



**APPENDIX B**

**SOIL BORING LOGS, WELL CONSTRUCTION LOGS, AND FIELD SAMPLING  
LOGS**

## 2010 DATA/ LOGS

							<b>Soil - Gas Sampling Log</b>		<b>Crew:</b> EB, TF
<b>Project Name:</b> NYSDEC Woodhaven Blvd.							<b>Sheet</b> 1 <b>of</b> 2	<b>Project No.:</b> 147-135583	
<b>Client:</b> NYSDEC							<b>Date:</b> Start 9/20/2010		
<b>Drilling/Boring Method:</b> GeoProbe 7720							Finish 9/22/2010		
<b>Pumping Method:</b> 6L Summa, 2hr Regulator							<b>Pump ID</b>		
<b>Boring Location:</b> Queens, NY							<b>Depth to Water:</b>		
<b>Coordinates:</b>							<b>Surf. Elevation</b>		
<b>Logged By:</b> E. Brandt							<b>Hole Diameter:</b>		
<b>Monitoring Instrument:</b>									
Sample ID	Start Time	End Time	Start Pressure	End Pressure	Purge Rate	Sample Depth	Cannister ID	Regulator ID	Remarks And Observations
WB-SG8-SV-10-0	1320	1520	-30	-12	n/a	10	1081	3028	
WB-SG9-SV-10-0	1355	1555	-30	-11	n/a	10	1053	3169	
WB-SG4-SV-8-0	0825	1025	-30	-10	n/a	8	1835	3039	
WB-SG5-SV-8-0	0925	1142	-30	-8	n/a	8	1826	3160	
WB-SG6-SV-8-0	1135	1335	-28	-14	n/a	8	1158	3183	
WB-SG3-SV-8-0	1250	1450	-29	-10	n/a	8	1455	3029	
WB-SG2-SV-8-0	1435	1635	-30	-12.5	n/a	8	1456	3054	
WB-SG1-SV-8-0	1525	1725	-31	-12	n/a	8	1061	3294	

Note: Start Time end Time refers to Start and end time for sample collection only. n/a: not applicable

 <b>Soil - Gas Sampling Log</b>							<b>Crew:</b> EB, TF		
							<b>Sheet</b> 2 of 2		
<b>Project Name:</b> NYSDEC Woodhaven Blvd.							<b>Project No.:</b> 147-135583		
<b>Client:</b> NYSDEC							<b>Date:</b> Start 9/20/2010		
<b>Drilling/Boring Method:</b> GeoProbe 7720							Finish 9/22/2010		
<b>Pumping Method:</b> 6L Summa, 2hr Regulator							<b>Pump ID</b>		
<b>Boring Location:</b> Queens, NY							<b>Depth to Water:</b>		
<b>Coordinates:</b>							<b>Surf. Elevation</b>		
<b>Logged By:</b> E. Brandt							<b>Hole Diameter:</b>		
<b>Monitoring Instrument:</b>									
Sample ID	Start Time	End Time	Start Pressure	End Pressure	Purge Rate	Sample Depth	Cannister ID	Regulator ID	Remarks And Observations
WB-SG13-SV-8-0	0805	1005	-28	-9	n/a	8	1109	3191	
WB-SG12-SV-8-0	0840	1040	-30	-10	n/a	8	1652	3233	
WB-SG11-SV-8-0	1035	1235	-30	-10	n/a	8	1659	3186	
WB-SG7-SV-8-0	1310	1510	-31	-12	n/a	8	1487	3040	
WB-SG10-SV-18-0	1400	1600	-31	-7.5	n/a	18	1232	3436	
WB-SG10-SV-18-1	1400	1600	-31	-13	n/a	18	1806	3041	

Note: Start Time end Time refers to Start and end time for sample collection only. n/a: not applicable



# Test Boring Log

Boring No.: MW-1S

Sheet 1 of 1

Project Name: NYSDEC Woodhaven Blvd.

