poor rock)		5-inch open borehole in rock: 115-140 ft bgs
120-124	5 / 5	0	NA	BEDROCK		Gray MUDSTONE (ARGILLITE), unweathered, 10-20 degree laminated, fine-grained strong rock, close to moderate fracture spacing, pyrite inclusions throughout, 60 degree fracture at 120.8 ft bgs, 80 degree fracture at 121.9-122.3 ft bgs, 20 degree fracture at 123.0 ft bgs, 30 degree fracture. Lockatong Formation		
125-129	4.67 / 5	0	NA	BEDROCK		Gray MUDSTONE (ARGILLITE), unweathered, 10-20 degree laminated, fine-grained strong rock, wide fracture spacing, 20 degree fractures at 126 ft bgs and 127.2 ft bgs. Lockatong Formation Recovery = 93%; RQD = 87% (good rock)		
130-131	4.75 / 5	0	NA	BEDROCK		Gray MUDSTONE (ARGILLITE), unweathered, 10-20 degree laminated, fine-grained strong rock, wide fracture spacing, 10 degree fracture @ 132.2 ft bgs.		

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RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 16.2 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610941.2
Date Started Drilling: 11/3/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683423.4
Date Finished Drilling: 11/8/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 140 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
133-134	4.75 / 5	0	NA	BEDROCK		Lockatong Formation Recovery = 95%; RQD = 86% (good rock)		
135-139	4.67 / 5	0	NA	BEDROCK		Gray MUDSTONE (ARGILLITE), unweathered, 10-20 degree laminated, fine-grained strong rock, wide fracture spacing, mechanical fractures throughout. Lockatong Formation Recovery = 93%; RQD = 93% (excellent rock) Open hole 90 ft bgs to 140 ft bgs		
140								

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RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.96 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610955.05
Date Started Drilling: 9/28/2021	Rig Type: Fraste CME55 XL MAX	Coordinates (NJSPNAD83) y: 683613.58
Date Finished Drilling: 10/19/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 141 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 14.2 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1	5 / 5	0	DRY	FILL		Hand dig to 5 ft bgs; Brown-gray fine to coarse SAND, some fine to coarse gravel, dense (Dense Graded Aggregate [DGA]), dry.		8-inch steel protective casing (stick up) Riser set in grout Grout: 0-115 ft bgs 6-inch steel threaded casing: 0-115 ft bgs
2								
3								
4								
5								
6	4 / 5	0	DAMP	FILL		Gray coarse GRAVEL, trace cobble, trace fine to medium sand (DGA), damp. Gray fine to coarse SAND, some fine to coarse gravel, very dense (DGA), wet.		
10								
11								
12	5 / 5	0	WET	FILL		Red brown to gray silty CLAY, trace fine sand, trace fine gravel and shells, medium stiff, wet.		
13								
14								
15	5 / 5	0	DAMP	PT		Gray, organic CLAY with fibers (80%). (Meadow Mat), fibrous, damp.		
16								
17	4 / 5	0	WET	CL		Gray CLAY, trace silt, trace fine sand, medium stiff, wet.		
18								
19								
20	5 / 5	0	WET	CL		Red brown, fine SAND, trace silt, trace fine gravel, loose, wet.		
21								
22								
23	5 / 5	0	WET	SP		Red brown, fine SAND, trace silt, loose, wet.		
24								
25	3 / 5	0	WET	SP		Red brown, fine SAND, trace silt, very loose, wet.		
26								
27								
28								
29								
30								
31								
32								

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Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.96 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610955.05
Date Started Drilling: 9/28/2021	Rig Type: Fraste CME55 XL MAX	Coordinates (NJSPNAD83) y: 683613.58
Date Finished Drilling: 10/19/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 141 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 14.2 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
33-34	3 / 5	0	WET	SP				
35-36	4.5 / 5	0	WET	SP		Red brown, fine SAND, trace silt, loose, wet.		
36-37			WET	ML		Red brown SILT, trace clay, trace fine sand, soft, wet.		
38-39	5 / 5	0	WET	SP		Red brown, fine SAND, trace silt, loose, wet.		
39-40			WET	ML		Red brown SILT, trace clay, trace fine sand, soft, wet.		
41-42	5 / 5	0	WET	SP		Red brown fine SAND, trace silt, loose, wet.		
42-43			WET	ML		Red brown SILT, trace clay, trace fine sand, soft, wet.		
44-45	5 / 5	0	WET	SP				
45-46								
47-48	3.5 / 5	0	WET	SP				
48-49								
50-51	2.5 / 5	0	WET	SM		Red brown, fine to medium SAND, some fine to coarse gravel, very dense, wet (Basal Till).		
51-52								
53-54	2 / 5	0	WET	SM		Red brown, fine to medium SAND, some fine to coarse gravel, trace cobbles, very dense, wet (Basal Till).		
55-56								
57-58								
59-60								
61-62								
63-64								

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RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.96 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610955.05
Date Started Drilling: 9/28/2021	Rig Type: Fraste CME55 XL MAX	Coordinates (NJSPNAD83) y: 683613.58
Date Finished Drilling: 10/19/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 141 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 14.2 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
66	3 / 5	0	WET	SM		Red brown, fine to medium SAND, some fine to coarse gravel, very dense, wet (Basal Till).		
67			NA	BEDROCK		DIABASE, gray weathered broken rock in a clay matrix with fine to medium sand and rock fragments.		
68	1.5 / 5	0	NA	BEDROCK		DIABASE, weathered gray broken rock, hard, fine-grained.		
69			NA	BEDROCK		Begin to rock core at 67.5 ft bgs.		
70	4 / 5	0	NA	BEDROCK		DIABASE, highly weathered gray broken rock, hard, medium-grained, weak to very weak rock, highly fractured (mechanical).		
71			NA	BEDROCK		Clay matrix washed out during coring.		
72			NA	BEDROCK		DIABASE, highly weathered gray broken rock fragments in clay matrix with fine to medium sand.		
73	4.5 / 5	0	NA	BEDROCK		DIABASE, highly weathered gray broken rock fragments in clay matrix with fine to medium sand.		
74			NA	BEDROCK		DIABASE, gray rock fragments and rock dust.		
75	4.25 / 5	0	NA	BEDROCK		DIABASE, gray, moderately weathered, medium-grained weak rock, highly fractured (mechanical). 60 degree fractures at 86.0-86.5 ft bgs and 88.4-89.2 ft bgs, 10 degree fracture at 88.0-88.2 ft bgs.		
76			NA	BEDROCK		REC = 85 %; RQD = 26% (poor rock)		
77	4.75 / 5	0	NA	BEDROCK		DIABASE, gray, moderately weathered, medium-grained weak rock, highly fractured (mechanical). 10 degree fractures at 90.0-90.5 and 93.0-93.5 ft bgs, 60 degree fractures at 91.0-91.5 ft bgs and 93.5-94.0 ft bgs.		
78			NA	BEDROCK		REC = 95 %; RQD = 46% (poor rock)		
79	3 / 5	0	NA	BEDROCK		DIABASE, gray, moderately to highly weathered medium-grained, very weak rock, highly fractured (mechanical). 10 degree fracture at 98.5 to 98.6 ft bgs.		
80			NA	BEDROCK		REC = 60%; RQD = 25% (very poor rock)		

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Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.96 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610955.05
Date Started Drilling: 9/28/2021	Rig Type: Fraste CME55 XL MAX	Coordinates (NJSPNAD83) y: 683613.58
Date Finished Drilling: 10/19/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 141 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 14.2 ft NAVD88

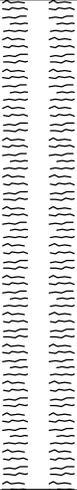
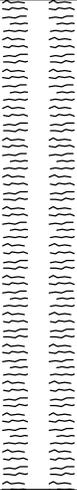
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
98-99	3 / 5	0	NA	BEDROCK				
100-103	2.67 / 5	0	NA	BEDROCK		DIABASE, gray, highly weathered, medium-grained, very weak rock. Highly-fractured (mechanical). REC = 53%; RQD = 0% (very poor rock)		
104-107	1.75 / 5	0	NA	BEDROCK		DIABASE, gray, highly weathered, medium-grained, very weak rock. Highly-fractured (mechanical). REC = 35%; RQD = 0% (very poor rock)		
108-110	1.1 / 5	0	NA	BEDROCK		GRAY MUDSTONE (Argillite), slightly metamorphosed, highly fractured Lockatong Formation REC = 35%; RQD = 0% (very poor rock)		
110-113			NA	BEDROCK		GRAY MUDSTONE (Argillite), slightly metamorphosed, highly fractured, weak broken Lockatong Formation REC = 22%; RQD = 0% (very poor rock)		
114-117	1.1 / 5	0	NA	BEDROCK		DIABASE, highly weathered, highly fractured (mechanical), very weak, broken REC = 22%; RQD = 0% (very poor rock)		5 7/8-inch open borehole in rock: 115-141 ft bgs
118-121	5 / 5	0	NA	BEDROCK		GRAY MUDSTONE (Argillite), highly to moderately weathered, slightly metamorphosed, highly fractured (mechanical), fine-grained with calcite intrusions. Lockatong Formation. REC = 100%; RQD = 20% (poor rock)		
122-129	4 / 5	0	NA	BEDROCK		GRAY MUDSTONE (Argillite), highly to moderately weathered, slightly metamorphosed, highly to moderately fractured, 60% fine grain laminations. 60 degree fractures with calcite coatings at 126.8 ft bgs, 127.0 ft bgs and 129.3 ft bgs. Lockatong Formation REC = 80%; RQD = 46% (poor rock)		

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RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 15.96 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610955.05
Date Started Drilling: 9/28/2021	Rig Type: Fraste CME55 XL MAX	Coordinates (NJSPNAD83) y: 683613.58
Date Finished Drilling: 10/19/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 141 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 14.2 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
131-134	0 / 5	0	NA	BEDROCK		No Recovery. Lockatong Formation based on borehole geophysical logging. Driller reported core string dropped 2 ft during coring. Cleanout borehole to 135 ft and continue to core.		
135-137	1.5 / 7	0		BEDROCK		Diabase based on borehole geophysical logging.		
138-140			NA	BEDROCK		GRAY MUDSTONE (Argillite), highly weathered, slightly metamorphosed, highly fractured (mechanical), weak, fine-grained, pitted. Lockatong Formation REC = 30%; RQD = 0% (very poor rock)		
141								

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RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.41 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610826.97
Date Started Drilling: 10/20/2021	Rig Type: Fraste XL Max	Coordinates (NJSPNAD83) y: 683100.23
Date Finished Drilling: 11/1/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 125 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 12.3 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1-5				FILL		Soft dig to 5 ft bgs; Brown and gray fine to coarse SAND, some fine to coarse gravel, trace concrete, very dense to dense (Dense Graded Aggregate [DGA]), dry.	8-inch steel protective casing (stick up) Riser set in grout	
5-10	3 / 5	0		FILL		Gray fine to coarse SAND, some fine to coarse gravel, very dense (DGA), damp.	Grout: 0-100 ft bgs 6-inch steel threaded casing: 0-100 ft bgs	
10-15	3 / 5	0		FILL		Gray fine to coarse SAND, some fine to coarse gravel, very dense (DGA), wet.		
15-20	1.5 / 5	0		FILL		Gray fine to coarse GRAVEL, little fine to coarse sand, dense (DGA), wet.		
20-21				SP		Gray fine SAND, trace silt, trace fine-medium gravel, medium dense, wet.		
21-25	5 / 5	0		SM		Red brown, fine to coarse SAND, some fine to coarse gravel, trace silt, medium dense, wet.		
25-26				SP		Red brown, fine to medium SAND, trace silt, loose, wet.		
26-30	3.5 / 5	0		SP		Red brown, fine SAND, trace silt, medium dense, wet.		
30-31	3.5 / 5	0						
31-32								

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RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.41 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610826.97
Date Started Drilling: 10/20/2021	Rig Type: Fraste XL Max	Coordinates (NJSPNAD83) y: 683100.23
Date Finished Drilling: 11/1/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 125 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 12.3 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
33-34	3.5 / 5	0		SP				
35-36	4.5 / 5	0		SM		Red brown, fine SAND, some silt, medium dense, wet.		
37-38				CL		Gray CLAY, medium stiff, damp.		
39-40	4.5 / 5	0		CL		Red brown CLAY, trace to little silt, soft.		
41-42				CL		Gray CLAY, medium stiff, damp.		
43-44	4 / 5	0		CL		Red brown CLAY, medium stiff, damp.		
45-46				CL		Red brown, fine SAND, trace silt, medium dense, wet.		
47-48	4 / 5	0		SP				
49-50				CL		Red brown CLAY, little silt, medium stiff.		
51-52	4 / 5	0		CL		Red brown CLAY, little fine to coarse sand, soft, wet.		
53-54				SM		Red brown, fine to medium SAND, some silt, little fine to coarse gravel, very dense (Basal Till).		
55-56	5 / 5	0		SM		Red brown, fine to medium SAND, some silt, little fine to coarse gravel, very dense, wet (Basal Till).		
57-58				SP		Red brown, fine to medium SAND, trace silt, trace fine to coarse gravel, loose, wet (Basal Till).		
59-60	5 / 5	0		SM				
61-62				SP				
63-64	5 / 5	0		SM				
65-66				SP				

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RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.41 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610826.97
Date Started Drilling: 10/20/2021	Rig Type: Fraste XL Max	Coordinates (NJSPNAD83) y: 683100.23
Date Finished Drilling: 11/1/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 125 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 12.3 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
66-67	5 / 5	0		SM		Red brown, fine to medium SAND, some silt, little fine to coarse gravel, very dense, wet (Basal Till).		
67-70						Red brown to gray, fine to coarse SAND, some silt, little fine to coarse gravel, very dense, wet (Basal Till). Rock fragments in Till from 69-70 ft bgs.		
70-71						Gray, fine to coarse SAND, some silt, little fine to coarse gravel, trace large rock fragments, very dense, damp (Basal Till).		
71-72	4 / 5	0		SM		Gray, fine to coarse SAND, some silt, little fine to coarse gravel, trace large rock fragments, very dense, damp (Basal Till).		
72-75						Gray, fine to coarse SAND, some silt, little to some fine to coarse gravel, boulder at 77 to 78 ft bgs, very dense, damp (Basal Till).		
75-76	4 / 5	0		SM		Gray, fine to coarse SAND, some silt, little to some fine to coarse gravel, boulder at 77 to 78 ft bgs, very dense, damp (Basal Till).		
76-77								
77-80								
80-81	5 / 5	0		SM				
81-84								
84-85	4.5 / 5	0		BEDROCK		White gray, fine to coarse SAND, some silt, little clay, some fine to coarse gravel, medium dense, wet (Basal Till).		
85-86						Gray MUDSTONE (Argillite), white/gray rock fragments and pulverized rock pieces. Fine-grained, strong, laminated with calcite veining.		
86-87						Lockatong Formation.		
87-88	2.83 / 5	0		BEDROCK		Gray MUDSTONE (Argillite), slightly weathered to unweathered, fine-grained, medium to strong, moderate to wide fracture spacing, calcite veins along bedding planes. Bedding at 20 degrees from horizontal. 60 degree fracture at 92.5 to 92.8 ft bgs.		
88-89						Lockatong Formation REC = 77%; RQD = 56% (good rock)		
89-90	5 / 5	0		BEDROCK				
90-91								
91-92								
92-93	5 / 5	0		BEDROCK		Gray MUDSTONE (Argillite), unweathered, fine-grained, strong, wide fracture spacing, bedding at 20 degrees from horizontal. Calcite veins in rock. 20 degree fractures at 95.8 ft bgs and 98.0 ft bgs.		
93-94								
94-95								
95-96								
96-97								

PPG WITH WELL CONSTRUCTION - - 3/10/22 12:01

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
RQD = rock quality designation

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.41 ft NAVD88
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610826.97
Date Started Drilling: 10/20/2021	Rig Type: Fraste XL Max	Coordinates (NJSPNAD83) y: 683100.23
Date Finished Drilling: 11/1/2021	Core Size: 6 in. sonic, 2 in rock core	Boring Total Depth: 125 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 12.3 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
98-99	5 / 5	0		BEDROCK		Lokatong Formation REC = 100%, RQD = 100% (excellent rock)		5 7/8-inch open borehole in rock: 100-125 ft bgs
100-103	4.83 / 5	0		BEDROCK		Gray MUDSTONE (Argillite), unweathered, fine-grained, strong, wide fracture spacing, bedding at 10 to 20 degrees from horizontal. 10 degree fracture at 101.3 ft bgs, 20 degree fractures at 101 ft bgs and 102.3 ft bgs, 30 degree fractures at 102.8 ft bgs and 104.5 ft bgs. Lokatong Formation REC = 97%, RQD = 83% (good rock)		
104-107	4.42 / 5	0		BEDROCK		Gray MUDSTONE (Argillite), unweathered to slightly weathered, fine-grained, strong to medium strong, very wide fracture spacing, slightly pitted at 106.5-108.5 ft bgs. Bedding at 10 to 20 degrees from horizontal. All mechanical fractures, calcite healed fracture at 109 ft bgs. Lokatong Formation REC = 88%, RQD = 88% (good rock)		
108-111	4.83 / 5	0		BEDROCK		Gray MUDSTONE (Argillite), unweathered, fine-grained, strong, wide fracture spacing, bedding at 10 to 20 degrees from horizontal. Vertical fracture at 110-111.2 ft bgs, 10 degree fracture at 111.2 ft bgs. Lokatong Formation REC = 96%, RQD = 90% (excellent rock)		
112-115	4.83 / 5	0		BEDROCK		Gray MUDSTONE (Argillite), unweathered, fine-grained, strong, very wide fracture spacing, bedding at 10 to 20 degrees from horizontal. All mechanical fractures. Lokatong Formation REC = 96%, RQD = 96% (excellent rock)		
116-119	4.83 / 5	0		BEDROCK		Gray MUDSTONE (Argillite), unweathered, fine-grained, strong, very wide fracture spacing, bedding at 10 to 20 degrees from horizontal. All mechanical fractures. Lokatong Formation REC = 96%, RQD = 96% (excellent rock)		
120-123	4.83 / 5	0		BEDROCK		Gray MUDSTONE (Argillite), unweathered, fine-grained, strong, very wide fracture spacing, bedding at 10 to 20 degrees from horizontal. All mechanical fractures. Lokatong Formation REC = 96%, RQD = 96% (excellent rock)		
124-125						Open hole 100 ft bgs to 125 ft bgs		

PPG WITH WELL CONSTRUCTION - 3/10/22 12:01

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RQD = rock quality designation

Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 14.99 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610916.6
Date Started Drilling: 12/26/2023	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 683379.7
Date Finished Drilling: 12/29/2023	Core Size: 6 inches	Boring Total Depth: 118 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 6
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1						Soft dig to 5 ft bgs Poorly graded sand with gravel, fine to medium, angular, 10-20% coarse gravel, Soft dig to 3.5. Poor recovery. [FILL] - 10BG 5/1 (greenish gray), wet, firm - no odor, no staining		Annular Seal (Bentonite Cement Grout) (0-88 ft bgs)
2								
3								
4								
5	10 / 10	0	wet	FILL				
6								
7								
8								
9								
10								
11						Poorly graded sand, fine to medium, angular, <10% coarse gravel, DGA. Poor recovery. [FILL] - 10BG 5/1 (greenish gray), wet, firm - no odor, no staining		Inner Casing (6-inch Steel) (0-88 ft bgs)
12								
13								
14								
15	10 / 10	0	wet	FILL				
16								
17								
18								
19								

PPG WITH WELL CONSTRUCTION - - 5/13/24 15:41

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Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 14.99 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610916.6
Date Started Drilling: 12/26/2023	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 683379.7
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Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 6
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks	
21	10 / 10	1	moist	PT		Peat, 50% organic fibers [NATIVE] - 10YR 3/3 (dark brown), moist, medium dense - peaty odor, no staining			
22			moist	CH		Fat clay (CH) [NATIVE] - 5YR 7/1 (light gray), moist, medium dense - no odor, no staining			
23			moist	SW		Well-graded sand (SW), fine to medium, subrounded, <10% gravel [NATIVE] - 2.5YR 4/4 (reddish brown), moist, loose - no odor, no staining			
24			moist	SW-SM		Poorly graded sand with silt (SW-SM), fine to coarse, angular, 5-15% silt, Reddish brown [NATIVE] - 7.5YR 4/6 (strong brown), moist, loose - no odor, no staining			
25			moist	SW-SM		Poorly graded sand with silt (SW-SM), fine to medium, angular, 5-15% silt and fine gravel, Reddish brown [NATIVE] - 7.5YR 4/6 (strong brown), moist, loose - no odor, no staining			
26	10 / 10	0	wet	SP		Poorly graded sand (SP), fine to medium, subangular, <10% silt, saturated [NATIVE] - 10R 4/8 (red), wet - no odor, no staining			
27						Poorly graded sand (SP), fine to medium, subangular, <10% silt, <10% gravel, saturated [NATIVE] - 10R 4/8 (red), wet - no odor, yellow water			
28			wet	SP					
29									
30	10 / 10	0	wet	SP					
31									wet
32			wet	SP					
33									
34	10 / 10	0	wet	SP					
35									wet
36			wet	SP					
37									
38	wet	SP							
39									

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Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 14.99 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610916.6
Date Started Drilling: 12/26/2023	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 683379.7
Date Finished Drilling: 12/29/2023	Core Size: 6 inches	Boring Total Depth: 118 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 6
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
41-42			moist	CL		Lean clay (CL), <10% silt, Gray and brownish red varved clay [NATIVE] [Transition Zone] - 10B 7/1 (light bluish gray), moist, medium dense - no odor, no staining		
43-49	10 / 10	0	wet	SW-SM		Well-graded sand with silt (SW-SM), fine to medium, subangular, 5-15% silt, Reddish brown [NATIVE] - 7.5YR 5/6 (strong brown), wet - no odor, no staining		
50-58			wet	SW-SM		Well-graded sand with silt (SW-SM), fine to medium, subangular, 5-15% silt, Reddish brown [NATIVE] - 7.5YR 5/6 (strong brown), wet - no odor, no staining		
59-60	10 / 10	0	wet	SP		Poorly graded sand with gravel (SP), fine to medium, angular, 25-35% fine gravel, <10% silt, Reddish brown [NATIVE] - 7.5YR 5/6 (strong brown), wet		

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Comments:

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Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610916.6
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Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 6
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

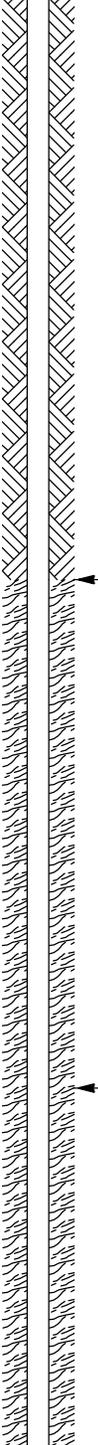
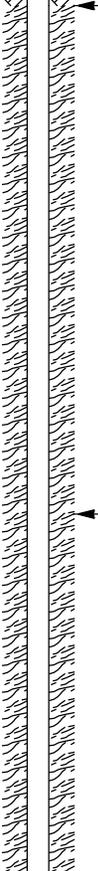
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
61-64						- no odor, no staining Poorly graded sand with silt and gravel (SW-SM), fine to medium, angular, 35-45% fine to coarse gravel, 5-15% silt, Reddish brown [NATIVE] [Basal Till] - 7.5YR 5/6 (strong brown), wet - no odor, no staining		
65-70	10 / 10	0	wet	SW-SM				
71-72			moist	CL		Lean clay (CL), <10% silt, Gray and brownish red mottled [NATIVE] [Basal Till] - 10B 7/1 (light bluish gray), moist, medium dense - no odor, no staining		
72-73			moist	SW-SM		Poorly graded sand with silt (SW-SM), fine to medium, subangular, 5-15% silt, Gray and brownish red mottled [NATIVE] [Basal Till] - 10B 7/1 (light bluish gray), moist, medium dense - no odor, no staining		
73-74			moist	SW-SM		Poorly graded sand with silt and gravel (SW-SM), fine to medium, subangular, 5-15% silt, 25-35% gravel, Gray and brownish red mottled [NATIVE] [Basal Till] - 10B 7/1 (light bluish gray), moist, medium dense - no odor, no staining		
74-75	10 / 10	0	moist	ML		Gravelly silt (ML), 5-15% fine sand 15-25% fine to coarse gravel, Green and gray mottled [NATIVE] [Basal Till] - 10BG 5/1 (greenish gray), moist - no odor, no staining		
75-76			moist	SW-SM		Poorly graded sand with silt and gravel (SW-SM), 5-15% silt. Red orange [NATIVE] [Basal Till]		
76-77								
77-78								
78-79			Moist	SW-SM		Poorly graded sand with silt and gravel (SW-SM), 5-15% silt. Tan [NATIVE] [Basal Till]		

PPG WITH WELL CONSTRUCTION - - 5/13/24 15:41

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Comments:

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Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610916.6
Date Started Drilling: 12/26/2023	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 683379.7
Date Finished Drilling: 12/29/2023	Core Size: 6 inches	Boring Total Depth: 118 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 6
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

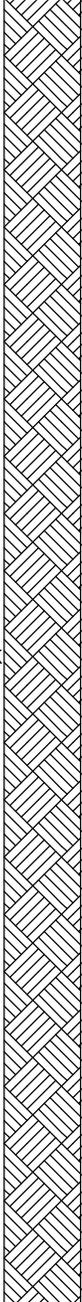
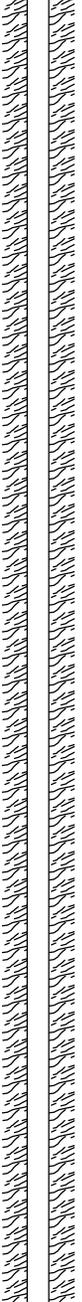
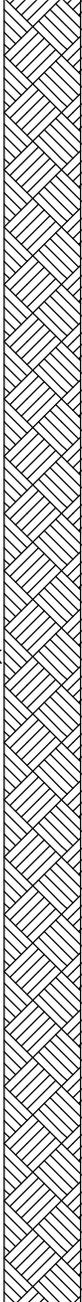
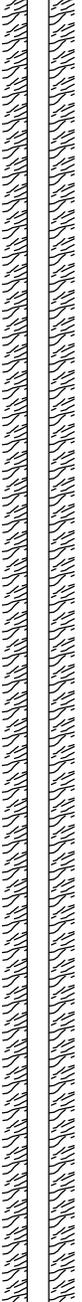
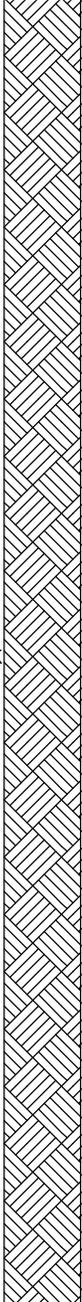
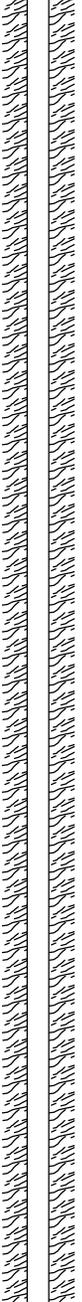
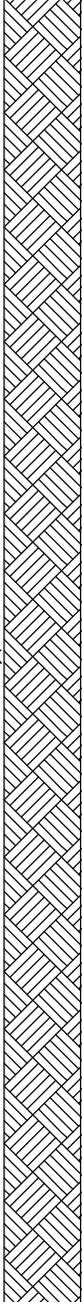
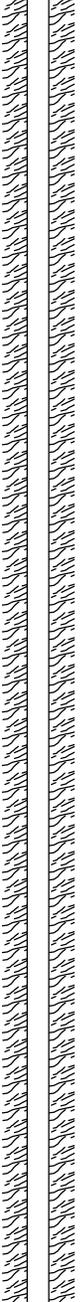
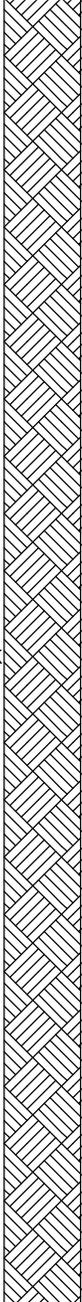
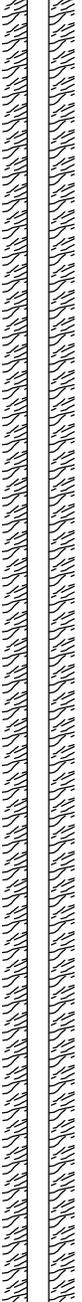
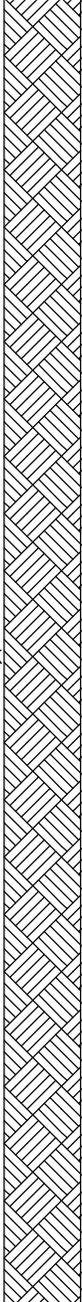
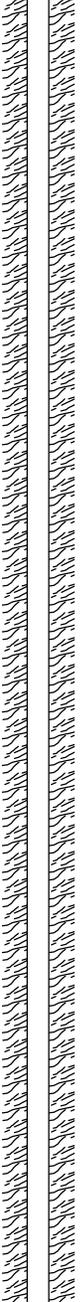
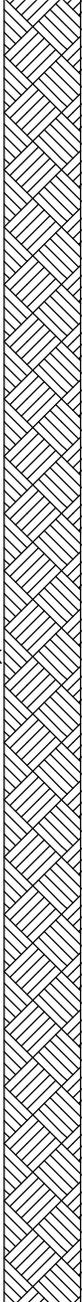
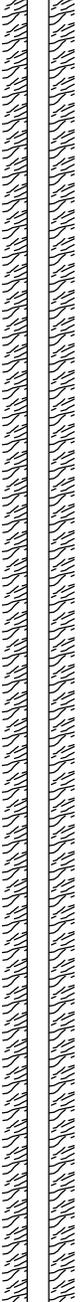
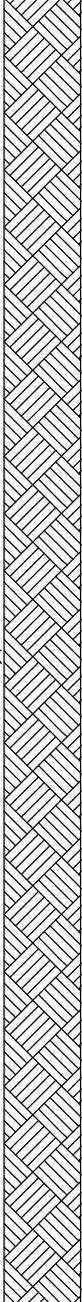
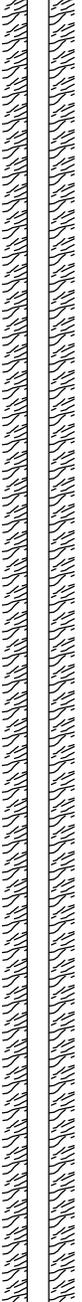
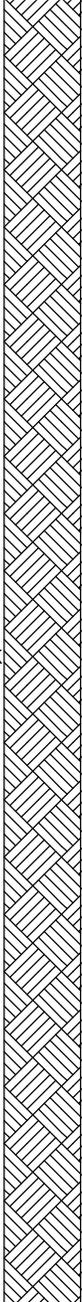
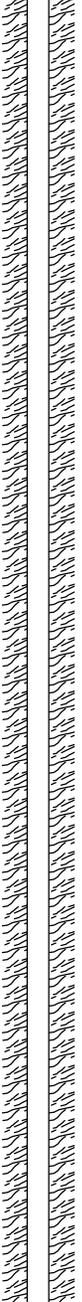
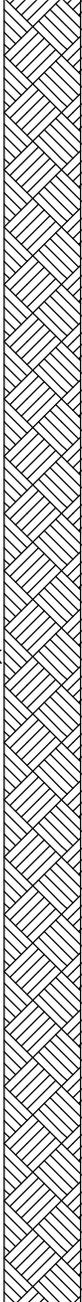
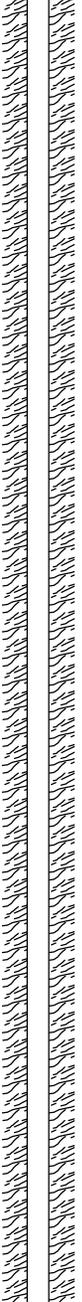
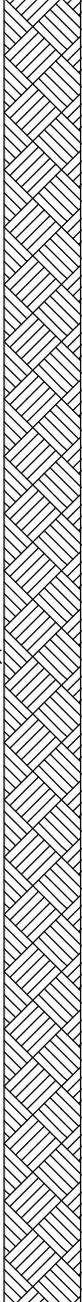
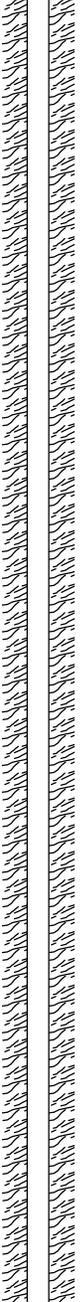
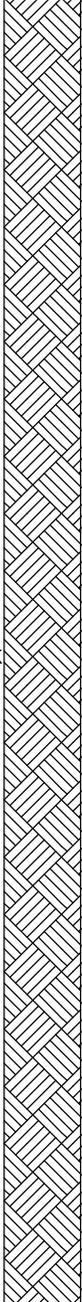
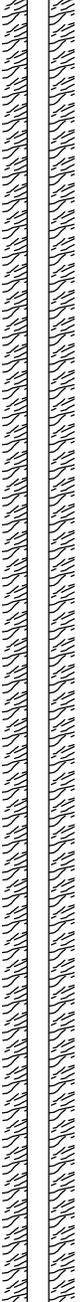
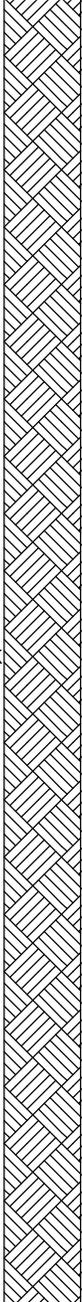
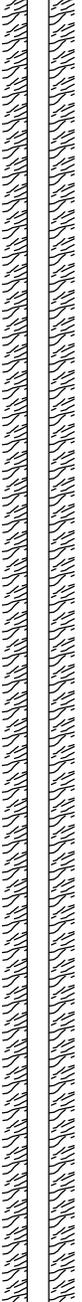
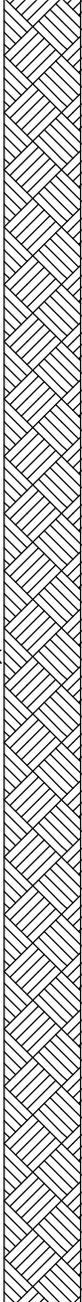
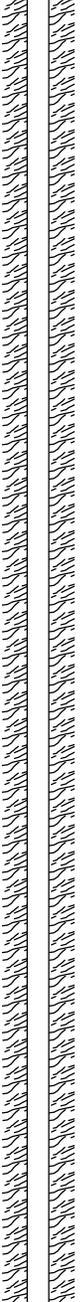
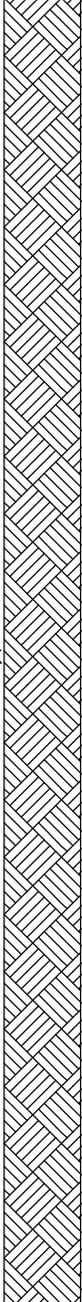
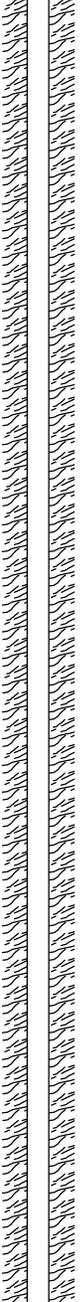
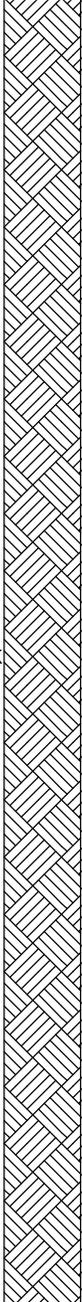
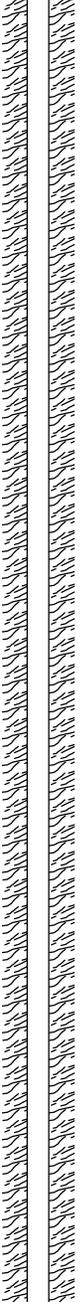
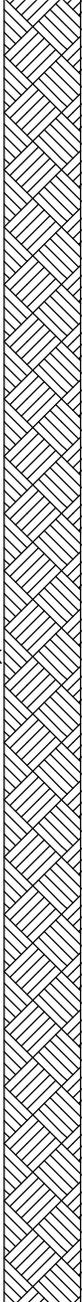
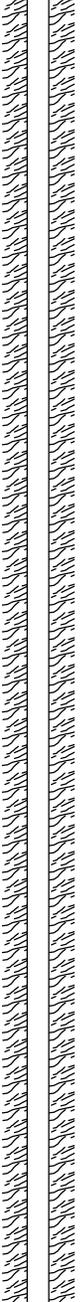
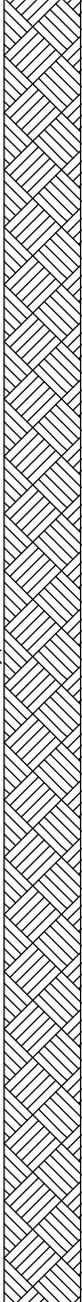
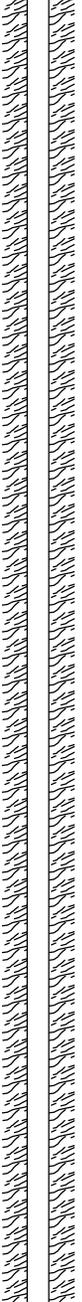
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks	
81	10 / 10	0	moist	CL		Lean clay (CL), <10% gravel [NATIVE] [Basal Till] - 10B 7/1 (light bluish gray), moist, medium dense - no odor, no staining			
82-83			dry	BEDROCK		Bedrock (Lockatong Formation), weathered gray mudstone from 81 to 84 ft bgs. Degree of weathering decreases with depth. Competent from 84 to 85 ft bgs. [NATIVE] - 2.5YR 8/1 (white), dry - no odor - 10-inch steel casing set to 85 ft bgs			
84-87				BEDROCK		Bedrock (Lockatong Formation), competent, gray mudstone, evidence of mineralization, green veins in laminations, evidence of thermalization in veins. - 10R 7/1 (light gray), very hard - no odor, no staining - 6-inch steel casing set to 88 ft bgs			
88-90	10 / 10	0		BEDROCK		Bedrock (Lockatong Formation-Hornfels with lenses of mudstone), competent, fine grained, medium strong.		5 7/8 inch open borehole in rock (88-118 ft bgs)	
91-94				BEDROCK					
95-96				BEDROCK					Bedrock
97-99				BEDROCK					

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Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 14.99 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610916.6
Date Started Drilling: 12/26/2023	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 683379.7
Date Finished Drilling: 12/29/2023	Core Size: 6 inches	Boring Total Depth: 118 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 6
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
101								
102								
103								
104								
105	10 / 10	0						
106								
107								
108								
109				BEDROCK				
110								
111								
112								
113								
114	8 / 8	0						
115								
116								
117								
118								

PPG WITH WELL CONSTRUCTION - - 5/13/24 15:41

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 15.23 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610897.5
Date Started Drilling: 1/4/2024	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683447.6
Date Finished Drilling: 1/10/2024	Core Size: 10 inches	Boring Total Depth: 132 ft
Logged By: J. Patel	Project Manager: Carey Letts	Well Diameter (inches): 6
Physical Location: Site 114		Surface Elevation: 14.2 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1	10 / 10	0	dry	FILL		Soft dig to 5 ft bgs.		Annular Seal (Bent-Cement Grout) (0-97 ft bgs)
2						DGA and Gravelly c. SAND [FILL]		
3						- No odor		
4						- No staining		
5								
6	10 / 10	0	wet	FILL		Light Gray Gravelly c.m SAND [FILL]		Outer Casing (10-inch Steel) (0-85 ft bgs)
7						- No odor		
8						- No staining		
9								
10								
11								
12								
13								
14								
15								
16	moist	PT		CH		PEAT [Meadow Mat]		Inner Casing (6-inch Steel) (0-97 ft bgs)
17								
18								
19	moist					Light Gray CLAY		
						- No odor		
						- No staining		

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Comments: Open borehole bedrock wells installed from 97-132 ft bgs. 10 inch casing down to 85 ft and 6 inch casing down to 97 ft.

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 15.23 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610897.5
Date Started Drilling: 1/4/2024	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683447.6
Date Finished Drilling: 1/10/2024	Core Size: 10 inches	Boring Total Depth: 132 ft
Logged By: J. Patel	Project Manager: Carey Letts	Well Diameter (inches): 6
Physical Location: Site 114		Surface Elevation: 14.2 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
21	10 / 10	0	moist	CL		Gray-Greenish Brown mottled CLAY - No odor - No staining		
22			wet	SP		Brown c. SAND - No odor - No staining		
23	10 / 10	0	wet	SP		Brown f. SAND - No odor - No staining		
24								
25								
26	10 / 10	0	wet	SP		Brown f. SAND - No odor - No staining		
27								
28								
29								
30	10 / 10	0	wet	MH		Reddish Brown SILT. Yellow water observed at ~35 ft bgs. - No odor - No staining		
31								
32								
33								
34								
35								
36	10 / 10	0	wet	MH		Reddish Brown SILT. Yellow water observed at ~35 ft bgs. - No odor - No staining		
37								
38								
39								

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments: Open borehole bedrock wells installed from 97-132 ft bgs. 10 inch casing down to 85 ft and 6 inch casing down to 97 ft.

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 15.23 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610897.5
Date Started Drilling: 1/4/2024	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683447.6
Date Finished Drilling: 1/10/2024	Core Size: 10 inches	Boring Total Depth: 132 ft
Logged By: J. Patel	Project Manager: Carey Letts	Well Diameter (inches): 6
Physical Location: Site 114		Surface Elevation: 14.2 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
41-44						Varved sands, silts, and clays [Transition zone] [NATIVE] - No odor - No staining		
45-49	10 / 10	0	moist	CL-ML				
50-58						Brown Silty f. SAND - No odor - No staining		
59	10 / 10	0	dry	SW-GW		Brown c.m.f SAND and fine to coarse subrounded Gravel with Silt and Clay. Medium dense. [Basal Till]		

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments: Open borehole bedrock wells installed from 97-132 ft bgs. 10 inch casing down to 85 ft and 6 inch casing down to 97 ft.

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 15.23 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610897.5
Date Started Drilling: 1/4/2024	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683447.6
Date Finished Drilling: 1/10/2024	Core Size: 10 inches	Boring Total Depth: 132 ft
Logged By: J. Patel	Project Manager: Carey Letts	Well Diameter (inches): 6
Physical Location: Site 114		Surface Elevation: 14.2 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
61	10 / 10	0	dry	SW-GW		- No odor - No staining Brown c.m.f SAND and fine to coarse subrounded Gravel with Silt and Clay. Dense. [Basal Till]		
62						- No odor - No staining		
63								
64								
65								
66								
67								
68								
69								
70								
71	10 / 10	0	dry	SW-GW		Brown c.m.f SAND and fine to coarse subrounded Gravel with Silt and Clay. Dense. [Basal Till]		
72						- No odor - No staining		
73								
74								
75								
76								
77								
78								
79								
76						Bedrock (Lockatong Formation) olive gray highly weathered mudstone		
77						- No odor - No staining		
78								
79								

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Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments: Open borehole bedrock wells installed from 97-132 ft bgs. 10 inch casing down to 85 ft and 6 inch casing down to 97 ft.

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 15.23 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSNAD83) x: 610897.5
Date Started Drilling: 1/4/2024	Rig Type: Fraste XL Max 170	Coordinates (NJSNAD83) y: 683447.6
Date Finished Drilling: 1/10/2024	Core Size: 10 inches	Boring Total Depth: 132 ft
Logged By: J. Patel	Project Manager: Carey Letts	Well Diameter (inches): 6
Physical Location: Site 114		Surface Elevation: 14.2 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
81-82	5 / 5	0	dry	BEDROCK		Bedrock (Lockatong Formation) olive gray highly weathered mudstone		
82-84						Bedrock (Lockatong Formation), competent, gray mudstone. 10-inch steel casing set to 85 ft bgs		
84-85	10 / 10	0	dry	BEDROCK		Bedrock (Lockatong Formation), competent, gray mudstone		
85-86						Bedrock (Lockatong Formation), competent, gray mudstone		
86-87						Bedrock (Lockatong Formation), competent, gray mudstone		
87-88	10 / 10	0	dry	BEDROCK		Bedrock (Lockatong Formation), competent, gray mudstone		
88-89						Bedrock (Lockatong Formation), competent, gray mudstone		
89-90						Bedrock (Lockatong Formation), competent, gray mudstone		
90-91						Bedrock (Lockatong Formation), competent, gray mudstone		
91-92	10 / 10	0	dry	BEDROCK		Bedrock (Lockatong Formation), competent, gray mudstone		
92-93						Bedrock (Lockatong Formation), competent, gray mudstone		
93-94						Bedrock (Lockatong Formation), competent, gray mudstone		
94-95						Bedrock (Lockatong Formation), competent, gray mudstone		
95-96						Bedrock (Lockatong Formation), competent, gray mudstone		
96-97	10 / 10	0	dry	BEDROCK		Bedrock (Lockatong Formation), competent, gray mudstone		5 7/8 inch open borehole in rock (97-132 ft bgs)
97-98						Bedrock (Lockatong Formation), competent, gray mudstone		
98-99						Bedrock (Lockatong Formation), competent, gray mudstone		
99-100						Bedrock (Lockatong Formation), competent, gray mudstone		

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments: Open borehole bedrock wells installed from 97-132 ft bgs. 10 inch casing down to 85 ft and 6 inch casing down to 97 ft.

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 15.23 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610897.5
Date Started Drilling: 1/4/2024	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683447.6
Date Finished Drilling: 1/10/2024	Core Size: 10 inches	Boring Total Depth: 132 ft
Logged By: J. Patel	Project Manager: Carey Letts	Well Diameter (inches): 6
Physical Location: Site 114		Surface Elevation: 14.2 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
101	10 / 10	0	dry	BEDROCK				
102								
103								
104								
105	5 / 10	0	dry	BEDROCK		Bedrock (Lockatong Formation), competent, gray mudstone transitioning to Hornfels (contact zone) - No odor - No staining		
106								
107								
108								
109								
110								
111	10 / 10	0	dry	BEDROCK		Bedrock (Lockatong Formation), competent, Hornfels (low grade metamorphic rock) - No odor - No staining		
112								
113								
114								
115								
116								
117								
118								
119								

PPG WITH WELL CONSTRUCTION - - 5/13/24 15:52

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments: Open borehole bedrock wells installed from 97-132 ft bgs. 10 inch casing down to 85 ft and 6 inch casing down to 97 ft.

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 15.23 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610897.5
Date Started Drilling: 1/4/2024	Rig Type: Fraste XL Max 170	Coordinates (NJSPNAD83) y: 683447.6
Date Finished Drilling: 1/10/2024	Core Size: 10 inches	Boring Total Depth: 132 ft
Logged By: J. Patel	Project Manager: Carey Letts	Well Diameter (inches): 6
Physical Location: Site 114		Surface Elevation: 14.2 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
121 - 125	10 / 10	0	dry	BEDROCK				
125 - 132	7 / 7	0	dry	BEDROCK		Bedrock (Lockatong Formation), competent, Hornfels with pyrite and stilbite growth (low grade metamorphic rock) - No odor - No staining		
132 - 132								

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Comments: Open borehole bedrock wells installed from 97-132 ft bgs. 10 inch casing down to 85 ft and 6 inch casing down to 97 ft.

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 11.17 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611142.9
Date Started Drilling: 12/14/2023	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 682659.5
Date Finished Drilling: 12/22/2023	Core Size: 3 inches	Boring Total Depth: 130 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 11.5 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1-2	5 / 5	0	dry	FILL		Soft dig to 5 ft bgs Poorly graded sand with gravel (SP), medium, angular, 10-20% coarse gravel, Silty sand with gravel [FILL] - 10BG 5/1 (greenish gray), dry, very loose - no odor, no staining		Annular Seal (Bent-Cement Grout) (0-111 ft bgs)
2-5						Poorly graded sand with gravel (SP), medium, angular, 20-30% gravel, Wet at 4 [FILL] - 10BG 5/1 (greenish gray), wet, very loose - no odor, no staining		Riser (Schedule 40 PVC) (0-116 ft bgs)
5-7	5 / 5	0	wet	FILL		Poorly graded sand with gravel (SP), medium, angular, 20-30% coarse gravel [FILL] - 10BG 5/1 (greenish gray), wet, very loose - no odor, no staining		Outer Casing (10-inch Steel) (0-65 ft bgs)
7-10								
10-13	5 / 5	0	moist	PT		Peat [MEADOW MAT], 25-30% silty clay [NATIVE] - 10YR 4/1 (dark gray), moist, medium dense - peaty odor, no staining		Inner Casing (6-inch Steel) (0-112 ft bgs)
13-15								
15-19	5 / 5	0		OL				

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Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 11.17 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611142.9
Date Started Drilling: 12/14/2023	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 682659.5
Date Finished Drilling: 12/22/2023	Core Size: 3 inches	Boring Total Depth: 130 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 11.5 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
21-24	5 / 5	0		OL				
25-26			wet	SP		Poorly graded sand with gravel (SP), fine to coarse, subangular, 20-30% fine to coarse gravel [NATIVE] - 10R 4/6 (red / moderate reddish brown), wet, loose - no odor, no staining		
27-28	5 / 5	0	moist	CH		Fat clay (CH), 10-20% silt, Trace fine sand [NATIVE] - 10YR 4/3 (brown), moist, medium dense - no odor, no staining		
29-30						Poorly graded sand (SP), fine to medium, subangular, <10% coarse gravel, Trace gravel from 29-30 [NATIVE] - 2.5YR 4/3 (reddish brown), moist, loose - no odor, no staining		
31-34	5 / 5	0	moist	SP				
35-36						Well-graded sand (SW), fine, angular [NATIVE] - 10R 3/4 (dusky red / dark reddish brown), moist, very loose - no odor, no staining		
37-39	5 / 5	0	moist	SW				

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Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 11.17 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611142.9
Date Started Drilling: 12/14/2023	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 682659.5
Date Finished Drilling: 12/22/2023	Core Size: 3 inches	Boring Total Depth: 130 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 11.5 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
41	5 / 5	0	moist	SW				
42			wet	MH		Sandy elastic silt (MH), 30-40% fine sand Saturated [NATIVE] - 2.5YR 3/3 (dark reddish brown), wet, medium dense - no odor, no staining		
43			moist	SW-SM		Well-graded sand with silt (SW-SM), fine, angular, 5-15% silt [NATIVE] - 2.5YR 3/3 (dark reddish brown), moist, loose - no odor, no staining		
44	5 / 5	0						
45			wet	CL		Sandy lean clay (CL), 25-35% fine sand [NATIVE] - 2.5YR 3/3 (dark reddish brown), wet, medium dense - no odor, no staining		
46								
47	5 / 5	0						
48						Poorly graded sand with silt (SW-SM), fine, angular, 5-15% silt [NATIVE] - 2.5YR 2.5/3 (dark reddish brown), moist, medium dense - no odor, no staining		
49								
50	5 / 5	0						
51								
52								
53	5 / 5	0	moist	SW-SM				
54								
55								
56	5 / 5	0						
57								
58								
59								

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 11.17 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611142.9
Date Started Drilling: 12/14/2023	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 682659.5
Date Finished Drilling: 12/22/2023	Core Size: 3 inches	Boring Total Depth: 130 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 11.5 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
61			moist	SW-SM				
62	5 / 5	0				Varved sands, silts and clays [Transition zone] [NATIVE] - 5R 4/2 (grayish red), wet, very dense - no odor, no staining 10-inch steel casing set to 65 ft bgs		
63								
64								
65								
66								
67	5 / 5	0						
68								
69								
70								
71			wet	CL-ML-SP				
72								
73	5 / 5	0						
74								
75								
76								
77								
78	5 / 5	0						
79								

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Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 11.17 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611142.9
Date Started Drilling: 12/14/2023	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 682659.5
Date Finished Drilling: 12/22/2023	Core Size: 3 inches	Boring Total Depth: 130 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 11.5 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
81-82	5 / 5	0	wet	GM		Silty gravel (GM), fine to coarse, subangular, 20-30% silt [NATIVE] - 5YR 3/2 (dark reddish brown / grayish brown), wet, soft - no odor, no staining		
83-84						Varved sands, silts and clays [Transition Zone] [NATIVE] - 10R 3/4 (dusky red / dark reddish brown), moist, dense - no odor, no staining		
85-89	5 / 5	0						
90-94	5 / 5	0	moist	CL-ML-SP				
95-99	5 / 5	0	moist	GM		Silty gravel (GM), fine to coarse, subrounded, 35-45% silt, 5-15% clay, cobbles throughout [Basal Till] [NATIVE] - 10R 3/4 (dusky red/dark reddish brown, moist, medium dense - No odor, no staining		

PPG WITH WELL CONSTRUCTION - - 5/13/24 15:42

Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 11.17 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSNAD83) x: 611142.9
Date Started Drilling: 12/14/2023	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSNAD83) y: 682659.5
Date Finished Drilling: 12/22/2023	Core Size: 3 inches	Boring Total Depth: 130 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 11.5 ft NAVD88

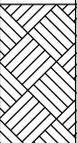
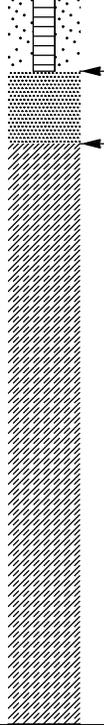
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
101-103	5 / 5	0	moist	GM				
103-105						Well-graded gravel with sand (GW), fine to coarse, subangular, 35-45% fine to coarse sand <10% silt [Basal Till] [NATIVE] - 10R 3/4 (dusky red / dark reddish brown), moist, very dense - no odor, no staining		
105-110	5 / 5	0	moist	GW				
110-115	5 / 5	0				Bedrock (Stockton Formation) greenish gray to gray weathered sandstone, highly fractured 113-115, micaceous, small holes throughout [NATIVE] - 10BG 6/1 (greenish gray), wet, very hard - no odor, no staining 6-inch steel casing set to 112 ft bgs	Annular Seal (Bentonite Chips) (111-113 ft bgs) Sand Pack (#00 Sand) (113-114 ft bgs) Sand Pack (#0 Sand) (114-121 ft bgs)	
115-118	5 / 5	0	wet	BEDROCK				Screen (Schedule 40 PVC) (116-121 ft bgs)
118-119			wet	BEDROCK		Bedrock (Stockton Formation) highly fractured purple gray siltstone, weathered [NATIVE] - 5P 4/2 (grayish purple), wet, very hard - no odor, no staining		

PPG WITH WELL CONSTRUCTION - - 5/13/24 15:42

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Comments:

Project Name: Groundwater Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 11.17 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611142.9
Date Started Drilling: 12/14/2023	Rig Type: Sonic Terra sonic TSI 150cc	Coordinates (NJSPNAD83) y: 682659.5
Date Finished Drilling: 12/22/2023	Core Size: 3 inches	Boring Total Depth: 130 ft
Logged By: D. Carr	Project Manager: Carey Letts	Well Diameter (inches): 2
Physical Location: Site 114		Surface Elevation: 11.5 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
121	3 / 5	0	wet	BEDROCK		Bedrock, interbedded Stockton and Lockatong Formations, weathered from 120-121.5, highly weathered from 121.5-122 [NATIVE] - 5P 4/2 (grayish purple), wet, very hard - no odor, no staining		Sand Pack (#00 Sand) (121-122 ft bgs) Annular Seal (Bentonite Chips) (121-130 ft bgs)
122			wet	BEDROCK		Bedrock (Lockatong Formation), competent, dark gray to gray siltstone, trace pyrite throughout, pyrite banding at 122 [NATIVE] - 10YR 4/1 (dark gray), wet, very hard - no odor, no staining		
123				NR		No Recovery		
124	2 / 5	0						
125			wet	BEDROCK		Bedrock, interbedded Stockton and Lockatong Formations, competent [NATIVE] - very hard - no odor, no staining		
126				NR		No Recovery		
127								
128								
129								
130								

PPG WITH WELL CONSTRUCTION - - 5/13/24 15:42

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Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.90 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610739.718
Date Started Drilling: 06/11/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 682956.53
Date Finished Drilling: 06/18/2024	Core Size: 8 in	Boring Total Depth: 124.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 6 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.0 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
0 - 2	0		dry	SP		Poorly graded sand (SP), fine to medium, some fine to coarse gravel, trace silt, hand cleared to 5 ft (DGA) [FILL] - 10YR 5/2 (grayish brown), dry, dense - no odor, no staining	 Bentonite-Cement Grout 0 - 99 ft RISER Type: Threaded Steel Casing Diameter: 6 in 0 - 99 ft
2 - 6	0	100	dry			Poorly graded sand (SP), fine to medium, little fine to coarse gravel, little silt (DGA) [FILL] - 7.5YR 2.5/1 (black), dry, dense - no odor, no staining	
6 - 8	0	100	dry			Poorly graded sand (SP), fine to medium, some fine to medium gravel (DGA) [FILL] - 10YR 6/1 (gray), dry, dense - no odor, no staining	
8 - 10	0	100	wet			Poorly graded sand (SP), fine to medium, some fine to coarse gravel, trace silt [FILL] - 7.5YR 2.5/1 (black), dry, loose - no odor, no staining	
10 - 12	0	100	wet			Poorly graded sand (SP), fine to medium, little fine to coarse gravel, little silt, trace wood [FILL] - 7.5YR 2.5/1 (black), wet, loose - no odor, no staining	
12 - 16	0	100	wet			Poorly graded sand (SP), fine to medium, trace fine to coarse gravel, some silt [FILL] - 7.5YR 2.5/1 (black), wet, loose - no odor, no staining	
16 - 18	0	100	wet	PT		Peat, trace silt, fibrous, 50% fibers, stiff [MEADOW MAT] - 10YR 6/1 (gray), wet - no odor, no staining	
18 - 20	0	100	wet				

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Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.90 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610739.718
Date Started Drilling: 06/11/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 682956.53
Date Finished Drilling: 06/18/2024	Core Size: 8 in	Boring Total Depth: 124.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 6 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.0 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
22	0	100	wet	CL		Lean clay (CL), trace silt, stiff [NATIVE] - 10YR 6/1 (gray), wet - no odor, no staining	
24			wet	SP		Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 10YR 5/6 (yellowish brown), wet, loose- no odor, no staining	
26	0	100	wet			Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
28			wet			Poorly graded sand (SP), fine to medium, some silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
30	0	80	wet			Poorly graded sand (SP), fine to medium, some silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
32			wet	CL		Lean clay (CL), trace varved silt, stiff [NATIVE] - 5YR 4/3 (reddish brown), wet - no odor, no staining	
34	0	100	wet	SP		Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
36			wet	CL		Lean clay (CL), varved, stiff [Transition Zone] - 10YR 6/1 (gray), wet - no odor, no staining	
38	0	100					
40							

Notes:
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Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.90 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610739.718
Date Started Drilling: 06/11/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 682956.53
Date Finished Drilling: 06/18/2024	Core Size: 8 in	Boring Total Depth: 124.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 6 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.0 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
42 - 44	0	100	wet			Lean clay (CL), varved, stiff [Transition Zone] - 5YR 3/2 (dark reddish brown / grayish brown), wet - no odor, no staining	
46 - 50		0		NR		no recovery	
50 - 52	0	100	wet	CL		Lean clay (CL), trace silt [Transition zone] - 5YR 3/2 (dark reddish brown / grayish brown), wet, soft - no odor, no staining	
52 - 54			wet	GW		Well-graded gravel (GW), fine to coarse, fine sand [NATIVE] - 10YR 6/1 (gray), wet, loose - no odor, no staining	
54 - 56			wet	SP		Poorly graded sand (SP), fine to medium, some fine to coarse gravel, little silt [Basal Till] - 5YR 4/3 (reddish brown), wet, dense - no odor, no staining	
56 - 58	0	80	wet			Poorly graded sand (SP), fine to medium, trace silt [Basal Till] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
58 - 60			wet			Poorly graded sand (SP), fine to medium, some fine to coarse gravel, some silt [Basal Till] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	

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Comments:



30 Knightsbridge Road, Piscataway, NJ 08854
732.564.3200 office telephone

114-MW76D

Total Depth 124.0 ft

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.90 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610739.718
Date Started Drilling: 06/11/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 682956.53
Date Finished Drilling: 06/18/2024	Core Size: 8 in	Boring Total Depth: 124.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 6 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.0 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
62	0	80	wet			Poorly graded sand (SP), fine to medium, trace silt [Basal Till] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
64							
66	0	80	wet			Poorly graded sand (SP), fine to medium, trace silt [Basal Till] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
68							
70				BEDROCK		Bedrock, Diabase, slightly weathered, rock pieces [NATIVE] - 10YR 6/1 (gray)	
72		70				Bedrock, Diabase, competent, rock pieces [NATIVE] - 10YR 6/1 (gray)	
74							
76						Bedrock, Diabase, competent, rock pieces, fine grained, some fine crystals embedded in rock pieces, 10-inch steel casing set to 75 ft bgs [NATIVE] - 10YR 6/1 (gray), hard	
78		60					
80							

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114-MW76D

Total Depth 124.0 ft

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.90 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610739.718
Date Started Drilling: 06/11/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 682956.53
Date Finished Drilling: 06/18/2024	Core Size: 8 in	Boring Total Depth: 124.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 6 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.0 ft NAVD88

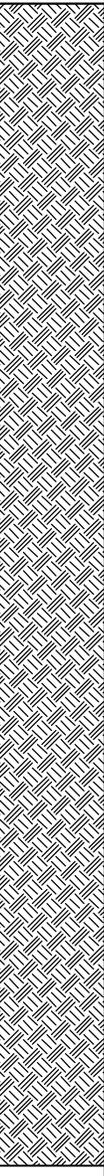
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
82		60				Bedrock, Diabase, competent, rock pieces, fine grained, some fine crystals embedded in rock pieces, 60 degrees fracture planes with calcite intrusions [NATIVE] - 10YR 6/1 (gray), hard	
84							
86		80				Bedrock, Diabase, competent, rock pieces, fine grained, some fine crystals embedded in rock pieces, 60 degrees fracture planes with calcite intrusions [NATIVE] - 10YR 6/1 (gray), hard	
88							
90						Bedrock, Diabase, competent, rock pieces, fine grained, some fine crystals embedded in rock pieces [NATIVE] - 10YR 6/1 (gray), hard	
92		60				Bedrock, Diabase, slightly weathered, rock fragments, some fine crystals embedded in rock fragments [NATIVE] - 10YR 6/1 (gray)	
94						Bedrock, Diabase, competent, rock pieces, fine grained, some fine crystals embedded in rock pieces, 60 degrees fracture planes with calcite intrusions [NATIVE] - 10YR 6/1 (gray), hard	
96							
98		80				Bedrock, Diabase, competent, rock pieces, fine grained, some fine crystals embedded in rock pieces, 60 degrees fracture planes with calcite intrusions [NATIVE] - 10YR 6/1 (gray), hard	
100						Bedrock, competent, rock fragments with some very close bedding, 60 degrees fracture planes	

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Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.90 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610739.718
Date Started Drilling: 06/11/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 682956.53
Date Finished Drilling: 06/18/2024	Core Size: 8 in	Boring Total Depth: 124.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 6 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.0 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
102		40	wet			with calcite intrusions [LOCKATONG FORMATION] - 10YR 6/1 (gray), hard - 6-inch steel casing set to 99 ft bgs	
104						Bedrock, fine to medium sand pulverized rock [LOCKATONG FORMATION] - competent - 10YR 6/1 (gray), wet, loose	
106		100				Bedrock [LOCKATONG FORMATION] - competent - 10YR 6/1 (gray)	
110			wet			Bedrock, pulverized rock with very small fragments [LOCKATONG FORMATION] - competent - 10YR 6/1 (gray), wet, loose	
114						Bedrock, competent, rock fragments, some calcite intrusions [LOCKATONG FORMATION] - competent - 10YR 6/1 (gray)	
116		80				Bedrock, competent, rock fragments, some calcite intrusions [LOCKATONG FORMATION] - 10YR 6/1 (gray)	
118							
120							

5 7/8-inch open borehole in rock 99-124 ft bgs

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Comments:



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732.564.3200 office telephone

114-MW76D

Total Depth 124.0 ft

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: 14.90 ft NAVD88
Project Number: 60723693	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610739.718
Date Started Drilling: 06/11/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 682956.53
Date Finished Drilling: 06/18/2024	Core Size: 8 in	Boring Total Depth: 124.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 6 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.0 ft NAVD88

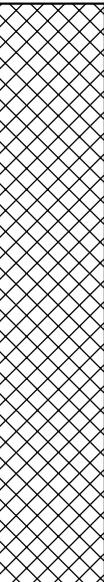
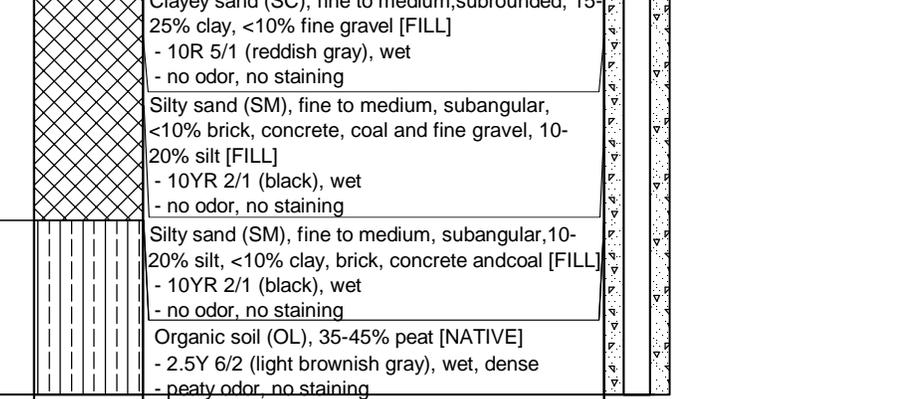
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
122		80				Bedrock, pulverized rock with very small rock fragments [LOCKATONG FORMATION] - competent - 10YR 6/1 (gray), wet, loose	
124						Boring terminated at 124 feet	
126							
128							
130							
132							
134							
136							
138							
140							

Notes:

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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 13.61 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611052.1
Date Started Drilling: 04/29/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683389.8
Date Finished Drilling: 05/02/2024	Core Size: 8 in	Boring Total Depth: 65.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.0 ft NAVD88

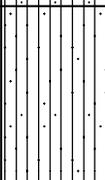
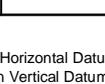
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
0 - 5	0	100	wet	FILL		Silty sand with gravel (SM), fine to medium, subangular, 10-20% silt and fine gravel. hand cleared to 5 ft [FILL] - 10YR 4/1 (dark gray), wet - no odor, no staining	 <p>Bentonite-Cement Grout 0 - 51 ft</p> <p>RISER Type: Schedule 40 PVC Diameter: 4 in 0 - 55 ft</p>
5 - 10	0	60					
10 - 12	0	97	wet			Silty sand (SM), fine to medium, subangular, 10-20% silt, 5-15% fine gravel [FILL] - 2.5Y 4/1 (dark gray), wet - no odor, no staining	
12 - 14			wet			Clayey sand (SC), fine to medium, subrounded, 15-25% clay, <10% fine gravel [FILL] - 10R 5/1 (reddish gray), wet - no odor, no staining	
14 - 16			wet			Silty sand (SM), fine to medium, subangular, <10% brick, concrete, coal and fine gravel, 10-20% silt [FILL] - 10YR 2/1 (black), wet - no odor, no staining	
16 - 18	0	98	wet	OL		Silty sand (SM), fine to medium, subangular, 10-20% silt, <10% clay, brick, concrete and coal [FILL] - 10YR 2/1 (black), wet - no odor, no staining	
18 - 20						Organic soil (OL), 35-45% peat [NATIVE] - 2.5Y 6/2 (light brownish gray), wet, dense - peaty odor, no staining	

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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 13.61 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611052.1
Date Started Drilling: 04/29/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683389.8
Date Finished Drilling: 05/02/2024	Core Size: 8 in	Boring Total Depth: 65.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.0 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
22	0	88	wet	SM		Silty sand (SM), fine to medium, subangular, 10-20% silt [NATIVE] - 10B 5/1 (bluish gray), wet, loose - no odor, no staining	
24			wet	SP-SM		Poorly graded sand with silt (SP-SM), fine to medium, subangular, 5-15% silt [NATIVE] - 10B 6/1 (bluish gray), wet, medium dense - no odor, no staining	
26	0	95	wet	SP		Poorly graded sand with silt and gravel (SP-SM), fine to medium, subangular, 10-20% fine to coarse gravel, 5-15% silt [NATIVE] - 10R 4/8 (red), wet, loose - no odor, no staining	
28			wet			Poorly graded sand (SP), fine to medium, subangular, <10% silt [NATIVE] - 10R 4/8 (red), wet, medium dense - no odor, no staining	
30	0	93	wet	SP-SM		Poorly graded sand (SP), fine to medium, subangular, <10% silt, <10% fine gravel [NATIVE] - 10R 4/8 (red), wet - no odor, yellow water	
32			wet			CH	
36	0	90	wet	CH		Fat clay (CH), <10% fine sand, 10-inch steel casing set to 40 ft bgs [Transition Zone] - 5R 4/2 (grayish red), wet, dense - no odor, no staining	
38							
40							

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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 13.61 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611052.1
Date Started Drilling: 04/29/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683389.8
Date Finished Drilling: 05/02/2024	Core Size: 8 in	Boring Total Depth: 65.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.0 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
42 - 44	0	100	wet	CL		Gravelly lean clay (CL), 25-35% fine to coarse gravel, 5-15% fine sand [Basal Till] - 2.5YR 4/4 (reddish brown), wet, dense - no odor, no staining	
46 - 48	0	30	wet	GP		Poorly graded gravel (GP), fine to coarse, subangular, <10% fine to medium sand [Basal Till] - 10R 3/1 (dark reddish gray), wet, loose - no odor, no staining	
48 - 50				ML		Silt (ML) with fine to coarse gravel and fine sand (25%), dense [Basal Till] - 5R 5/6 (Red), wet - no odor, no staining	
50 - 52			wet			Gravelly silt (ML), 30-40% fine to coarse gravel [Basal Till] - 10R 5/1 (reddish gray), wet, medium dense - no odor, no staining	
52 - 54	0	43					
54 - 56				BEDROCK		Bedrock, fine grained, thickly bedded, medium strong [LOCKATONG FORMATION] - weathered from 54 to 54.5 ft bgs - competent from 54.5 to 65 ft bgs	
56 - 58	0						
58 - 60							

Notes:
 bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

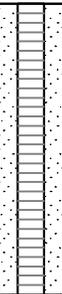


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114-MW76WR

Total Depth 65.0 ft

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 13.61 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611052.1
Date Started Drilling: 04/29/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683389.8
Date Finished Drilling: 05/02/2024	Core Size: 8 in	Boring Total Depth: 65.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.0 ft NAVD88

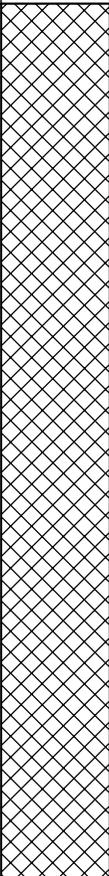
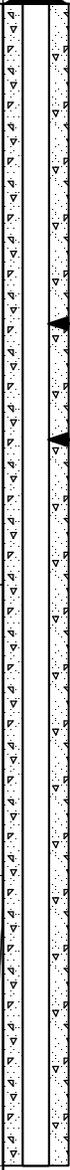
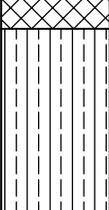
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
62	0						
64							
66						Boring terminated at 65 feet	
68							
70							
72							
74							
76							
78							
80							

Notes:

bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 13.71 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611023.4
Date Started Drilling: 05/03/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683307.5
Date Finished Drilling: 05/06/2024	Core Size: 8 in	Boring Total Depth: 65.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.2 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
0 - 10	0	100	moist	FILL		Poorly graded sand with gravel (SP), fine to medium, angular, 25-35% fine gravel, Hand clear to 5 feet [FILL] - 10YR 4/1 (dark gray), moist - no odor, no staining	 <p>Bentonite-Cement Grout 0 - 51 ft</p> <p>RISER Type: Schedule 40 PVC Diameter: 4 in 0 - 55 ft</p>
10 - 16	0	88	wet			Silty sand with gravel (SM), fine to medium, subangular, 35-45% fine gravel, 10-20% silt [FILL] - 10YR 4/1 (dark gray), wet - no odor, no staining	
16 - 20	0	97	wet wet	OL		Poorly graded sand with silt and gravel (SP-SM), fine to medium, subangular, 25-35% fine gravel, 5-15% silt [FILL] - 10YR 4/1 (dark gray), wet, loose - no odor, no staining Organic soil (OL), 20-30% peat, [MEADOW MAT] - 10YR 4/1 (dark gray), wet - no odor, no staining	

Notes:
 bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 13.71 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611023.4
Date Started Drilling: 05/03/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683307.5
Date Finished Drilling: 05/06/2024	Core Size: 8 in	Boring Total Depth: 65.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.2 ft NAVD88

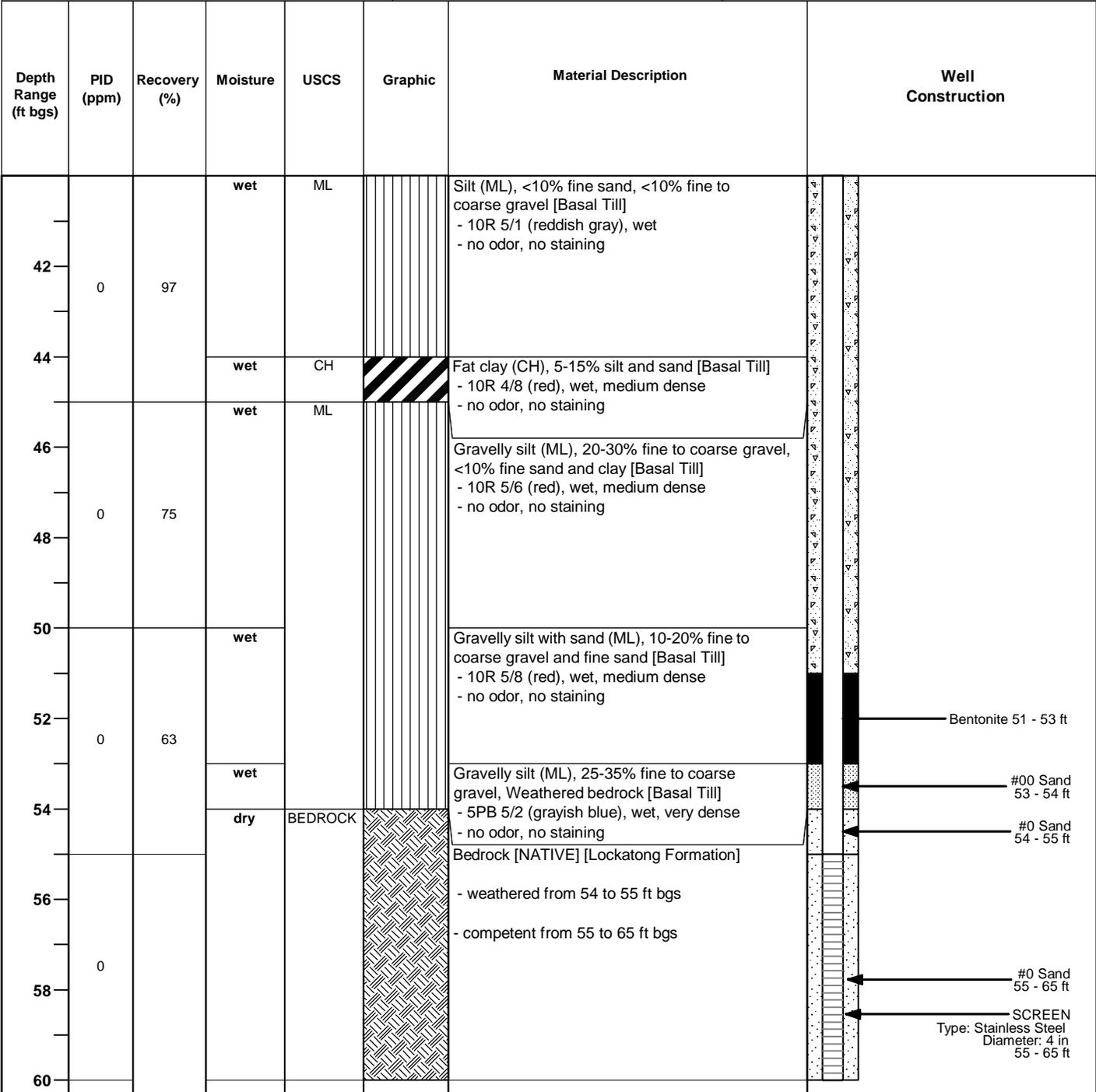
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
22	0	82	wet	OL		Organic soil (OL) [NATIVE] - 10YR 4/1 (dark gray), wet - no odor, no staining	
24			wet	SM		Silty sand (SM), fine to medium, subangular, 10-20% silt [NATIVE] - 5R 4/2 (grayish red), wet - no odor, no staining	
26	0	95	wet	SP-SM		Poorly graded sand with silt (SP-SM), fine to medium, subangular [NATIVE] - 10R 4/8 (red), wet - no odor, no staining	
28							
30	0	78	wet			Poorly graded sand with silt (SP-SM), fine to medium, subangular [NATIVE] - 10R 4/8 (red), wet, loose - no odor, yellow water	
32							
34							
36	0	92	wet	SC		Clayey sand (SC), fine, subangular, 30-40% clay [NATIVE] - 10R 5/8 (red), wet - no odor, no staining	
38			wet	CH		Fat clay (CH), 10-inch steel casing set at 40 ft bgs [Transition Zone] - 10R 4/2 (weak red / grayish red), wet - no odor, no staining	
40							

Notes:

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 13.71 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611023.4
Date Started Drilling: 05/03/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683307.5
Date Finished Drilling: 05/06/2024	Core Size: 8 in	Boring Total Depth: 65.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.2 ft NAVD88



Notes:
 bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

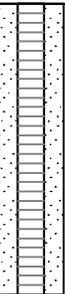


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114-MW77WR

Total Depth 65.0 ft

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 13.71 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611023.4
Date Started Drilling: 05/03/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683307.5
Date Finished Drilling: 05/06/2024	Core Size: 8 in	Boring Total Depth: 65.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.2 ft NAVD88

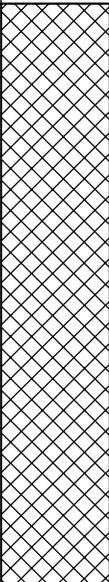
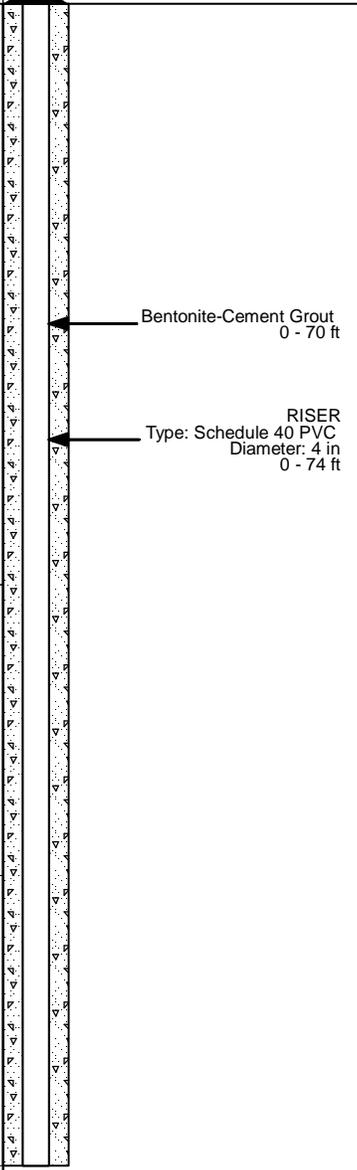
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
62	0						
64							
66						Boring terminated at 65 feet	
68							
70							
72							
74							
76							
78							
80							

Notes:

bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

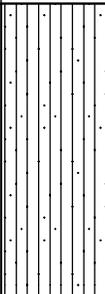
Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 12.10 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610979.7
Date Started Drilling: 05/07/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683145.3
Date Finished Drilling: 05/08/2024	Core Size: 8 in	Boring Total Depth: 84.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.5 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
0 - 10	0	33	moist	FILL		Silty sand with gravel (SM), fine to medium, subangular, 25-35% silt and fine gravel, Hand clear to 5 feet [FILL] - 2.5Y 6/2 (light brownish gray), moist - no odor, no staining	
10 - 15						Debris [FILL]	
15 - 20	0	77	moist			Silty gravel with sand (GM), fine, subangular, 20-30% silt and fine sand [FILL] - 10B 2.5/1 (bluish black), moist - no odor, black staining	

Notes:
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 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 12.10 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610979.7
Date Started Drilling: 05/07/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683145.3
Date Finished Drilling: 05/08/2024	Core Size: 8 in	Boring Total Depth: 84.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.5 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
22-24	0	88	wet	SP-SM		Poorly graded sand with silt (SP-SM), fine to medium, subangular, 5-15% silt [NATIVE] - 10R 5/6 (red), wet, loose - no odor, no staining	
26-28	0	85	wet			Poorly graded sand with silt (SP-SM), fine, subangular, 5-15% silt [NATIVE] - 10R 5/6 (red), wet, loose - no odor, no staining	
30-34	0	88	wet			Poorly graded sand with silt (SP-SM), fine, subangular, 5-15% silt [NATIVE] - 10R 5/6 (red), wet, medium dense - no odor, no staining	
36-40	0	97	wet	CH		Fat clay (CH), <10% fine sand [Transition Zone] -5R4/2 (grayish red), wet, dense - no odor, no staining - 10-inch steel casing set to 40 ft bgs	

Notes:
 bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:



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114-MW78WR

Total Depth 84.0 ft

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 12.10 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610979.7
Date Started Drilling: 05/07/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683145.3
Date Finished Drilling: 05/08/2024	Core Size: 8 in	Boring Total Depth: 84.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.5 ft NAVD88

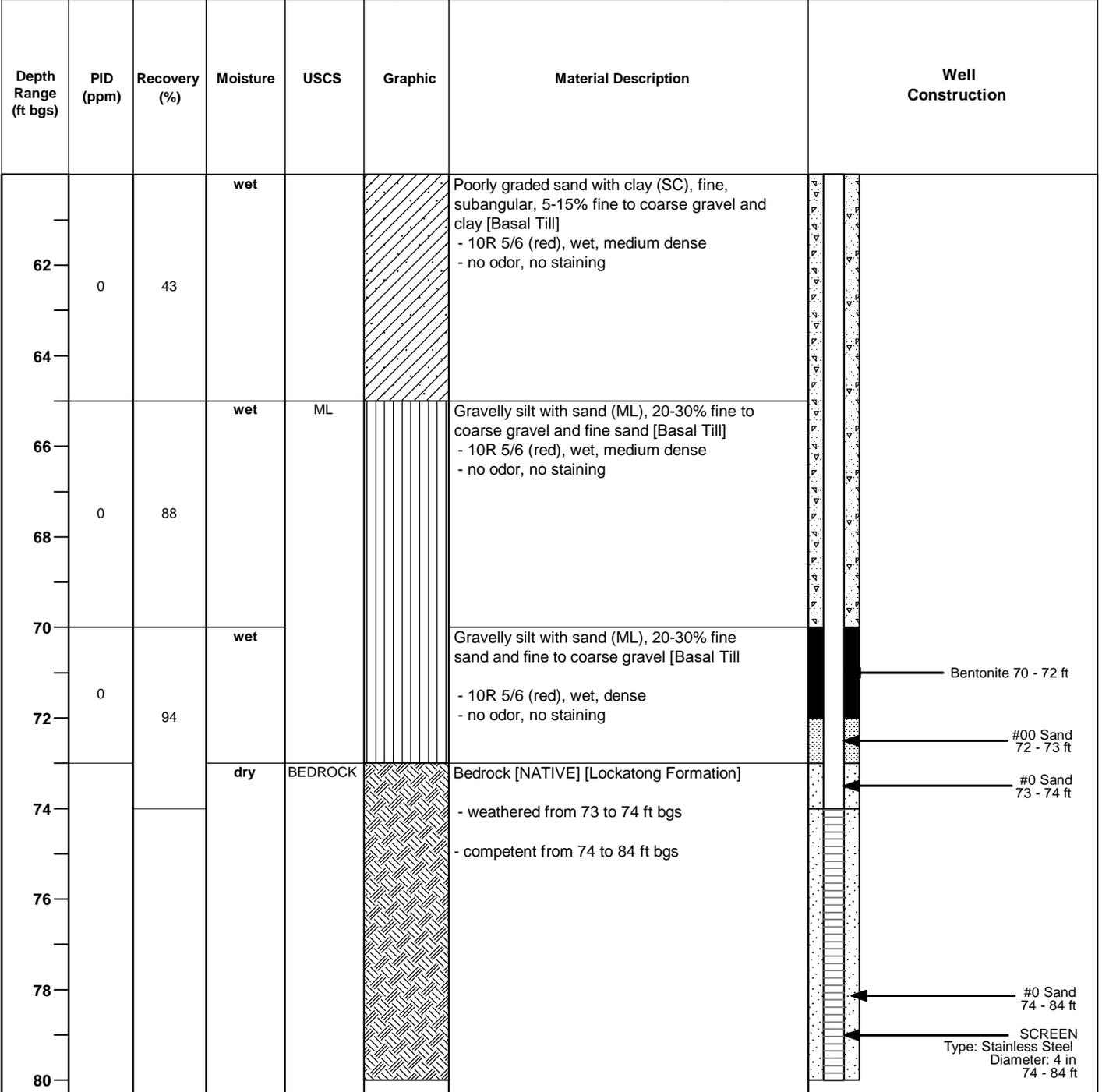
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
42	0	78	wet	SC		Clayey sand (SC), fine, subangular, 25-35% clay, Interbedded sand and clays [Transition Zone] - 5R 4/2 (grayish red), wet, medium dense - no odor, no staining	
44							
46	0	92	wet			Clayey sand (SC), fine to medium, subangular, 10-20% clay [Transition Zone] - 10R 4/4 (weak red), wet, medium dense - no odor, no staining	
48							
50	0		wet			Clayey sand (SC), fine, subangular, 15-25% clay [Transition Zone] - 10R 4/3 (weak red), wet, medium dense - no odor, no staining	
52		90	wet	SP-SM		Poorly graded sand with silt (SP-SM), fine, subangular, 5-15% silt [NATIVE] - 10R 5/6 (red), wet, medium dense - no odor, no staining	
54	0						
56	0	78	wet	SC		Clayey sand (SC), fine, subangular, 10-20% clay [Basal Till] - 10R 5/6 (red), wet, medium dense - no odor, no staining	
58							
60							

Notes:

bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 12.10 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610979.7
Date Started Drilling: 05/07/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683145.3
Date Finished Drilling: 05/08/2024	Core Size: 8 in	Boring Total Depth: 84.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.5 ft NAVD88



Notes:
 bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

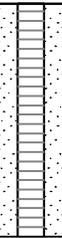


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114-MW78WR

Total Depth 84.0 ft

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 12.10 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610979.7
Date Started Drilling: 05/07/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683145.3
Date Finished Drilling: 05/08/2024	Core Size: 8 in	Boring Total Depth: 84.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.5 ft NAVD88

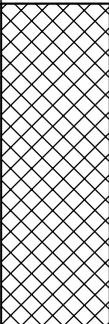
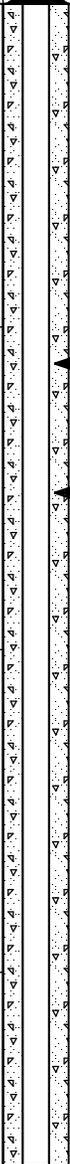
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
82							
84						Boring terminated at 84 feet	
86							
88							
90							
92							
94							
96							
98							
100							

Notes:

bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 13.9 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610899.4
Date Started Drilling: 05/23/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683455.9
Date Finished Drilling: 05/29/2024	Core Size: 8 in	Boring Total Depth: 81.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.2 ft NAVD88

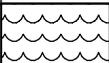
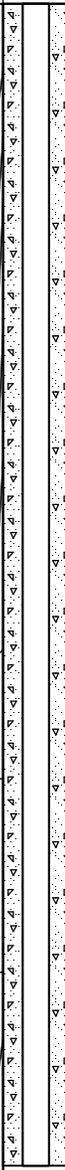
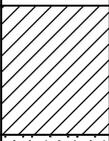
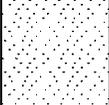
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
0 - 5	0		dry	FILL		Poorly graded sand (SP), fine to medium, some fine to coarse gravel, little silt, hand cleared to 5 ft (DGA) [FILL] - 2.5Y 5/2 (grayish brown), dry, very dense - no odor, no staining	 <p>Bentonite-Cement Grout 0 - 67 ft</p> <p>RISER Type: Schedule 40 PVC Diameter: 4 in 0 - 71 ft</p>
5 - 10	0	100	dry			Poorly graded sand (SP), fine to medium, some fine to coarse gravel, little silt (DGA) [FILL] - 2.5Y 5/2 (grayish brown), dry, very dense - no odor, no staining	
10 - 15	0	40	wet			Poorly graded sand (SP), fine to medium, some fine to coarse gravel, little silt (DGA) [FILL] - 2.5Y 5/2 (grayish brown), wet, very dense - no odor, no staining	
15 - 18	0	80	wet			Poorly graded sand (SP), fine to medium, some fine to coarse gravel, little silt (DGA) [FILL] - 7.5YR 4/3 (brown), wet, very dense - no odor, no staining	

Notes:

bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 13.9 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610899.4
Date Started Drilling: 05/23/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683455.9
Date Finished Drilling: 05/29/2024	Core Size: 8 in	Boring Total Depth: 81.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.2 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
20	0	100	wet	PT		Peat (PT), fibrous, organic, medium stiff [MEADOW MAT] - 7.5YR 2.5/1 (black), wet - no odor, no staining	
			wet	CL		Lean clay (CL), trace silt, organic, medium stiff [NATIVE] - 10YR 6/1 (gray), wet - no odor, no staining	
22	0	100	wet	SP		Lean clay (CL), trace silt, medium stiff [NATIVE] - 10YR 6/1 (gray), wet - no odor, no staining	
			wet			Poorly graded sand (SP), fine to medium, little fine to medium gravel [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
26	0	100	wet			Poorly graded sand (SP), fine to medium [NATIVE] - 10R 5/6 (red), wet, loose - no odor, no staining	
			wet			Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
28	0	100	wet			Poorly graded sand (SP), fine to medium [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
			wet			Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
30	0	100	wet			Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
			wet			Poorly graded sand (SP), fine to medium, little silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
32	0	100	wet			Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
			wet			Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
34	0	100	wet			Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
			wet			Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
36	0	100	wet			Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	

Notes:
 bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:



30 Knightsbridge Road, Piscataway, NJ 08854
732.564.3200 office telephone

114-MW79WR

Total Depth 81.0 ft

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 13.9 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610899.4
Date Started Drilling: 05/23/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683455.9
Date Finished Drilling: 05/29/2024	Core Size: 8 in	Boring Total Depth: 81.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.2 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
38	0	100		SP		Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
			wet			Poorly graded sand (SP), fine to medium, little to some silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
40			wet	CL		Lean clay (CL), trace silt, varved, stiff [Transition Zone] - 5YR 4/3 (reddish brown), wet - no odor, no staining	
			wet	SP		Poorly graded sand (SP), fine to medium, some silt [Transition Zone] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
44	0	100	wet	CL		Lean clay (CL), trace silt, varved, stiff [Transition Zone] - 5YR 4/3 (reddish brown), wet - 10-inch steel casing set to 45 ft bgs - no odor, no staining	
			wet	SP		Poorly graded sand (SP), fine to medium, little silt [Transition Zone] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
46			wet	CL		Lean clay (CL), competent, trace silt, stiff, [Transition Zone] - 5YR 4/3 (reddish brown), wet - no odor, no staining	
			wet	SP		Poorly graded sand (SP), fine to medium, little silt [Transition Zone] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
48		100	wet	CL		Lean clay (CL), trace silt, stiff [Transition Zone] - 5YR 4/3 (reddish brown), wet - no odor, no staining	
			wet	SP		Poorly graded sand (SP), fine to medium, trace silt [Transition Zone] - 5YR 4/3 (reddish brown), wet - no odor, no staining	
50	0	60	wet	CL		Lean clay (CL), trace silt, stiff [Transition Zone] - 5YR 4/3 (reddish brown), wet - no odor, yellow water	
			wet	SP		Poorly graded sand (SP), fine to medium, trace silt [Transition Zone] - 5YR 4/3 (reddish brown), wet - no odor, no staining	
52							
54	0	60					

Notes:

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Comments:

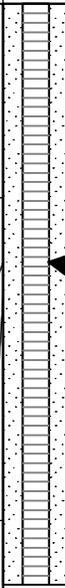
Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 13.9 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610899.4
Date Started Drilling: 05/23/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683455.9
Date Finished Drilling: 05/29/2024	Core Size: 8 in	Boring Total Depth: 81.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.2 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
56	0	100	wet	SP		Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet - no odor, no staining	
58			wet			Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet - no odor, no staining	
60	0	80	wet	BOULDERS		Poorly graded sand (SP), fine to coarse, some fine to coarse gravel, little silt, medium dense [NATIVE] - 5YR 4/3 (reddish brown), wet - no odor, no staining	
62			wet			Poorly graded sand (SP), fine to coarse, some fine to coarse gravel, little silt [BASAL TILL] - 5YR 4/3 (reddish brown), wet - no odor, no staining	
64	0	100	wet	SP		Poorly graded sand (SP), fine to medium, some silt, little fine to coarse gravel, little clay [BASAL TILL] - 5YR 4/3 (reddish brown), wet, medium dense - no odor, no staining	
66			moist			Poorly graded sand (SP), fine, some silt, little fine to coarse gravel [BASAL TILL] - 10YR 6/1 (gray), moist, dense - no odor, no staining	
68	0	100	dry	BEDROCK		Bedrock, Diabase, highly weathered, fine sand some clay, little rock fragments, little silt, [NATIVE] - 10YR 6/1 (gray), dry, dense - no odor, no staining	
70							
72							

Notes:
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 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 13.9 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610899.4
Date Started Drilling: 05/23/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683455.9
Date Finished Drilling: 05/29/2024	Core Size: 8 in	Boring Total Depth: 81.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.2 ft NAVD88

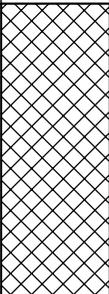
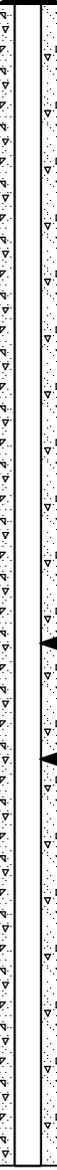
Depth Range (ft bgs)	PID	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
0		50		BEDROCK			 <p>SCREEN Type: Stainless Steel Diameter: 4 in 71 - 81 ft</p> <p>#0 Sand 71 - 81 ft</p>
74						Bedrock, Diabase, moderately weathered, broken rock pieces [NATIVE] - 10YR 6/1 (gray)	
76						Bedrock, Diabase, highly weathered, fine sand some clay, little fine to coarse rock fragments. little silt [NATIVE] - 10YR 6/1 (gray)	
78		80				Bedrock, Diabase, moderately weathered, medium rock fragments [NATIVE] - 10YR 6/1 (gray)	
80		100				Bedrock, Diabase, fine, highly weathered, some clay, little rock fragments [NATIVE] - 10YR 6/1 (gray) - no odor, no staining	
82						Boring terminated at 81 feet	
84							
86							
88							
90							

Notes:

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 10.95 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611129.3
Date Started Drilling: 06/05/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683132.3
Date Finished Drilling: 06/10/2024	Core Size: 8 in	Boring Total Depth: 94.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 11.2 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
0 - 2	0		dry	FILL		Poorly graded sand (SP), fine to medium, little fine to coarse gravel, trace silt (DGA) [FILL] - 10YR 5/6 (yellowish brown), dry - no odor, no staining	 <p>Bentonite-Cement Grout 0 - 80 ft</p> <p>RISER Type: Schedule 40 PVC Diameter: 4 in 0 - 84 ft</p>
2 - 6			dry			Poorly graded sand (SP), fine to medium, little fine to coarse gravel, trace silt (DGA) [FILL] - 10YR 5/6 (yellowish brown), dry - no odor, no staining	
6 - 8	0	100	dry			Poorly graded sand (SP), fine to medium, little fine to coarse gravel, trace silt (DGA) [FILL] - 10YR 5/6 (yellowish brown), dry, dense- no odor, black staining	
8 - 10							
10 - 12	0	100	moist			Poorly graded sand (SP), fine to medium, little fine to coarse gravel, trace silt (DGA) [FILL] - 10YR 5/6 (yellowish brown), moist, dense- no odor, black staining	
12 - 14			moist			Poorly graded sand (SP), fine to medium, little gravel, trace silt [FILL] - 10YR 6/1 (gray), moist, dense - no odor, no staining	
14 - 16			moist	PT		Peat, organic clay with fibers, 15% fibrous, stiff [MEADOW MAT] - 10YR 6/1 (gray), moist - no odor, no staining	
16 - 18	0	100	moist			Peat, organic clay with fibers, stiff [MEADOW MAT] - 10YR 6/1 (gray), moist - no odor, no staining	
18 - 20							

Notes:
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 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:



30 Knightsbridge Road, Piscataway, NJ 08854
732.564.3200 office telephone

114-MW80WR

Total Depth 94.0 ft

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 10.95 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611129.3
Date Started Drilling: 06/05/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683132.3
Date Finished Drilling: 06/10/2024	Core Size: 8 in	Boring Total Depth: 94.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 11.2 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
22	0	100	moist	SP		Peat, organic clay with fibers, 20% fibrous, stiff [MEADOW MAT]	
			wet			- 10YR 6/1 (gray), moist - no odor, no staining	
24	0	100	wet	SP		Poorly graded sand (SP), fine to medium, little fine to coarse gravel, some silt [NATIVE]	
						- 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
26	0	100	wet	SP		Poorly graded sand (SP), fine to medium [NATIVE]	
						- 5YR 4/3 (reddish brown), wet, loose - no odor, black staining	
28	0	100	wet	SP		Poorly graded sand (SP), fine to medium, trace silt [NATIVE]	
						- 5YR 4/3 (reddish brown), wet, loose - no odor, black staining	
30	0	100	wet	SP		Poorly graded sand (SP), medium, little silt [NATIVE]	
						- 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
32	0	100	wet	SP		Poorly graded sand (SP), fine to medium, little silt [NATIVE]	
						- 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
34	0	100	wet	SP		Poorly graded sand (SP), fine to medium, little silt [NATIVE]	
						- 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
36	0	100	wet	SP		Poorly graded sand (SP), fine to medium, some silt [NATIVE]	
						- 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
38	0	100	wet	SP		Poorly graded sand (SP), fine to medium, some silt [NATIVE]	
						- 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
40							

Notes:
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 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 10.95 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611129.3
Date Started Drilling: 06/05/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683132.3
Date Finished Drilling: 06/10/2024	Core Size: 8 in	Boring Total Depth: 94.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 11.2 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
42		100	wet	SP		Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
44							
46			wet			Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
48	0	100	wet	CL		Lean clay (CL), trace silt, medium stiff, 10-inch steel casing set at 50 ft [Transition Zone] - 5YR 4/3 (reddish brown), wet - no odor, no staining	
50							
52	0	100	wet			Lean clay (CL), trace silt, stiff [Transition Zone] - 5YR 4/3 (reddish brown), wet - no odor, no staining	
54							
56			wet			Lean clay (CL), trace silt, stiff [Transition Zone] - 5YR 4/3 (reddish brown), wet - no odor, no staining	
58	0	60					
			wet	SP		Poorly graded sand (SP), some fine to coarse gravel, some silt [BASAL TILL] - 5YR 4/3 (reddish brown), wet, dense - no odor, no staining	
60							

Notes:

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:



30 Knightsbridge Road, Piscataway, NJ 08854
732.564.3200 office telephone

114-MW80WR

Total Depth 94.0 ft

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 10.95 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611129.3
Date Started Drilling: 06/05/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683132.3
Date Finished Drilling: 06/10/2024	Core Size: 8 in	Boring Total Depth: 94.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 11.2 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
62	0	10	wet	SP		Poorly graded sand (SP), fine to coarse, some fine to coarse gravel, some silt [BASAL TILL] - 5YR 4/3 (reddish brown), wet, dense - no odor, no staining	
64							
66				NR		no recovery	
68		0					
70							
72	0	100	wet	SP		Poorly graded sand (SP), fine to coarse, some fine to coarse gravel, some silt [BASAL TILL] - 5YR 4/3 (reddish brown), wet, dense - no odor, no staining	
74							
76			wet			Poorly graded sand (SP), fine to coarse, some fine to coarse gravel, some silt [BASAL TILL] - 5YR 4/3 (reddish brown), wet, dense - no odor, no staining	
78	0	100	wet			Poorly graded sand (SP), fine to coarse, some fine to coarse gravel, some silt [BASAL TILL] - 5YR 4/3 (reddish brown), wet, dense - no odor, no staining	
80						Poorly graded sand (SP), fine to coarse, some fine to coarse gravel, some silt [BASAL TILL] - 5YR 4/3 (reddish brown), wet, dense - no odor, no staining	

Notes:

bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

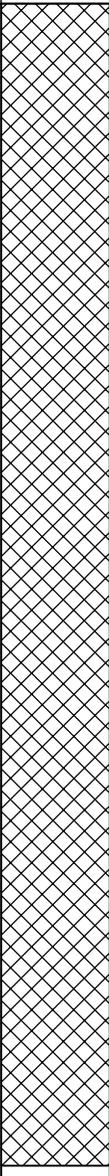
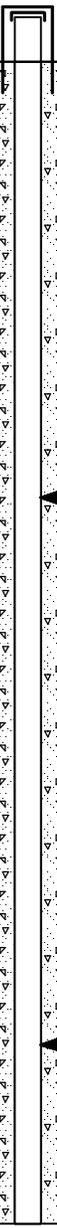
Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 10.95 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611129.3
Date Started Drilling: 06/05/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683132.3
Date Finished Drilling: 06/10/2024	Core Size: 8 in	Boring Total Depth: 94.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 11.2 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
82	0	20		NR		no recovery	Bentonite 80 - 82 ft
84				BEDROCK		Bedrock, competent, rock pieces [STOCKTON FORMATION] - 10YR 6/1 (gray), hard - weathered from 83 ft	#00 Sand 82 - 83 ft
86						Bedrock, competent, rock pieces [STOCKTON FORMATION] - 10YR 6/1 (gray), hard	#0 Sand 83 - 84 ft
88		100					
90						Bedrock, competent, rock pieces [STOCKTON FORMATION] - 10YR 6/1 (gray), hard	#0 Sand 84 - 94 ft
92		20					SCREEN Type: Stainless Steel Diameter: 4 in 84 - 94 ft
94						Boring terminated at 94 feet	
96							
98							
100							

Notes:
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 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Bedrock Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 15.45 ft NAVD88
Project Number: 60729481	Drilling Method: Terra Sonic, Fratse XL Rig	Coordinates (NJSPNAD83) x: 610795.9
Date Started Drilling: 11/14/2024	Rig Type: Terra Sonic, Fratse XL Rig	Coordinates (NJSPNAD83) y: 683046.5
Date Finished Drilling: 11/21/2024	Core Size: 6 in	Boring Total Depth: 125.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 6 in
Physical Location: HCC Site 114		Surface Elevation: 12.2 ft NAVD88

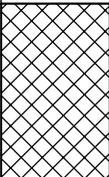
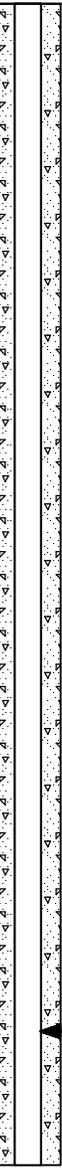
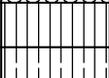
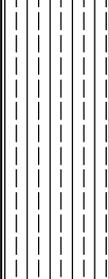
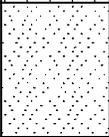
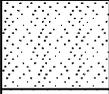
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
0 - 2	0		dry	FILL		Well-graded sand (SW), fine to coarse, some fine to coarse gravel, trace silt, hand cleared to 5 ft (DGA) [FILL] - 2.5Y 6/2 (light brownish gray), dry, very dense - no odor, no staining	 <p>RISER Type: Threaded Steel Casing Diameter: 6 in 0 - 100 ft bgs</p> <p>Bentonite-Cement Grout 0 - 100 ft bgs</p>
2 - 6	0		dry			Well-graded sand (SW), fine to coarse, some fine gravel, trace silt (DGA) [FILL] - 10YR 5/1 (gray), dry, very dense - no odor, no staining	
6 - 8	1.1	80	dry			Well-graded sand (SW), fine to medium, trace silt, trace fine to coarse gravel [FILL] - 10YR 2/1 (black), dry - hydrocarbon odor, black staining	
8 - 10	1		dry			Well-graded sand (SW), fine to medium, some silt [FILL] - 2.5YR 4/3 (reddish brown), dry, very dense - hydrocarbon odor, black staining	
10 - 12	1.7	80	wet			Well-graded sand (SW), fine to medium, trace silt, little ash and cinders [FILL] - 10YR 2/1 (black), wet, loose - no odor, black staining	

Notes:

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Bedrock Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 15.45 ft NAVD88
Project Number: 60729481	Drilling Method: Terra Sonic, Fratse XL Rig	Coordinates (NJSPNAD83) x: 610795.9
Date Started Drilling: 11/14/2024	Rig Type: Terra Sonic, Fratse XL Rig	Coordinates (NJSPNAD83) y: 683046.5
Date Finished Drilling: 11/21/2024	Core Size: 6 in	Boring Total Depth: 125.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 6 in
Physical Location: HCC Site 114		Surface Elevation: 12.2 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
14	1.7	80				Well-graded sand (SW), fine to medium, trace silt, little ash and cinders [FILL] - 10YR 2/1 (black), wet, loose - no odor, black staining	
16	0		moist			Well-graded sand (SW), fine to medium, trace silt, little ash and cinders [FILL] - 10YR 2/1 (black), moist, loose - no odor, black staining	
18	0	100	moist	PT		Peat (PT), with fibers (80% fibers) [MEADOW MAT] - 10YR 5/1 (gray), moist, hard - no odor, no staining	
20	0		moist	ML		Silt (ML), trace fine sand [NATIVE] - 10YR 5/1 (gray), moist, soft - no odor, no staining	
22	0	100	moist	OL		Organic soil (OL), medium stiff, organic clay [NATIVE] - 10YR 5/1 (gray), moist - no odor, no staining	
24	0		wet	SP		Poorly graded sand (SP), fine to coarse, trace silt, little fine to coarse gravel [NATIVE] - 10YR 7/6 (yellow), wet, loose - no odor, no staining	
26	0	100	wet	SW			

RISER
Type: Threaded Steel Casing
Diameter: 10 in
0 - 75 ft bgs

Notes:
 bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Bedrock Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 15.45 ft NAVD88
Project Number: 60729481	Drilling Method: Terra Sonic, Fratse XL Rig	Coordinates (NJSPNAD83) x: 610795.9
Date Started Drilling: 11/14/2024	Rig Type: Terra Sonic, Fratse XL Rig	Coordinates (NJSPNAD83) y: 683046.5
Date Finished Drilling: 11/21/2024	Core Size: 6 in	Boring Total Depth: 125.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 6 in
Physical Location: HCC Site 114		Surface Elevation: 12.2 ft NAVD88

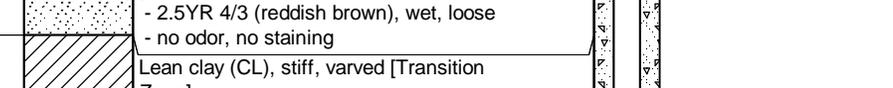
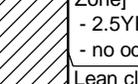
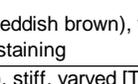
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
0						Well-graded sand (SW), fine to medium, trace silt [NATIVE] - 10YR 7/6 (yellow), wet - no odor, no staining	
28	0	100	wet			Well-graded sand (SW), fine to medium, trace silt [NATIVE] - 2.5YR 4/3 (reddish brown), wet - no odor, no staining	
30			wet			Poorly-graded sand (SW), fine, trace silt [NATIVE] - 2.5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
32	0	100				Poorly-graded sand (SW), fine, trace silt [NATIVE] - 2.5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
34			wet			Poorly-graded sand (SW), fine, trace silt [NATIVE] - 2.5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
36	0	80				Poorly-graded sand (SW), fine, trace silt [NATIVE] - 2.5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
38	0		wet	CL		Lean clay (CL), stiff, varved [Transition Zone] - 2.5YR 4/3 (reddish brown), wet - no odor, no staining	

Notes:

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Bedrock Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 15.45 ft NAVD88
Project Number: 60729481	Drilling Method: Terra Sonic, Fratse XL Rig	Coordinates (NJSPNAD83) x: 610795.9
Date Started Drilling: 11/14/2024	Rig Type: Terra Sonic, Fratse XL Rig	Coordinates (NJSPNAD83) y: 683046.5
Date Finished Drilling: 11/21/2024	Core Size: 6 in	Boring Total Depth: 125.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 6 in
Physical Location: HCC Site 114		Surface Elevation: 12.2 ft NAVD88

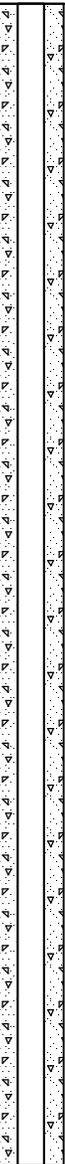
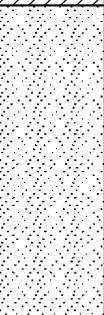
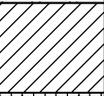
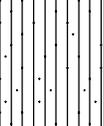
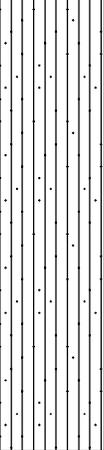
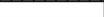
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
40	0	80		CL		Lean clay (CL), stiff, varved [Transition Zone] - 2.5YR 4/3 (reddish brown), wet - no odor, no staining	
	0		wet			Lean clay (CL), stiff, varved [Transition Zone] - 2.5YR 4/3 (reddish brown), wet - no odor, no staining	
42	0	100		SW		Poorly-graded sand (SW), fine, trace silt [Transition Zone] - 2.5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
	0		wet	CL		Lean clay (CL), stiff, varved [Transition Zone] - 2.5YR 4/3 (reddish brown), wet - no odor, no staining	
44	0			SW		Poorly-graded sand (SW), fine, trace silt [Transition Zone] - 2.5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
	0		wet	CL		Lean clay (CL), stiff, varved [Transition Zone] - 2.5YR 4/3 (reddish brown), wet - no odor, no staining	
46	0	100		SW		Poorly-graded sand (SW), fine, trace silt [Transition Zone] - 2.5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
	0		wet	CL		Lean clay (CL), stiff, varved [Transition Zone] - 2.5YR 4/3 (reddish brown), wet - no odor, no staining	
48	0			SW		Poorly-graded sand (SW), fine, trace silt [Transition Zone] - 2.5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
	0		wet	CL		Lean clay (CL), stiff, varved [Transition Zone] - 2.5YR 4/3 (reddish brown), wet - no odor, no staining	
50	0	100		SW		Poorly-graded sand (SW), fine, trace silt [Transition Zone] - 2.5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
	0		wet	CL		Lean clay (CL), stiff, varved [Transition Zone] - 2.5YR 4/3 (reddish brown), wet - no odor, no staining	
52							

Notes:

bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
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Comments:

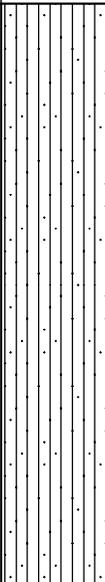
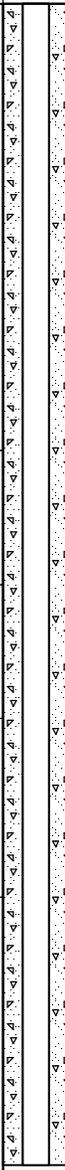
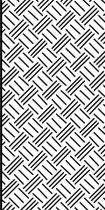
Project Name: Bedrock Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 15.45 ft NAVD88
Project Number: 60729481	Drilling Method: Terra Sonic, Fratse XL Rig	Coordinates (NJSPNAD83) x: 610795.9
Date Started Drilling: 11/14/2024	Rig Type: Terra Sonic, Fratse XL Rig	Coordinates (NJSPNAD83) y: 683046.5
Date Finished Drilling: 11/21/2024	Core Size: 6 in	Boring Total Depth: 125.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 6 in
Physical Location: HCC Site 114		Surface Elevation: 12.2 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
54	0	100	wet	SW		Lean clay (CL), medium stiff, trace silt [Transition Zone] - 2.5YR 4/3 (reddish brown), wet - no odor, no staining	
56	0	80	wet	CL		Poorly-graded sand (SW), fine, trace silt [Transition Zone] - 2.5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
58	0		wet	SM		Poorly-graded sand (SW), fine, trace silt, some clay [Transition Zone] - 2.5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
60	0	60	wet	CL		Lean clay (CL), stiff, varved [Transition Zone] - 2.5YR 4/3 (reddish brown), wet - no odor, no staining	
62	0		wet	SM		Fine to coarse sand (SM), some silt, little fine to coarse gravel [BASAL TILL] - 2.5YR 4/3 (reddish brown), wet, dense - no odor, no staining	
64	0		wet			Well-graded sand (SM), fine to coarse, fine to coarse gravel, trace cobbles [BASAL TILL] - 2.5YR 4/3 (reddish brown), wet, dense - no odor, no staining	

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Comments:

Project Name: Bedrock Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 15.45 ft NAVD88
Project Number: 60729481	Drilling Method: Terra Sonic, Fratse XL Rig	Coordinates (NJSPNAD83) x: 610795.9
Date Started Drilling: 11/14/2024	Rig Type: Terra Sonic, Fratse XL Rig	Coordinates (NJSPNAD83) y: 683046.5
Date Finished Drilling: 11/21/2024	Core Size: 6 in	Boring Total Depth: 125.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 6 in
Physical Location: HCC Site 114		Surface Elevation: 12.2 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
66	0	80	wet			Well-graded sand (SM), fine to coarse, some fine to coarse gravel, trace cobbles [BASAL TILL] - 2.5YR 4/3 (reddish brown), wet, dense - no odor, no staining	
68							
70			wet			Well-graded sand (SM), fine to coarse, fine to coarse gravel, trace cobbles [BASAL TILL] - 2.5YR 4/3 (reddish brown), wet, dense - no odor, no staining	
72		80		BEDROCK		Bedrock, highly weathered [LOCKATONG FORMATION] - 10YR 5/2 (grayish brown)	
74						Bedrock, moderately weathered, fine grained, faintly laminated, 10-inch steel casing set to 75 ft bgs [LOCKATONG FORMATION] - 10YR 5/2 (grayish brown)	
76		70	moist			Bedrock, highly weathered, some rounded fine to coarse gravel in a sand/clay matrix [LOCKATONG FORMATION] - 10YR 6/1 (gray), moist	
78							

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Comments:

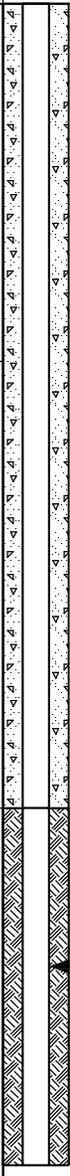
Project Name: Bedrock Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 15.45 ft NAVD88
Project Number: 60729481	Drilling Method: Terra Sonic, Fratse XL Rig	Coordinates (NJSPNAD83) x: 610795.9
Date Started Drilling: 11/14/2024	Rig Type: Terra Sonic, Fratse XL Rig	Coordinates (NJSPNAD83) y: 683046.5
Date Finished Drilling: 11/21/2024	Core Size: 6 in	Boring Total Depth: 125.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 6 in
Physical Location: HCC Site 114		Surface Elevation: 12.2 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
80		70				Bedrock, highly weathered, some rounded fine to coarse gravel in a sand/clay matrix [LOCKATONG FORMATION] - 10YR 6/1 (gray), moist	
						Bedrock, moderately weathered, fine grained [LOCKATONG FORMATION] - 10YR 5/2 (grayish brown)	
82		40				Bedrock, highly weathered, fine to coarse broken rock [LOCKATONG FORMATION] - 10YR 6/1 (gray)	
84						Bedrock, moderately weathered, fine grained [LOCKATONG FORMATION] - 10YR 6/1 (gray)	
86		30				Bedrock, highly weathered, decomposed, fine to coarse broken rock [LOCKATONG FORMATION] - 10YR 6/1 (gray)	
90		100					

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Date Finished Drilling: 11/21/2024	Core Size: 6 in	Boring Total Depth: 125.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 6 in
Physical Location: HCC Site 114		Surface Elevation: 12.2 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
92		100				Bedrock, highly weathered, decomposed, fine to coarse broken rock in a sand/clay matrix [LOCKATONG FORMATION] - 10YR 6/1 (gray)	
94						Bedrock, highly weathered, decomposed, broken rock in a sand/clay matrix, 6-inch steel casing set to 100 ft bgs [LOCKATONG FORMATION] - 10YR 6/1 (gray)	
96		70				Bedrock, angular, broken rock with sand/clay matrix, hard drilling [LOCKATONG FORMATION] - 10YR 6/1 (gray)	
98							
100							
102		60					5 3/4-inch open borehole in rock: 100 - 125 ft bgs
104							

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Comments:

Project Name: Bedrock Remedial Investigation	Drilling Company: ADT	Top of PVC Elevation: 15.45 ft NAVD88
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Date Finished Drilling: 11/21/2024	Core Size: 6 in	Boring Total Depth: 125.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 6 in
Physical Location: HCC Site 114		Surface Elevation: 12.2 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
106		60				Bedrock, angular, broken rock with sand/clay matrix, hard drilling [LOCKATONG FORMATION] - 10YR 6/1 (gray)	
108		60				Bedrock, laminated, large angular broken pieces, hard drilling [LOCKATONG FORMATION] - 10YR 6/1 (gray)	
110						Bedrock, large angular broken pieces, hard drilling [LOCKATONG FORMATION] - 10YR 6/1 (gray)	
112		60				Bedrock, small angular broken pieces, hard drilling [LOCKATONG FORMATION] - 10YR 6/1 (gray)	
114						Bedrock, large angular and disc pieces of broken rock, very hard drilling [LOCKATONG FORMATION] - 10YR 6/1 (gray)	
116		20					

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Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 6 in
Physical Location: HCC Site 114		Surface Elevation: 12.2 ft NAVD88

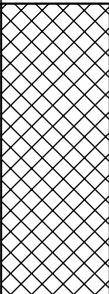
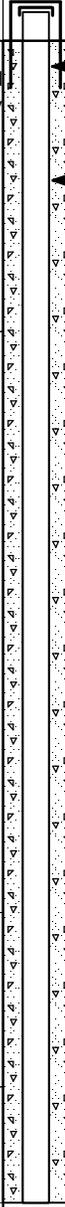
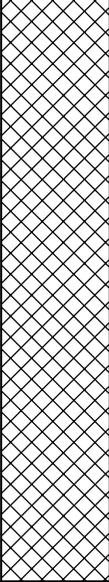
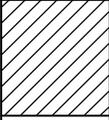
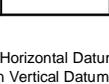
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
118		20				Bedrock, large angular and disc pieces of broken rock, very hard drilling [LOCKATONG FORMATION] - 10YR 6/1 (gray)	
120						Bedrock, large angular pieces of broken rock, very hard drilling [LOCKATONG FORMATION] - 10YR 6/1 (gray)	
122		60				Boring terminated at 125 feet	
124							
126							
128							
130							

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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 17.43 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610908.2
Date Started Drilling: 05/13/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683443.7
Date Finished Drilling: 05/15/2024	Core Size: 8 in	Boring Total Depth: 95.0 ft
Logged By: Steve Wright	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	PID	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
0 - 2	0		dry	FILL		Poorly graded sand (SP), fine to coarse, some fine to coarse gravel, some silt, cobbles, trace wire and wood fragments, fine to coarse gravel, little silt, dry from 0 ft to 1 ft, hand cleared to 5 ft [FILL] - 10YR 6/1 (gray), dry - no odor, no staining	 <p>Bentonite-Cement Grout 0 - 77 ft</p> <p>RISER Type: Schedule 40 PVC Diameter: 4 in 0 - 81 ft</p>
2 - 6	0	80	wet			Poorly graded sand (SP), fine to coarse, some silt, some fine to coarse gravel, cobbles [FILL] - 10YR 6/1 (gray), wet - no odor, no staining	
6 - 10	0	76.6					
10 - 16	0		wet	PT		Peat, friable, some clay [MEADOW MAT] - 5YR 2.5/1 (black), wet - moderate organic odor, no staining	
16 - 18	0	80	wet	CL		Lean clay (CL), organics [NATIVE] - 10YR 6/1 (gray), wet - slight organic odor, no staining	
18 - 20							

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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 17.43 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610908.2
Date Started Drilling: 05/13/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683443.7
Date Finished Drilling: 05/15/2024	Core Size: 8 in	Boring Total Depth: 95.0 ft
Logged By: Steve Wright	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	PID	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
22	0	80	wet			Lean clay (CL), trace fine to coarse gravel [NATIVE] - 5PB 5/2 (grayish blue), wet - no odor, no staining	
24			wet	SW		Well-graded sand (SW), fine to coarse, some silt, some fine to coarse gravel, cobbles [NATIVE] - 10R 4/8 (red), wet, dense - no odor, no staining	
26							
28	0	80	wet	SP		Poorly graded sand (SP), fine, trace fine to coarse clay [NATIVE] - 10R 4/8 (red), wet - no odor, no staining	
30			wet			Poorly graded sand (SP), fine [NATIVE] - 10R 4/8 (red), wet - no odor, no staining	
32	0	60					
34							
36							
38	0	60					
40							

Notes:

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Comments:



30 Knightsbridge Road, Piscataway, NJ 08854
732.564.3200 office telephone

114-PW-01WR

Total Depth 95.0 ft

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 17.43 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610908.2
Date Started Drilling: 05/13/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683443.7
Date Finished Drilling: 05/15/2024	Core Size: 8 in	Boring Total Depth: 95.0 ft
Logged By: Steve Wright	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	PID	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
42	0	100	wet	CL		Lean clay (CL) [Transition Zone] - 5YR 5/2 (reddish gray / pale brown), wet - no odor, no staining	
44							
46		100	wet			Lean clay (CL), microbeds of fine sand little fine to coarse gravel [Transition Zone] - 5YR 5/2 (reddish gray / pale brown), wet - no odor, no staining	
48							
50							
52	0	100	wet			Lean clay (CL) [Transition Zone] - 5YR 5/2 (reddish gray / pale brown), wet, dense - no odor, no staining	
54			wet	SP		Poorly graded sand (SP), fine to medium, little clay from 53 to 53.5 ft [NATIVE] - 5YR 5/2 (reddish gray / pale brown), wet- no odor, no staining	
56							
58	0	90	wet			Poorly graded sand (SP), fine, some fine to coarse gravel, cobbles [NATIVE] - 5YR 5/2 (reddish gray / pale brown), wet - no odor, no staining	
			wet	ML		Silt (ML), some fine to coarse gravel, cobbles [Basal Till]- 5YR 4/3 (reddish brown), wet, dense - no odor, no staining	
60							

Notes:

bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 17.43 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610908.2
Date Started Drilling: 05/13/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683443.7
Date Finished Drilling: 05/15/2024	Core Size: 8 in	Boring Total Depth: 95.0 ft
Logged By: Steve Wright	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	PID	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
62	0	20	wet	SP		Poorly graded sand (SP), fine, some fine to coarse gravel, cobbles [Basal Till] - 5YR 5/2 (reddish gray / pale brown), wet, loose - no odor, no staining	
66	0	96.6					
70	0	65					
74	0	65					
76	0	75	wet	ML		Silt (ML), some fine to coarse sand, some fine to coarse gravel, numerous cobbles [Basal Till] - 10YR 6/2 (light brownish gray / pale yellowish brown), wet, dense - no odor, no staining	
78							Bentonite 77 - 79 ft
80							#00 Sand 79 - 80 ft

Notes:
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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 17.43 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610908.2
Date Started Drilling: 05/13/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683443.7
Date Finished Drilling: 05/15/2024	Core Size: 8 in	Boring Total Depth: 95.0 ft
Logged By: Steve Wright	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 13.9 ft NAVD88

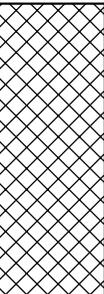
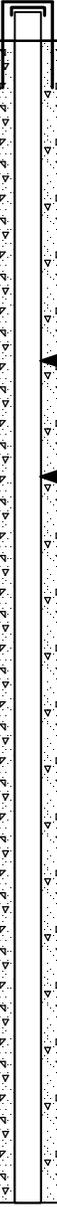
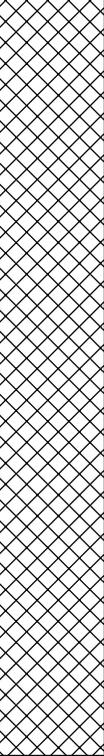
Depth Range (ft bgs)	PID	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
82	0	100	wet	BEDROCK		Bedrock, some fine to coarse sand some fine to coarse gravel, cobbles, cobbles match presumed bedrock [LOCKATONG FORMATION] - 10GY 4/1 (dark greenish gray), wet, dense - no odor, no staining - weathered from 80 to 90 ft	#0 Sand 80 - 81 ft
84							
86	0	93.2	wet			Bedrock, some fine to coarse gravel, numerous rock fragments [LOCKATONG FORMATION] - 10YR 5/1 (gray), wet - no odor, no staining - weathered	#0 Sand 81 - 91 ft SCREEN Type: Stainless Steel Diameter: 4 in 81 - 91 ft
88							
90							
92	0	60				Bedrock [LOCKATONG FORMATION] - 7.5YR 4/1 (dark gray) - competent from 90 to 95 ft	#00 Sand 91 - 92 ft
94							Bentonite 92 - 95 ft
96						Boring terminated at 95 feet	
98							
100							

Notes:

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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 18.25 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610933.8
Date Started Drilling: 05/16/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683486.3
Date Finished Drilling: 05/21/2024	Core Size: 8 in	Boring Total Depth: 93.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.9 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
2	0	100	moist	FILL		Poorly graded sand (SM), fine to coarse, some silt, some fine to coarse gravel, crushed stone with fabric liner at 1 ft and 1.5 ft, crushed stone from 1.5 ft to 2 ft, grout from 2 ft to 4 ft, hand cleared to 5 ft [FILL] - 10YR 5/1 (gray), moist - no odor, no staining	 <p>Bentonite-Cement Grout 0 - 81 ft</p> <p>RISER Type: Schedule 40 PVC Diameter: 4 in 0 - 83 ft</p>
4							
6	0	70	moist			Poorly graded sand (SM), fine to coarse, some silt, some fine to coarse gravel, trace brick fragments and wet from 10 ft [FILL] - 10YR 5/1 (gray), moist - no odor, no staining	
8							
10							
12	0	80					
14							
16	0	70					
18			wet	PT		Peat (PT), some clay [MEADOW MAT] - 10YR 2/1 (black), wet - slight organic odor, no staining	
	0.2		wet	CL		Lean clay (CL) [NATIVE] - 10YR 5/1 (gray), wet - no odor, no staining	
20							

Notes:
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Comments:

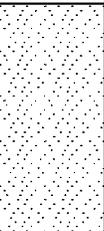
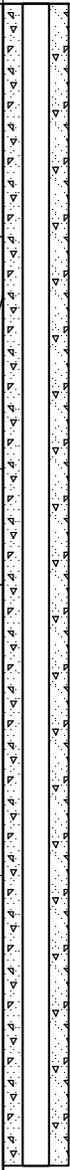
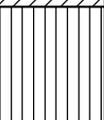
Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 18.25 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610933.8
Date Started Drilling: 05/16/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683486.3
Date Finished Drilling: 05/21/2024	Core Size: 8 in	Boring Total Depth: 93.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.9 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
22	0	70	wet	SM		Well-graded sand (SM), fine to coarse, some silt, little fine to coarse gravel [NATIVE]	
			wet	CL		- 10YR 5/1 (gray), wet - no odor, no staining Lean clay (CL), some fine sand, trace fine to coarse gravel, organics at 23.5 ft [NATIVE]	
24	0	83	wet			Lean clay (CL), some fine sand, trace fine to coarse gravel [NATIVE]	
26			wet			- 10BG 5/1 (greenish gray), wet - no odor, no staining	
28	0	83	wet			Lean clay (CL), some fine to coarse sand, some silt, some fine to coarse gravel, cobbles [NATIVE]	
30			wet			- 10R 4/8 (red), wet - no odor, no staining	
32	0	67	wet	SP		Poorly graded sand (SP) [NATIVE]	
34	0	67				- 10R 4/8 (red), wet - no odor, yellow water	
36							
38	0	67					
40							

Notes:
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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 18.25 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610933.8
Date Started Drilling: 05/16/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683486.3
Date Finished Drilling: 05/21/2024	Core Size: 8 in	Boring Total Depth: 93.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.9 ft NAVD88

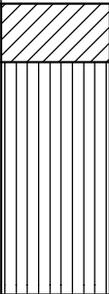
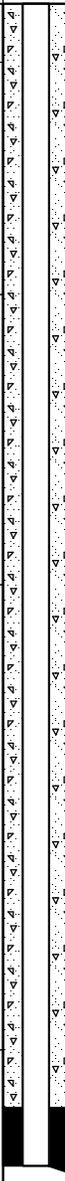
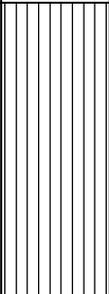
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
42	0	70					
44			wet	CL		Lean clay (CL) [Transition Zone] - 10R 5/1 (reddish gray), wet - no odor, no staining	
46			wet			Lean clay (CL), microbeds of fine sand [Transition Zone] - 10R 5/1 (reddish gray), wet - no odor, no staining	
48	0	73				Silt (ML) [Transition Zone] - 10R 4/8 (red), wet - no odor, yellow water	
50			wet	CL		Lean clay (CL), 2" fine sand at 54 ft, black clay lens at 53.5 ft [Transition Zone] - 10R 5/1 (reddish gray), wet - no odor, no staining	
52	0	93					
54			wet			Lean clay (CL) [Transition Zone] - 10R 5/1 (reddish gray), wet - no odor, no staining	
56							
58	0	93					
60							

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Comments:

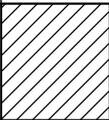
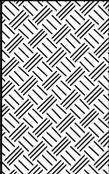
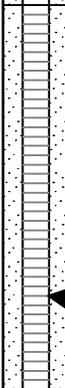
Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 18.25 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610933.8
Date Started Drilling: 05/16/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683486.3
Date Finished Drilling: 05/21/2024	Core Size: 8 in	Boring Total Depth: 93.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.9 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
62	0	67	wet	ML		Silt (ML), some fine to coarse sand, some fine to coarse gravel, cobbles [Basal Till] - 10R 5/1 (reddish gray), wet - no odor, no staining	
66		0		Not Recorded		- no recovery (cobble stuck in sampler) from 65 to 70 ft	
72	0	65	wet	ML		Silt (ML), some fine to coarse sand, some fine to coarse gravel, cobbles [Basal Till] - 10R 5/1 (reddish gray), wet, dense - no odor, yellow water	
78	0	100	wet	CL		Lean clay (CL), some fine to coarse sand, some fine to coarse gravel, cobbles [Basal Till] - 10BG 5/1 (greenish gray), wet, very dense- no odor, no staining	
80							

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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 18.25 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610933.8
Date Started Drilling: 05/16/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683486.3
Date Finished Drilling: 05/21/2024	Core Size: 8 in	Boring Total Depth: 93.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.9 ft NAVD88

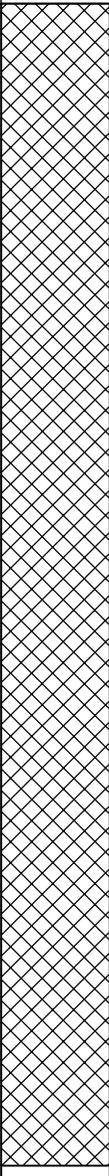
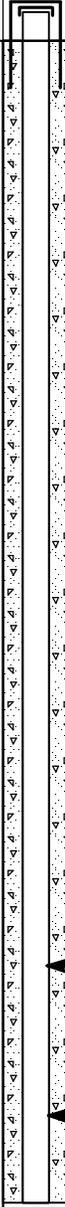
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
82	0	100	wet	BEDROCK		Bedrock [LOCKATONG FORMATION] - 10YR 4/1 (dark gray), wet - no odor, yellow water	
84						- weathered from 82 to 84 ft bgs - competent from 84 to 93 ft bgs	
86							
88	0	80					
90							
92	0						
94						Boring terminated at 93 feet	
96							
98							
100							

Notes:

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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 18.14 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610958.5
Date Started Drilling: 05/24/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683529.8
Date Finished Drilling: 05/29/2024	Core Size: 8 in	Boring Total Depth: 91.0 ft
Logged By: Steve Wright	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.9 ft NAVD88

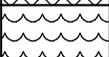
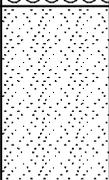
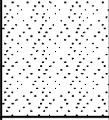
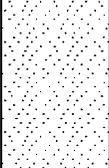
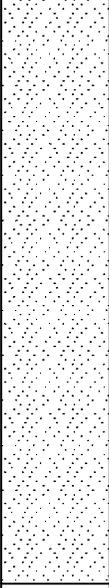
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
0 - 5	0	100	wet	FILL		Well-graded sand (SW), fine to coarse, some fine to coarse gravel, some silt, cobbles, hand cleared to 5 ft [FILL] - 2.5Y 4/1 (dark gray), wet - no odor, no staining	 <p>Bentonite-Cement Grout 0 - 77 ft</p> <p>RISER Type: Schedule 40 PVC Diameter: 4 in 0 - 81 ft</p>
5 - 10	0	80					
10 - 15	0	97					
15 - 20							

Notes:

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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 18.14 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610958.5
Date Started Drilling: 05/24/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683529.8
Date Finished Drilling: 05/28/2024	Core Size: 8 in	Boring Total Depth: 91.0 ft
Logged By: Steve Wright	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.9 ft NAVD88

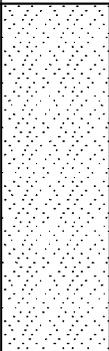
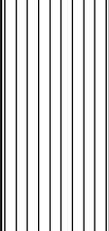
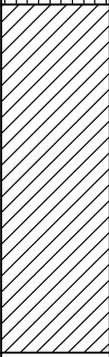
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
				FILL			
22	0	100	wet	PT		Peat, friable with Clay, 2.5YR 4/1 (gray) [MEADOW MAT]	
24			wet	SW		- 7.5YR 3/3 (dark brown), wet - no odor, no staining	
26						Well-graded sand (SW), fine to coarse, some silt, some fine to coarse gravel, cobbles [NATIVE] - 10YR 5/1 (gray), wet - no odor, no staining	
28	0	100	wet	SP		Well-graded sand (SW), fine to coarse, some fine to coarse gravel, some silt [NATIVE] - 10R 3/4 (dusky red / dark reddish brown), wet - no odor, no staining	
30						Poorly graded sand (SP), fine to medium, little fine to coarse gravel [NATIVE] - 2.5YR 4/3 (reddish brown), wet - no odor, no staining	
32	0	83	wet			Poorly graded sand (SP), fine [NATIVE] - 2.5YR 4/3 (reddish brown), wet - no odor, yellow water	
34							
36							
38	0	77					
40							

Notes:

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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 18.14 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610958.5
Date Started Drilling: 05/24/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683529.8
Date Finished Drilling: 05/28/2024	Core Size: 8 in	Boring Total Depth: 91.0 ft
Logged By: Steve Wright	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.9 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction	
42	0	100						
46	0	87	wet	ML		Silt (ML) [Transition Zone] - 2.5Y 4/1 (dark gray), wet - no odor, no staining		
48			wet	CL		Lean clay (CL) [Transition Zone] - 2.5Y 4/1 (dark gray), wet - no odor, no staining		
50			wet	ML		Silt (ML) [Transition Zone] - 2.5YR 4/3 (reddish brown), wet - no odor, no staining		
52	0	80	wet			Silt (ML) [Transition Zone] - 2.5YR 4/3 (reddish brown), wet- no odor, no staining		
54			wet	CL		Lean clay (CL), microbeds, fine sand [Transition Zone] - 2.5YR 5/1 (reddish gray), wet - no odor, no staining		
56	0	97						
58								
60								

Notes:
 bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
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Comments:

HEC-10 114-PW-03WR
 114-PW-03WR-01

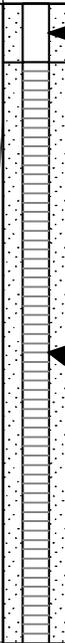
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Date Started Drilling: 11/11/11	Rig Type: V ()	Coordinates (NJSPNAD83) y: 114-PW-03WR
Date Finished Drilling: 11/11/11	Core Size: 1 1/2	Boring Total Depth: 114.00 -c
Logged By: J 114-PW-03WR	Project Manager: U () ()	Well Diameter (inches): 1 1/2
Physical Location: J 114-PW-03WR		Surface Elevation: 18.14 -0.0000

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
62-64	€	1€	wet	UY	[Stippled Pattern]	Y 114-PW-03WR (114-PW-03WR) d 114-PW-03WR (114-PW-03WR) a 114-PW-03WR (114-PW-03WR) E 114-PW-03WR (114-PW-03WR) E 114-PW-03WR (114-PW-03WR)	[Well Construction Diagram]
66-68	€	F€€			[Stippled Pattern]		
70-72	€	1€			[Stippled Pattern]		
74-76					[Stippled Pattern]		
78-80	€	F€€			[Stippled Pattern]		

Notes:
 a 114-PW-03WR (114-PW-03WR)
 O 114-PW-03WR (114-PW-03WR)
 P 114-PW-03WR (114-PW-03WR)
 U 114-PW-03WR (114-PW-03WR)
 V 114-PW-03WR (114-PW-03WR)
 W 114-PW-03WR (114-PW-03WR)
 X 114-PW-03WR (114-PW-03WR)
 Y 114-PW-03WR (114-PW-03WR)

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 18.14 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610958.5
Date Started Drilling: 05/24/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683529.8
Date Finished Drilling: 05/28/2024	Core Size: 8 in	Boring Total Depth: 91.0 ft
Logged By: Steve Wright	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.9 ft NAVD88

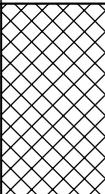
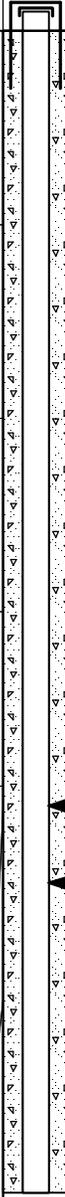
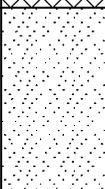
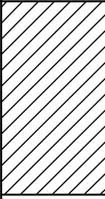
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
82	0	70	wet	BEDROCK		Bedrock, some fine to coarse sand some fine to coarse gravel, numerous rock fragments [LOCKATONG FORMATION] - 10YR 5/1 (gray), wet - no odor, no staining - weathered from 80 to 81 ft - competent from 81 to 91 ft	 <p>#0 Sand 80 - 81 ft</p> <p>SCREEN Type: Stainless Steel Diameter: 4 in 81 - 91 ft</p> <p>#0 Sand 81 - 91 ft</p>
84						Bedrock, competent [LOCKATONG FORMATION] - 2.5Y 4/1 (dark gray)	
86							
88	0	100					
90							
92						Boring terminated at 91 feet	
94							
96							
98							
100							

Notes:

bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 17.43 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611148.4
Date Started Drilling: 05/30/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683452.9
Date Finished Drilling: 05/31/2024	Core Size: 8 in	Boring Total Depth: 54.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.0 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
2 - 4	0	100	moist	FILL		Poorly graded gravel with sand (GP), fine, subangular, 15-25% fine sand Hand cleared to 5 ft [FILL] - 10B 3/1 (very dark bluish gray), moist - no odor, no staining	
6 - 8	0	78	moist			Poorly graded sand with gravel (SP), fine to medium, subangular, 15-25% fine gravel [FILL] - 10YR 5/2 (grayish brown), moist - no odor, no staining	
10 - 12	0	43	wet			Poorly graded sand with gravel (SP), fine to medium, angular, 20-30% fine gravel, Petrofix? [FILL] - 10YR 4/1 (dark gray), wet, very loose - no odor, black staining	
16 - 18	0	92	wet			Poorly graded sand with gravel (SP), fine to medium, angular, 20-30% fine gravel [FILL] - 10YR 3/1 (very dark gray), wet, very loose - no odor, black staining	
20 - 22	0	82	moist wet	SP		Poorly graded sand (SP), fine, subangular, <10% fine gravel [FILL] - 2.5Y 6/2 (light brownish gray), moist, very loose - no odor, no staining	
24 - 26	0	85	wet	CL		Poorly graded sand with gravel (SP), fine to medium, subangular, 20-30% fine gravel [NATIVE] - 2.5Y 6/2 (light brownish gray), wet, dense - no odor, no staining	
28 - 30	0	85				Sandy lean clay (CL), 35-45% fine sand [Transition Zone] - 2.5YR 4/3 (reddish brown), wet, medium dense - no odor, no staining	

Bentonite-Cement Grout
0 - 40 ft

RISER
Type: Schedule 40 PVC
Diameter: 4 in
0 - 44 ft

Notes:
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Comments:

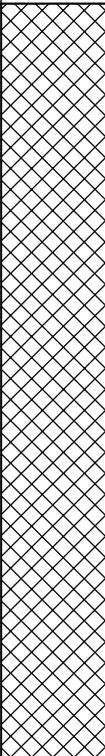
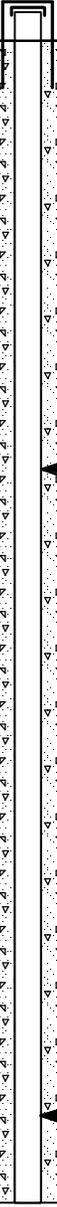
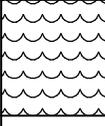
Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 17.43 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611148.4
Date Started Drilling: 05/30/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683452.9
Date Finished Drilling: 05/31/2024	Core Size: 8 in	Boring Total Depth: 54.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.0 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
32	0	72					
34							
36			wet	SC		Clayey sand (SC), fine, subangular, 25-35% clay [Transition Zone]	
38	0	90	wet	SP-SM		- 2.5YR 4/3 (reddish brown), wet, medium dense - no odor, no staining	
40						Poorly graded sand with silt (SP-SM), fine to medium, subangular, 5-15% silt, thin lenses of medium to coarse sand @ 39-39.5 ft bgs [Basal Till]	
42	0		dry	BEDROCK		- 2.5YR 4/3 (reddish brown), wet, loose - no odor, no staining	Bentonite 40 - 42 ft
44						Bedrock [NATIVE] [Lockatong Formation]	#00 Sand 42 - 43 ft
46						- weathered from 42 to 44 ft bgs	#0 Sand 43 - 44 ft
48	0					- competent from 44 to 54 ft bgs	
50							#0 Sand 44 - 54 ft
52	0						SCREEN Type: Stainless Steel Diameter: 4 in 44 - 54 ft
54						Boring terminated at 54 feet	
56							
58							
60							

Notes:
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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 17.43 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610886.6
Date Started Drilling: 05/15/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683398.9
Date Finished Drilling: 05/16/2024	Core Size: 8 in	Boring Total Depth: 91.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.0 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
0 - 5	0	100	moist	FILL		Poorly graded, fine to coarse, SAND, some silt, some fine to coarse gravel, cobbles, crushed stone with fabric (SP-SM), wood fragments at 7.5 ft, hand cleared to 5 ft. [FILL] - 7.5YR 6/1 (gray), moist - no odor, no staining	 <p>RISER Type: Schedule 40 PVC Diameter: 4 in 0 - 81 ft</p> <p>Bentonite-Cement Grout 0 - 77 ft</p>
5 - 10	0	100					
10 - 13		93					
13 - 14	0		wet			Lean clay (CL) [FILL] - 2.5Y 4/1 (dark gray), wet - no odor, no staining	
14 - 15			wet			Debris, cinders, little fine to coarse gravels [FILL] - 7.5YR 6/1 (gray), wet - no odor	
15 - 18		100	wet			Poorly graded sand (SP-SM), fine to coarse, some silt, some fine to coarse gravel, cobbles [FILL] - 7.5YR 6/1 (gray), wet - no odor, no staining	
18 - 20	0.2		wet	PT		Peat (PT) [MEADOW MAT] - 7.5YR 2.5/1 (black), wet - slight organic odor, no staining	

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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 17.43 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610886.6
Date Started Drilling: 05/15/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683398.9
Date Finished Drilling: 05/16/2024	Core Size: 8 in	Boring Total Depth: 91.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.0 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
22 - 24	0	100	wet	SP		Poorly graded sand (SP), fine, trace coarse gravel [NATIVE] - 2.5YR 4/6 (red), wet - no odor, no staining	
26 - 28	0	100	wet	ML		Silt (ML), some fine to coarse sand some fine to coarse gravel, cobbles [NATIVE] - 2.5YR 4/6 (red), wet - no odor, no staining	
30 - 32	0	100	wet	SP		Poorly graded sand (SP), fine [NATIVE] - 2.5YR 4/6 (red), wet - no odor, no staining	
32 - 38	0	100	wet	SP		Poorly graded sand (SP), fine, little silt [NATIVE] - 2.5YR 4/6 (red), wet - no odor, yellow water	
40			wet	CL		Lean clay (CL) [Transition Zone] - 2.5YR 4/6 (red), wet - no odor, no staining	

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:



30 Knightsbridge Road, Piscataway, NJ 08854
732.564.3200 office telephone

114-PW-05WR

Total Depth 91.0 ft

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 17.43 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610886.6
Date Started Drilling: 05/15/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683398.9
Date Finished Drilling: 05/16/2024	Core Size: 8 in	Boring Total Depth: 91.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.0 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
42	0	67	wet	SP		Poorly graded sand (SP) [Transition Zone] - 2.5YR 4/6 (red), wet - no odor, no staining	
44			wet	CL		Lean clay (CL) [Transition Zone] - 2.5YR 4/6 (red), wet - no odor, no staining	
46	0	95	wet			Lean clay (CL) [Transition Zone] - 2.5YR 4/6 (red), wet - no odor, no staining	
48			wet	SP-SM		Poorly graded sand (SP-SM), fine to medium, grading to silty fine sand [NATIVE] - 2.5YR 4/6 (red), wet - no odor, no staining	
50	0	83	wet	SP		Poorly graded sand (SP) [NATIVE] - 2.5YR 4/6 (red), wet - no odor, no staining	
52							
54	0	100	wet	ML		Silt (ML), some fine to coarse sand, some fine to coarse gravel [Basal Till] - 2.5YR 4/6 (red), wet - no odor, no staining	
56							
58							
60							

Notes:

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Comments:

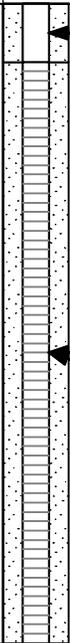
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Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610886.6
Date Started Drilling: 05/15/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683398.9
Date Finished Drilling: 05/16/2024	Core Size: 8 in	Boring Total Depth: 91.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.0 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
62	0	67					
64							
66							
68	0	100					
70			wet	CL		Lean clay (CL), some fine to coarse sand, some fine to coarse gravel [Basal Till]	
72	0	60		ML		Silt (ML), some fine to coarse sand, some fine to coarse gravel, numerous cobbles, 6" red fine sand at 70 ft [Basal Till]	
74						- 5GY 6/1 (greenish gray), wet, very dense- no odor, no staining	
76			wet	CL		Lean clay (CL), some fine to coarse sand, some fine to coarse gravel, cobbles [Basal Till]	
78	0	93				- 5GY 5/1 (greenish gray), wet, dense	
80						- no odor, no staining	

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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 17.43 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610886.6
Date Started Drilling: 05/15/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683398.9
Date Finished Drilling: 05/16/2024	Core Size: 8 in	Boring Total Depth: 91.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.0 ft NAVD88

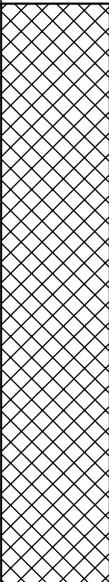
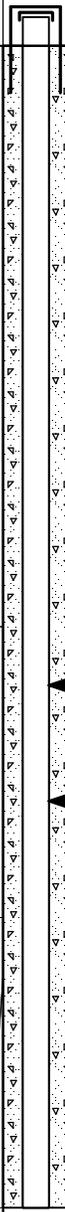
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
82	0	100	wet	BEDROCK		Bedrock, some gray clay [NATIVE] [LOCKATONG FORMATION] - 7.5YR 4/1 (dark gray), wet - no odor - weathered from 80 to 86 ft bgs - competent from 86 to 91 ft bgs	 <p>#0 Sand 80 - 81 ft</p> <p>SCREEN Type: Stainless Steel Diameter: 4 in 81 - 91 ft</p> <p>#0 Sand 81 - 91 ft</p>
84							
86							
88	0	60					
90							
92						Boring terminated at 91 feet	
94							
96							
98							
100							

Notes:

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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 17.46 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610895.7
Date Started Drilling: 05/13/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683311.6
Date Finished Drilling: 05/14/2024	Core Size: 8 in	Boring Total Depth: 89.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.0 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
0 - 5	0		moist	FILL		Silty sand with gravel (SM), fine to medium, subangular, 20-30% silt and fine gravel, Hand clear to 5 feet [FILL] - 10B 4/1 (dark bluish gray), moist, loose - no odor, no staining	 <p>Bentonite-Cement Grout 0 - 75 ft</p> <p>RISER Type: Schedule 40 PVC Diameter: 4 in 0 - 79 ft</p>
5 - 10	0	87	moist			Silty sand with gravel (SM), fine to medium, subangular, 20-30% silt and fine gravel [FILL] - 10B 4/1 (dark bluish gray), moist, loose - no odor, no staining	
10 - 16	0	73	moist			Silty sand with gravel (SM), fine to medium, subangular, 20-30% silt and fine gravel [FILL] - 10B 5/1 (bluish gray), moist, loose - no odor, no staining	
16 - 18	0	95	moist	CL		Lean clay (CL), 20-30% peat, Meadow mat [NATIVE] - 2.5Y 3/2 (very dark grayish brown), moist, medium dense - peaty odor, no staining	
18 - 20							

Notes:
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 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:



30 Knightsbridge Road, Piscataway, NJ 08854
732.564.3200 office telephone

114-PW-06WR

Total Depth 89.0 ft

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 17.46 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610895.7
Date Started Drilling: 05/13/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683311.6
Date Finished Drilling: 05/14/2024	Core Size: 8 in	Boring Total Depth: 89.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.0 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
22	0	95	wet	ML		Gravelly silt with sand (ML), 20-30% fine gravel and fine to medium sand [NATIVE] - 10B 5/1 (bluish gray), wet, medium dense - no odor, no staining	
24			wet	SM		Silty sand with gravel (SM), fine to medium, subangular, 20-30% silt and fine gravel [NATIVE] - 10R 5/1 (reddish gray), wet, loose - no odor, no staining	
26	0	98	wet	SP-SM		Poorly graded sand with silt (SP-SM), fine, subangular, 5-15% silt [NATIVE] - 10R 4/8 (red), wet, loose - no odor, no staining	
28			wet	SM		Silty sand (SM), fine, subangular, 15-25% silt [NATIVE] - 10R 5/6 (red), wet - no odor, yellow water	
30	0	77	wet	SM		Silty sand (SM), fine, subangular, 15-25% silt [NATIVE] - 10R 5/6 (red), wet - no odor, yellow water	
32			wet	SP-SM		Poorly graded sand with silt (SP-SM), fine, subangular, 5-15% silt [NATIVE] - 2.5YR 5/6 (red), wet, medium dense - no odor, yellow water	
34	0	87	wet	SP-SM		Poorly graded sand with silt (SP-SM), fine, subangular, 5-15% silt [NATIVE] - 2.5YR 5/6 (red), wet, medium dense - no odor, yellow water	
36			wet	SP-SM		Poorly graded sand with silt (SP-SM), fine, subangular, 5-15% silt [NATIVE] - 2.5YR 5/6 (red), wet, medium dense - no odor, yellow water	
38	0	87	wet	SP-SM		Poorly graded sand with silt (SP-SM), fine, subangular, 5-15% silt [NATIVE] - 2.5YR 5/6 (red), wet, medium dense - no odor, yellow water	
40			wet	SP-SM		Poorly graded sand with silt (SP-SM), fine, subangular, 5-15% silt [NATIVE] - 2.5YR 5/6 (red), wet, medium dense - no odor, yellow water	

Notes:

bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:



30 Knightsbridge Road, Piscataway, NJ 08854
732.564.3200 office telephone

114-PW-06WR

Total Depth 89.0 ft

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 17.46 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610895.7
Date Started Drilling: 05/13/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683311.6
Date Finished Drilling: 05/14/2024	Core Size: 8 in	Boring Total Depth: 89.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.0 ft NAVD88

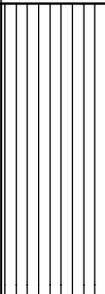
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
42	0	88	wet	CH		Fat clay (CH), <10% silt and fine sand [Transition Zone] - 5R 4/2 (grayish red), wet, dense - no odor, no staining	
44							
46	0	90	wet			Fat clay (CH), <10% fine sand [Transition Zone] - 5R 4/2 (grayish red), wet, medium dense - no odor, no staining	
48							
50							
52	0	68	wet	SP-SM		Poorly graded sand with silt (SP-SM), fine to medium, subangular, 5-15% silt [Transition Zone] - 10R 4/8 (red), wet, loose - no odor, no staining	
54							
56	0	90	wet	CH		Fat clay with sand (CH), 20-30% fine sand Interbedded sands and clays [Transition Zone] - 10R 5/6 (red), wet, medium dense - no odor, no staining	
58							
60							

Notes:

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DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

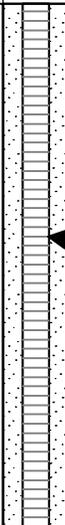
Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 17.46 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610895.7
Date Started Drilling: 05/13/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683311.6
Date Finished Drilling: 05/14/2024	Core Size: 8 in	Boring Total Depth: 89.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.0 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
62	0	65	wet	ML		Gravelly silt with sand (ML), 15-25% fine to coarse gravel and fine to medium sand [Basal Till] - 10R 4/8 (red), wet, medium dense - no odor, no staining	
66	0	93	wet			Gravelly silt with sand (ML), 20-30% fine to coarse gravel and fine to medium sand [Basal Till] - 10R 4/8 (red), wet, very dense - no odor, no staining	
78	0		dry	BEDROCK		Bedrock [NATIVE] [Lockatong Formation] - weathered from 78 to 79 ft bgs - competent from 79 to 89 ft bgs	

Notes:
 bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 17.46 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610895.7
Date Started Drilling: 05/13/2024	Rig Type: Fraste MRS XL 250	Coordinates (NJSPNAD83) y: 683311.6
Date Finished Drilling: 05/14/2024	Core Size: 8 in	Boring Total Depth: 89.0 ft
Logged By: TJ Malgieri	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.0 ft NAVD88

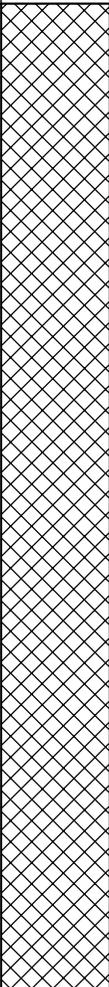
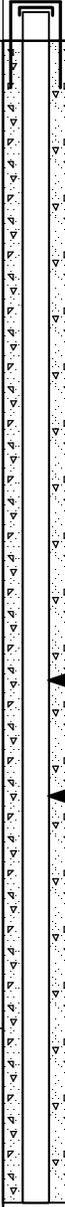
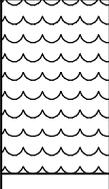
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
82	0						 <p>SCREEN Type: Stainless Steel Diameter: 4 in 79 - 89 ft</p> <p>#0 Sand 79 - 89 ft</p>
84							
86	0						
88							
90						Boring terminated at 89 feet	
92							
94							
96							
98							
100							

Notes:

bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 18.12 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610923.2
Date Started Drilling: 05/22/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683228.8
Date Finished Drilling: 05/23/2024	Core Size: 8 in	Boring Total Depth: 77.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.8 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
0 - 5	0		wet	FILL		Poorly graded sand (SP), fine to coarse, some silt, some fine to coarse gravel, few cobbles, gray crushed stone with fabric liner at 1ft bgs, hand cleared to 5ft [FILL] - 7.5YR 4/1 (dark gray), wet - no odor, no staining	 <p>Bentonite-Cement Grout 0 - 62 ft</p> <p>RISER Type: Schedule 40 PVC Diameter: 4 in 0 - 66 ft</p>
5 - 10	0	90					
10 - 15	0	88.2					
15 - 18	0	100	wet	PT		Peat, little clay [MEADOW MAT] - 7.5YR 3/4 (dark brown), wet - slightly organic odor, no staining	
18 - 20							

Notes:
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 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 18.12 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610923.2
Date Started Drilling: 05/22/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683228.8
Date Finished Drilling: 05/22/2024	Core Size: 8 in	Boring Total Depth: 77.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.8 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
22	0	80	wet	ML		Silt (ML), little fine to coarse sand little fine to coarse gravel [NATIVE] - 10YR 6/1 (gray), wet - no odor, no staining	
24			wet	SW		Well-graded sand (SW), fine to coarse, some fine to coarse gravel, some silt [NATIVE] - 5YR 4/3 (reddish brown), wet - no odor, no staining	
26							
28	0	100	wet	SP		Poorly graded sand (SP), fine, little silt [NATIVE] - 10R 4/8 (red), wet - no odor, no staining	
30							
32	0	70	wet			Poorly graded sand (SP), fine, little silt, little fine to coarse gravel [NATIVE] - 10R 4/8 (red), wet - no odor, yellow water	
34			wet				
36							
38	0	100				Poorly graded sand (SP), fine, little silt [NATIVE] - 10R 4/8 (red), wet - no odor, yellow water	
40							

Notes:

bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

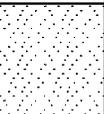
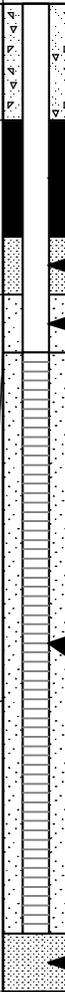
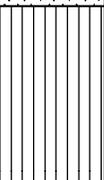
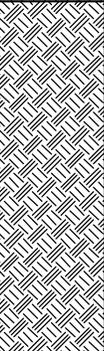
Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 18.12 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610923.2
Date Started Drilling: 05/22/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683228.8
Date Finished Drilling: 05/22/2024	Core Size: 8 in	Boring Total Depth: 77.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.8 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
42	0	50	wet	SW		Well-graded sand (SW), fine to coarse, some silt, some fine to coarse gravel [NATIVE]	
			wet	SM		- 10R 4/8 (red), wet - no odor, no staining Silt (ML) [NATIVE] - 10R 4/8 (red), wet - no odor, no staining	
46	0	50	wet	CL		Lean clay (CL), microbeds of fine sand [NATIVE] - 5YR 5/2 (reddish gray / pale brown), wet - no odor, no staining	
			wet	SM		Silt (ML) [NATIVE] - 10R 4/8 (red), wet - no odor, no staining	
50	0	80	wet	CL		Lean clay (CL), microbeds of fine sand [Transition Zone] - 5YR 5/2 (reddish gray / pale brown), wet - no odor, no staining	
			wet	ML		Silt (ML) [Transition Zone] - 5YR 5/3 (reddish brown), wet - no odor, no staining	
54	0	100	wet			Silt (ML), 2" layer fine to medium sand [Transition Zone] - 5YR 5/2 (reddish gray / pale brown), wet - no odor, no staining	
56	0	100					
58							
60							

Notes:
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 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

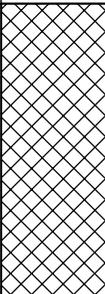
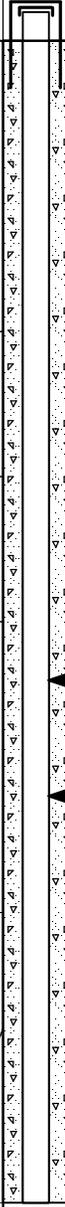
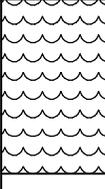
Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 18.12 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610923.2
Date Started Drilling: 05/22/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683228.8
Date Finished Drilling: 05/22/2024	Core Size: 8 in	Boring Total Depth: 77.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 14.8 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
62	0	93.2	wet	SP		Poorly graded sand (SP), fine [NATIVE] - 5YR 5/2 (reddish gray / pale brown), wet - no odor, no staining	 <p>Bentonite 62 - 64 ft</p> <p>#00 Sand 64 - 65 ft</p> <p>#0 Sand 65 - 66 ft</p> <p>#0 Sand 66 - 76 ft</p> <p>SCREEN Type: Stainless Steel Diameter: 4 in 66 - 76 ft</p> <p>#00 Sand 76 - 77 ft</p>
64			wet	ML		Silt (ML), some fine to coarse sand some fine to coarse gravel [BASAL TILL] - 5YR 5/2 (reddish gray / pale brown), wet - no odor, no staining	
66			wet			Silt (ML), some fine to coarse sand some fine to coarse gravel [BASAL TILL] - 5YR 5/2 (reddish gray / pale brown), wet, very dense - no odor, no staining	
68	0	83.2	dry	BEDROCK		Bedrock, rock debris [LOCKATONG FORMATION] - 7.5YR 4/1 (dark gray), dry - no odor - weathered from 66 to 72 ft	
70							
72	0	100	wet			Bedrock, competent, rock debris [LOCKATONG FORMATION] - 7.5YR 4/1 (dark gray), wet - no odor - competent from 72 to 80 ft	
74							
76	0	75					
78						Boring terminated at 77 feet	
80							

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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 15.61 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611100.4
Date Started Drilling: 05/30/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683183.2
Date Finished Drilling: 06/03/2024	Core Size: 8 in	Boring Total Depth: 81.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.4 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
0 - 2	0		dry	FILL		Poorly graded sand (SP), fine to medium, some fine to coarse gravel, trace silt, hand cleared to 5 ft. [FILL] - 7.5YR 4/3 (brown), dry, dense - no odor, no staining	 <p>Bentonite-Cement Grout 0 - 67 ft</p> <p>RISER Type: Schedule 40 PVC Diameter: 4 in 0 - 71 ft</p>
2 - 6	0	100	moist			Poorly graded sand (SP), fine to medium, some fine to coarse gravel, trace silt [FILL] - 7.5YR 4/3 (brown), moist, dense - no odor, no staining	
6 - 8	0	100	moist			Poorly graded sand (SP), fine to medium, some fine to coarse gravel, trace silt [FILL] - 10YR 5/2 (grayish brown), moist, dense - no odor, no staining	
8 - 10	0	40	wet			Poorly graded gravel (GP), fine to coarse, little fine to coarse sand trace silt [FILL] - 10YR 5/2 (grayish brown), wet, dense - no odor, no staining	
10 - 16	0	40	wet			Poorly graded sand (SP), fine to medium, some fine to coarse gravel, trace silt [FILL] - 10YR 5/2 (grayish brown), wet, dense - no odor, no staining	
16 - 18	0	100	moist	PT		Peat, clay with fibers, organic, 70% fibrous, medium stiff [MEADOW MAT] - 10YR 6/1 (gray), moist - no odor, no staining	
18 - 20	0	100	moist				

Notes:
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 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

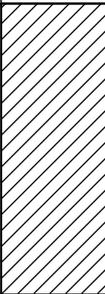
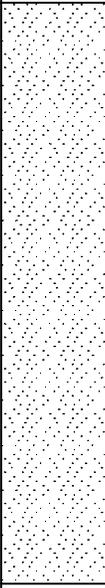
Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 15.61 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611100.4
Date Started Drilling: 05/30/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683183.2
Date Finished Drilling: 05/31/2024	Core Size: 8 in	Boring Total Depth: 81.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.4 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
22	0		moist			Peat, clay with fibers, organic, medium stiff [MEADOW MAT] - 10YR 6/1 (gray), moist - no odor, no staining	
24			wet	SP		Poorly graded sand (SP), fine to medium, little fine to coarse gravel [NATIVE] - 10YR 6/1 (gray), wet, loose - no odor, no staining	
26			wet			Poorly graded sand (SP), fine to medium, trace clay, trace silt, MGP waste [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
28	0	100	wet		Poorly graded sand (SP), fine to medium, trace silt, slight MGP [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining		
30							
32	0	70	wet		Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining		
34							
36			wet		Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining		
38	0	100	wet		Poorly graded sand (SP), fine to medium, little silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, black staining		
40							

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Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 15.61 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611100.4
Date Started Drilling: 05/30/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683183.2
Date Finished Drilling: 05/31/2024	Core Size: 8 in	Boring Total Depth: 81.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.4 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
42	0		wet	CL		Lean clay (CL), varved, trace silt, medium stiff [Transition Zone] - 5YR 4/3 (reddish brown), wet - no odor, no staining	
44			wet			Lean clay (CL), varved, trace silt, medium stiff, 10-inch steel casing set to 45 ft bgs [Transition Zone] - 10YR 5/2 (grayish brown), wet - no odor, no staining	
46				NR		- no recovery.	
48		0					
50							
52	0	100	wet	SP		Poorly graded sand (SP), fine to medium, some silt, trace clay [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
54			wet			Poorly graded sand (SP), fine to medium, some fine to coarse gravel, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
56			wet			Poorly graded sand (SP), fine to medium, little silt, trace clay [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
58	0	100	wet			Poorly graded sand (SP), fine to medium, some fine to coarse gravel, trace silt [BASAL TILL] - 5YR 4/3 (reddish brown), wet, dense - no odor, no staining	
60							

Notes:
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 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 15.61 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611100.4
Date Started Drilling: 05/30/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683183.2
Date Finished Drilling: 05/31/2024	Core Size: 8 in	Boring Total Depth: 81.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.4 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
62 - 64	0	10	wet	COBBLE		Cobbles, fine to medium sand, some fine to coarse gravel, trace silt, cobble in sampler [BASAL TILL] - 5YR 4/3 (reddish brown), wet, dense - no odor, no staining	
66 - 68	0	80	wet	ML		Silt (ML), little fine to coarse gravel, trace clay [BASAL TILL] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	Bentonite 67 - 69 ft
70 - 71			wet	SP		Poorly graded sand (SP), fine to coarse gravel and cobbles [BASAL TILL] - 5YR 4/3 (reddish brown), wet, dense - no odor, no staining	#00 Sand 69 - 70 ft
72 - 73		100		BEDROCK		Bedrock, highly weathered, rock fragments in clay sand matrix [STOCKTON FORMATION] - weathered from 70 to 73 ft	#0 Sand 70 - 71 ft
74 - 75						Bedrock, moderately weathered, rock flour with pieces of rock fragments [STOCKTON FORMATION]	
76 - 77						Bedrock, slightly weathered, rock fragments [STOCKTON FORMATION] - competent from 73 to 81 ft	
78 - 79		100				Bedrock, rock fragments and pieces [STOCKTON FORMATION]	#0 Sand 71 - 81 ft
80 - 81						- hard	SCREEN Type: Stainless Steel Diameter: 4 in 71 - 81 ft

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 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:



30 Knightsbridge Road, Piscataway, NJ 08854
732.564.3200 office telephone

114-PW-09WR

Total Depth 81.0 ft

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 15.61 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611100.4
Date Started Drilling: 05/30/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683183.2
Date Finished Drilling: 05/31/2024	Core Size: 8 in	Boring Total Depth: 81.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.4 ft NAVD88

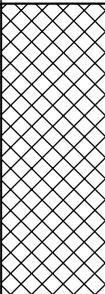
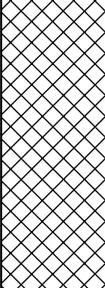
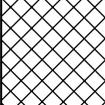
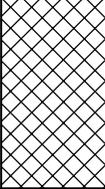
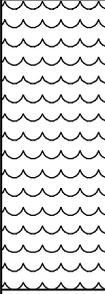
Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
82						Boring terminated at 81 feet	
84							
86							
88							
90							
92							
94							
96							
98							
100							

Notes:

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 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 15.96 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611132.3
Date Started Drilling: 06/03/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683261.0
Date Finished Drilling: 06/05/2024	Core Size: 8 in	Boring Total Depth: 86.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.6 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
0 - 5	0		dry	FILL		Poorly graded sand (SP), fine to medium, little fine to coarse gravel, trace silt, hand cleared to 5 ft (DGA) [FILL] - 10YR 5/6 (yellowish brown), dry, dense - no odor, no staining	
5 - 8	0	80	dry			Poorly graded sand (SP), fine to medium, little fine to coarse gravel, trace silt (DGA) [FILL] - 10YR 5/6 (yellowish brown), dry, dense- no odor, no staining	
8 - 10			dry			Poorly graded sand (SP), fine to medium, little fine to coarse gravel, trace silt (DGA) [FILL] - 10YR 6/1 (gray), dry, dense - no odor, black staining	
10 - 16	0	80	wet			Poorly graded sand (SP), fine to medium, little fine to coarse gravel, trace silt (DGA) [FILL] - 10YR 6/1 (gray), wet, dense - no odor, black staining	
16 - 20	0	100	moist	PT		Peat, fine to medium, organic clay with fibers, 10% fibrous, stiff [MEADOW MAT] - 10YR 6/1 (gray), moist - no odor, no staining	

Bentonite-Cement Grout
0 - 72 ft

RISER
Type: Schedule 40 PVC
Diameter: 4 in
0 - 76 ft

Notes:
 bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 15.96 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611132.3
Date Started Drilling: 06/03/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683261.0
Date Finished Drilling: 06/05/2024	Core Size: 8 in	Boring Total Depth: 86.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.6 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
22	0	100	moist			Peat, organic clay with fibers, 10% fibrous, stiff [MEADOW MAT] - 10YR 6/1 (gray), moist - no odor, no staining	
24			wet	SP		Poorly graded sand (SP), fine to medium, some fine to coarse gravel, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
26			wet			Poorly graded sand (SP), fine to medium, little fine to coarse gravel, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
28	0	100	wet			Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
30			wet			Poorly graded sand (SP), fine to medium, some silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
32	0	100				Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
34			wet			Poorly graded sand (SP), fine to medium, some silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
36			wet			Poorly graded sand (SP), fine to medium, trace silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
38	0		wet	CL		Poorly graded sand (SP), fine to medium, some silt [NATIVE] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
40						Lean clay (CL), trace silt, stiff [TransitionZone] - 5YR 4/3 (reddish brown), wet - no odor, no staining	

Notes:
 bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 15.96 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611132.3
Date Started Drilling: 06/03/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683261.0
Date Finished Drilling: 06/05/2024	Core Size: 8 in	Boring Total Depth: 86.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.6 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
42		0		NR		no recovery	
44							
46	0	100	wet	SP		Poorly graded sand (SP), fine to medium, little fine to coarse gravel, 10-inch steel casing set to 45 ft bgs [Transition Zone] - 10YR 6/1 (gray), wet, loose - no odor, no staining	
48			wet	CL		Lean clay (CL), little silt [Transition Zone] - 5YR 4/3 (reddish brown), wet, soft - no odor, no staining	
50			wet	SP		Poorly graded sand (SP), fine to medium, some silt [NATIVE] - 5YR 4/3 (reddish brown), wet, medium dense - no odor, no staining	
52	0	100				Poorly graded sand (SP), fine to medium, some silt, little fine to coarse gravel [BASALTILL] - 5YR 4/3 (reddish brown), wet, very dense- no odor, no staining	
54							
56			wet			Poorly graded sand (SP), fine to medium, trace silt, little fine to coarse gravel [BASAL TILL] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
58	0	60				Poorly graded sand (SP), fine to medium, some silt, little fine to coarse gravel [BASAL TILL] - 5YR 4/3 (reddish brown), wet, very dense - no odor, no staining	
60			wet				

Notes:

bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

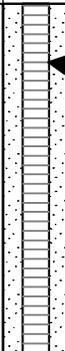
Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 15.96 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611132.3
Date Started Drilling: 06/03/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683261.0
Date Finished Drilling: 06/05/2024	Core Size: 8 in	Boring Total Depth: 86.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.6 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
62	0	80	wet	SP		Poorly graded sand (SP), fine to medium, trace silt, little fine to coarse gravel [BASAL TILL] - 5YR 4/3 (reddish brown), wet, very dense- no odor, no staining	
64							
66			wet			Poorly graded sand (SP), fine to medium, trace silt, little fine to coarse gravel [BASAL TILL] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
68	0	80	wet			Poorly graded sand (SP), fine to medium, some silt, little fine to coarse gravel [BASAL TILL] - 10YR 6/1 (gray), wet, loose - no odor, no staining	
70			wet			Poorly graded sand (SP), fine to medium, trace silt, little fine to coarse gravel, rock fragments consisting of diabase from 70 to 72 ft [BASAL TILL] - 10YR 6/1 (gray), wet, loose - no odor, no staining	
72	0	60	wet			Poorly graded sand (SP), fine to medium, trace silt, little fine to coarse gravel [BASAL TILL] - 5YR 4/3 (reddish brown), wet, loose - no odor, no staining	
74							
76				BEDROCK		Bedrock, broken rock, laminations [STOCKTON FORMATION] - hard - weathered from 75 to 75.5 ft - competent from 75.5 to 86 ft	
78		80					
80							

Notes:
 bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Weathered Rock Remedial Action	Drilling Company: ADT	Top of PVC Elevation: 15.96 ft NAVD88
Project Number: 60729481	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611132.3
Date Started Drilling: 06/03/2024	Rig Type: Terrasonic	Coordinates (NJSPNAD83) y: 683261.0
Date Finished Drilling: 06/05/2024	Core Size: 8 in	Boring Total Depth: 86.0 ft
Logged By: Eric Acs	Project Manager: Shannon Gleason	Well Diameter (inches): 4 in
Physical Location: 900 Garfield Ave. Jersey City, NJ		Surface Elevation: 12.6 ft NAVD88

Depth Range (ft bgs)	PID (ppm)	Recovery (%)	Moisture	USCS	Graphic	Material Description	Well Construction
82		100				Bedrock, competent, broken rock, laminations [STOCKTON FORMATION] - hard	 <p>SCREEN Type: Stainless Steel Diameter: 4 in 76 - 86 ft</p> <p>#0 Sand 76 - 86 ft</p>
84		100				Boring terminated at 86 feet	
86							
88							
90							
92							
94							
96							
98							
100							

Notes:

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 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches

Comments:

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: See comment
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611062.95
Date Started Drilling: 11/23/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683542.02
Date Finished Drilling: 11/29/2021	Core Size: 10 in. sonic	Boring Total Depth: 75 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1-5					[Cross-hatch pattern]	Hand dig to 5 ft bgs. Gray fine to coarse SAND, some fine to coarse gravel, dense (Dense Graded Aggregate [DGA]), dry.	[Steel protective well cover]	
5-10	5 / 5	0	DRY	FILL	[Cross-hatch pattern]		[Riser set in grout]	
10-15							[Grout: 0-20 ft bgs]	
15-17					[Cross-hatch pattern]	Gray fine to coarse GRAVEL, dense (DGA), wet. Slightly stained black from Ferro-Black.		
17-19	5 / 5	0	WET	FILL	[Cross-hatch pattern]			
19-20					[Cross-hatch pattern]	Gray fine to coarse SAND, some fine to coarse gravel, dense (DGA), wet.		
20-22					[Wavy lines]	Organic PEAT, fibrous-50 to 80% fibers, soft, damp. (Meadow Mat)		
22-24	5 / 5	0	DAMP	PT	[Wavy lines]			
24-26					[Diagonal lines]	Gray organic CLAY, trace silt, stiff, damp.		[Bentonite: 20-26 ft bgs]
26-28	5 / 5	0	DAMP	CL	[Diagonal lines]			
28-30					[Dotted pattern]	Red brown, fine SAND, trace silt, medium dense, wet.		
30-32	5 / 5	0	WET	SP	[Dotted pattern]			[#0 Sand: 26-34 ft bgs]
								[1.5-inch diameter, 0.010-inch slot PVC screen: 28-33 ft bgs]

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Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
 RQD = rock quality designation

Comments: Top of PVC elevation (ft NAVD88): 114-PZ-52I: 15.99, 114-PZ-52D: 15.89, 114-PZ-52WR: 15.93

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: See comment
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611062.95
Date Started Drilling: 11/23/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683542.02
Date Finished Drilling: 11/29/2021	Core Size: 10 in. sonic	Boring Total Depth: 75 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

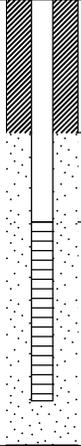
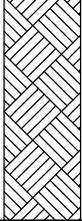
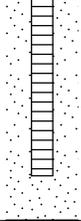
Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
33-34	5 / 5	0	WET	SM		Red brown, fine SAND, some silt, medium dense, wet.		Bentonite: 34-39 ft bgs
35-36			DAMP	CL		Red brown CLAY, trace silt, stiff, damp.		
37-38	5 / 5	0	WET	ML		Red brown SILT, some fine sand, soft, wet.		#0 Sand: 39-47 ft bgs 1.5-inch diameter, 0.010-inch slot PVC screen: 40-45 ft bgs
39-40			DAMP	CL		Red brown CLAY, trace silt, stiff, damp.		
41-42	5 / 5	0	WET	SP		Red brown, fine SAND, trace silt, medium dense, wet.		Bentonite: 47-68 ft bgs
43-44			WET	SM		Red brown, fine SAND, little to some silt, medium dense, wet.		
45-46	4.5 / 5	0				Red brown, fine to coarse SAND, some fine to coarse gravel, trace silt, trace cobbles, dense, wet (Basal Till). Cobbles in till recovered-pushed cobbles downward for low recovery from 55 ft to 60 ft bgs.		
47-48								
49-50								
51-52	4 / 5	0						
53-54								
55-56			WET	SM				
57-58	1.5 / 5	0						
59-60								
61-62								
63-64	4.5 / 5	0						

PPG WITH WELL CONSTRUCTION - - 3/10/22 12:01

Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
 RQD = rock quality designation

Comments: Top of PVC elevation (ft NAVD88): 114-PZ-52I: 15.99, 114-PZ-52D: 15.89, 114-PZ-52WR: 15.93

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: See comment
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 611062.95
Date Started Drilling: 11/23/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683542.02
Date Finished Drilling: 11/29/2021	Core Size: 10 in. sonic	Boring Total Depth: 75 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
66-67	4 / 5	0	WET	SM				#0 Sand: 68-75 ft bgs 2-inch diameter, 0.010-inch slot PVC screen: 70-74 ft bgs
68-69								
70-71	3 / 5	0	NA	BEDROCK		Gray MUDSTONE (Argillite), weathered 70 ft to 74 ft bgs. Unweathered 74 ft to 75 ft bgs. Lockatong Formation		
72-73								
74-75								

PPG WITH WELL CONSTRUCTION - - 3/10/22 12:01

Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
RQD = rock quality designation

Comments: Top of PVC elevation (ft NAVD88): 114-PZ-52I: 15.99, 114-PZ-52D: 15.89, 114-PZ-52WR: 15.93

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: See comment
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610922.52
Date Started Drilling: 11/19/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683223.43
Date Finished Drilling: 11/22/2021	Core Size: 8.5 in. sonic	Boring Total Depth: 75 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 14.4 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1-5			DRY	FILL		Hand dig to 5 ft bgs. Gray fine to coarse SAND, some fine to coarse gravel, trace silt, dense (Dense Graded Aggregate [DGA]), dry.	Steel protective well cover Riser set in grout	
5-10	3.5 / 5	0	DAMP	FILL		Gray fine to coarse SAND, little to some fine to coarse gravel, trace silt, dense (DGA), damp. Stained black by Ferro-Black.	Portland/bentonite grout: 0-20 ft bgs	
10-15	3 / 5	0	WET	FILL		Gray fine to coarse SAND, little fine to coarse gravel, trace silt, dense (DGA), wet. Stained black by Ferro-Black.		
15-18	5 / 5	0	DAMP	PT		Organic PEAT, fibrous-70% fibers, soft to medium stiff, damp. (Meadow Mat)		
18-22	5 / 5	0	WET	ML		Gray SILT, little fine SAND, trace medium to coarse rounded gravel, medium stiff, wet.	Bentonite: 20-24 ft bgs	
22-25			WET	SM		Red brown, fine to medium SAND, little silt, little fine to coarse sub-rounded gravel, dense, wet.	#0 Sand: 24-33 ft bgs	
25-28	5 / 5	0	WET	SW		Red brown, fine to coarse SAND, trace fine to coarse rounded gravel, trace silt, medium dense, wet.	1.5-inch diameter, 0.010-inch slot PVC screen: 26-31 ft bgs	
28-30			WET	SP		Red brown, fine SAND, trace silt, dense, wet.		
30-32	4.5 / 5	0						

PPG WITH WELL CONSTRUCTION - 4/4/22 11:59

Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
 RQD = rock quality designation

Comments: Top of PVC elevation (ft NAVD88): 114-PZ-57I: 16.13, 114-PZ-57D: 16.39, 114-PZ-57T: 16.42

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: See comment
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610922.52
Date Started Drilling: 11/19/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683223.43
Date Finished Drilling: 11/22/2021	Core Size: 8.5 in. sonic	Boring Total Depth: 75 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 14.4 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
34	4.5 / 5	0						Bentonite: 33-51 ft bgs
35								
36			WET	SP				
37	5 / 5	0						
38								
39			WET	ML		Red brown SILT, little fine silt, soft, wet.		
40								
41						Red brown CLAY, trace silt, medium stiff, damp.		
42	5 / 5	0	DAMP	CL				
43								
44			WET	ML		Red brown SILT, little fine sand, medium stiff, wet.		
45			DAMP	CL		Red brown CLAY, trace silt, stiff, damp.		
46								
47	5 / 5	0	WET	SM		Red brown fine SAND, little to some silt, dense, wet.		
48								
49								
50			DAMP	CL		Red brown CLAY, trace silt, stiff, damp.		
51								#0 Sand: 51-59 ft bgs
52	5 / 5	0	WET	SP		Red brown fine SAND, trace silt, dense, wet.		
53								1.5-inch diameter, 0.010-inch slot PVC screen: 53-58 ft bgs
54			WET	SM		Red brown fine SAND, some silt, dense, wet.		
55								
56								
57	5 / 5	0				Red brown fine SAND, trace silt, dense, wet.		
58								
59			WET	SP				Bentonite: 59-62 ft bgs
60								
61								
62	4 / 5	0				Red brown fine to coarse SAND, some fine to coarse gravel, trace silt, dense, wet. (Basal Till)		#0 Sand: 62-70 ft bgs
63			WET	SM				1.5-inch diameter, 0.010-inch slot PVC screen: 63-68 ft bgs
64								
65	4 / 5	0	WET	SM		Red brown fine to coarse SAND, some fine to coarse		

PPG WITH WELL CONSTRUCTION - 4/4/22 11:59

Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
 DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
 RQD = rock quality designation

Comments: Top of PVC elevation (ft NAVD88): 114-PZ-57I: 16.13, 114-PZ-57D: 16.39, 114-PZ-57T: 16.42

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: See comment
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610922.52
Date Started Drilling: 11/19/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683223.43
Date Finished Drilling: 11/22/2021	Core Size: 8.5 in. sonic	Boring Total Depth: 75 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 14.4 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
67	4 / 5	0	WET	SM		gravel, trace silt, dense, wet. (Basal Till)		Bentonite: 70-75 ft bgs
68								
69	/ 5			NA		Gray MUDSTONE (Argillite), weathered 71-74 ft bgs. Unweathered 74-75 ft bgs. Lockatong Formation		
70								
71								
72								
73								
74								
75								

PPG WITH WELL CONSTRUCTION - - 4/4/22 11:59

Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
RQD = rock quality designation

Comments: Top of PVC elevation (ft NAVD88): 114-PZ-57I: 16.13, 114-PZ-57D: 16.39, 114-PZ-57T: 16.42

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: See comment
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610929.92
Date Started Drilling: 11/15/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683430.17
Date Finished Drilling: 11/18/2021	Core Size: 10 in. sonic	Boring Total Depth: 85 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
1				FILL		Hand dig to 5 ft bgs. Brown gray, fine to coarse SAND, some fine to coarse gravel, very dense (Dense Graded Aggregate [DGA]), dry.		Steel protective well cover
2				FILL				Riser set in grout
3				FILL				
4				FILL				
5				FILL				Portland/bentonite grout: 0-25 ft bgs
6	4 / 5	0		FILL		Brown gray, fine to coarse SAND, some fine to coarse gravel, very dense (DGA), damp.		
7				FILL				
8				FILL				
9				FILL				
10				FILL				
11	5 / 5	0		FILL		Gray, fine to coarse SAND, some fine to coarse gravel, very dense (DGA), damp to wet.		
12				FILL				
13				FILL				
14				FILL				
15				FILL				
16	4.5 / 5	0		PT		Organic PEAT, fibrous-stiff to medium stiff, damp. (Meadow Mat)		
17				PT				
18				PT				
19				PT				
20				CL		Gray CLAY, organic, trace silt, medium stiff, damp.		
21				SP		Red brown, fine SAND, trace silt.		
22	5 / 5	0		SM		Red brown, fine to coarse SAND, little fine to coarse gravel, dense, wet.		
23				SM				
24				SM				
25				SM				Bentonite: 25-33 ft bgs
26				SM		Red brown, fine to coarse SAND, stained black (Ferro-Black), little fine to coarse gravel, dense, wet.		
27				SM		Red brown, fine SAND, trace silt, medium dense, wet.		
28	5 / 5	0		SP				
29				SP				
30				SP				
31	5 / 5	0		SP				
32				SP				

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Notes: bgs = below surface grade NAD83 = North American Horizontal Datum of 1983 NJSP = New Jersey State Plane ppm = parts per million ft = feet
DGA = dense graded aggregate NAVD88 = North American Vertical Datum of 1988 PID = photoionization detector USCS = Unified Soil Classification System in = inches
RQD = rock quality designation

Comments: Top of PVC elevation (ft NAVD88): 114-PZ-66I: 16.19, 114-PZ-66D: 16.15, 114-PZ-66T: 16.17, 114-PZ-66WR: 15.85

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: See comment
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610929.92
Date Started Drilling: 11/15/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683430.17
Date Finished Drilling: 11/18/2021	Core Size: 10 in. sonic	Boring Total Depth: 85 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
33-34	5 / 5	0		SP				#0 Sand: 33-41 ft bgs
35-38	5 / 5	0		SP		Red brown, fine SAND, trace silt, medium dense, wet. Yellow water at 38 to 39 ft bgs.		1.5-inch diameter, 0.010-inch slot PVC screen: 35-40 ft bgs
39-40				SM SP		Red brown, fine SAND, some silt, soft, wet. Yellow water at 38 to 39 ft bgs. Red brown, fine SAND, trace silt, medium dense, wet. Stained with Ferro-Black 39.5 ft to 40 ft bgs.		
41-42				SM		Red brown, fine SAND, some silt, medium dense, wet.		Bentonite: 41-44 ft bgs
43-44	5 / 5	0		CL		Red brown CLAY, trace silt, medium stiff, damp.		#0 Sand: 44-49 ft bgs
45-46				SM		Red brown, fine SAND, some silt, medium dense, wet.		1.5-inch diameter, 0.010-inch slot PVC screen: 45-47 ft bgs
47-48	5 / 5	0		CL		Red brown CLAY, trace silt, medium stiff, damp.		
49-50								Bentonite: 49-63 ft bgs
51-52	3 / 5	0		SM		Red brown, fine to coarse SAND, some fine to coarse subrounded gravel, trace silt, trace cobbles, very dense, wet. (Basal Till)		
53-54								
55-56				SP		Red brown, fine SAND, trace silt, medium dense, wet.		
57-58	4 / 5	0				Red brown, fine to coarse SAND, some fine to coarse subrounded gravel, trace silt, trace cobbles, very dense, wet. (Basal Till)		
59-60				SM				
61-62								
63-64	3 / 5	0						#0 Sand: 63-72 ft bgs

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Comments: Top of PVC elevation (ft NAVD88): 114-PZ-66I: 16.19, 114-PZ-66D: 16.15, 114-PZ-66T: 16.17, 114-PZ-66WR: 15.85

Project Name: Garfield Avenue Groundwater RI	Drilling Company: ADT	Top of PVC Elevation: See comment
Project Number: 60667926	Drilling Method: Sonic	Coordinates (NJSPNAD83) x: 610929.92
Date Started Drilling: 11/15/2021	Rig Type: Terra Sonic TSI 150CC	Coordinates (NJSPNAD83) y: 683430.17
Date Finished Drilling: 11/18/2021	Core Size: 10 in. sonic	Boring Total Depth: 85 ft
Logged By: E. Acs	Project Manager: Shannon Gleason	Depth to Water: NA
Physical Location: Site 114		Surface Elevation: 13.9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Material Description	Well Construction	Remarks
66-70	4 / 5	0		SM				1.5-inch diameter, 0.010-inch slot PVC screen: 65-70 ft bgs
70-72								
72-75	3 / 5	0						Bentonite: 72-78 ft bgs
75-76								
76-78	4 / 5	0		SM		Red brown, fine to coarse SAND, some fine to coarse subrounded gravel, trace silt, very dense, wet. (Basal Till)		
78-80								#0 Sand: 78-85 ft bgs
80-81								
81-82								
82-83	5 / 5	0		BEDROCK		Gray MUDSTONE (Argillite), weathered - broken rock and rock flour. Lockatong Formation		2-inch diameter, 0.010-inch slot PVC screen: 80-84 ft bgs
83-84								
84-85				BEDROCK		Gray MUDSTONE (Argillite), broken unweathered rock pieces. Lockatong Formation		

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Comments: Top of PVC elevation (ft NAVD88): 114-PZ-66I: 16.19, 114-PZ-66D: 16.15, 114-PZ-66T: 16.17, 114-PZ-66WR: 15.85