Project No.: 135583

Client: NYSDEC

Date: Start 28 Aug 2010

Driller: LAWES - Kevin

Finish 28 Aug 2010

Drilling Method: 4.25 HSA

Total Depth: 71

Boring Location: Queens, NY

Depth To Water: 55

Coordinates:

Surf. Elevation:

Logged By: MVP

Hole Diameter: 8 inch

Monitoring Instrument(s): Multi-RAE Plus

Depth (ft)	Blows On Sampler				Recovery (ft)	Instrument Reading (ppm)	Sample Retained	Classification Of Material f - fine m - medium c - coarse and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	Remarks
	0"-6"	6"-12"	12"-18"	18"-24"					
0								0' - 5' Brown M-F SAND. Trace M gravel, Silt, Clay	Dry, No Odors
4									
5									
6	4	5	5	9	1.4	0	N		
9									
10									
11	3	12	20	11	1.0	0	N		
14									
15									
16	10	14	16	16	0.4	0	N		
19									
20									
21	11	12	12	12	1.0	0	N		
24									
25									
26	7	7	8	10	1.2	0	N		
29									
30									
31	13	15	17	21	1.6	0	N		
34									
35									
36	12	15	19	19	1.6	0	N		
39									
40									
41	10	13	14	16	1.6	0	N		
44									
45									
46	16	17	20	21	1.9	0	N		
49									
50									
51					1.7	0	Y		
54									
55									
56					1.3	0	N		
59									
60									
61					1.1	0	N		
64									
65									
66					1.5	0	N		
69									
70									
71					1.5	0	N		



# Test Boring Log

Boring No.: MW-2I

Sheet 1 of 1

Project Name: NYSDEC Woodhaven Blvd.

Project No.: 135583

Client: NYSDEC

Date: Start 8 Sept 2010

Driller: LAWES - Carl

Finish 8 Sept 2010

Drilling Method: 4.25 HSA

Total Depth: 110

Boring Location: Queens, NY

Depth To Water: 53

Coordinates:

Surf. Elevation:

Logged By: E.Brandt

Hole Diameter: 8 inch

Monitoring Instrument(s): Multi-RAE Plus

Depth (ft)	Blows On Sampler				Recovery (ft)	Instrument Reading (ppm)	Sample Retained	Classification Of Material f - fine m - medium c - coarse and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	Remarks
	0"-6"	6"-12"	12"-18"	18"-24"					
									No Samples (See MW-2S)
49									
51	8	14	14	18	1.5	0	Y	49' - 51' Med Brown and Tan F-M SAND, tr. Silt.	Dry, No Odors
69									
71	10	12	21	26	1.6	0	N	69' - 71' Med to Dark Brown and Tan M-C SAND, tr. F Sand.	Wet, No Odors.
79									
81	4	4	5	9	1.6	0	N	79' - 81' Med Brown F-C SAND.	Wet, No Odors.
89									
91	5	7	13	16	1.5	0	N	89' - 91' Med Brown F-M SAND, tr. Silt.	Wet, No Odors.
99									
101	6	9	13	17	1.6	0	N	99' - 101' Med Brown F SAND, some M Sand.	Wet, No Odors.
								EOB	
								<b>Soil Sample Retained, ID:</b> WB-MW2I-SS-50-0	
								<b>Monitor Well Installed:</b> 2in PVC 10ft Screen 100ft Riser Set at 110ft bgs. 8in flush-mount	



# Test Boring Log

Boring No.: MW-2S

Sheet 1 of 1

Project Name: NYSDEC Woodhaven Blvd.

Project No.: 135583

Client: NYSDEC

Date: Start 30 Aug 2010

Driller: LAWES - Carl

Finish 30 Aug 2010

Drilling Method: 4.25 HSA

Total Depth: 71

Boring Location: Queens, NY

Depth To Water: 54

Coordinates:

Surf. Elevation:

Logged By: E. Brandt

Hole Diameter: 8 inch

Monitoring Instrument(s): Multi-RAE Plus

Depth (ft)	Blows On Sampler				Recovery (ft)	Instrument Reading (ppm)	Sample Retained	Classification Of Material f - fine and - 35-50% m - medium some - 20-35% c - coarse little - 10-20% trace - 0-10%	Remarks
	0"-6"	6"-12"	12"-18"	18"-24"					
4									
5								4' - 4.5' Dark Brown F SAND and C Sand.	
6	4	8	10	14	1.00	0.0	N	4.5' - 6' Med Brown F SAND , tr. Silt and C Sand.	Dry, No Odors
9								9' - 11' Med Brown F SAND, some C Sand, tr.	
10	10	12	11	12	0.80	0.0	N	F Gravel.	Dry, No Odors
14									
15	9	14	15	16	NR	-	N	Rock in Shoe	No Recovery
19									
20								19' - 21' Med Brown M-C SAND, tr. Rounded	
21	8	19	18	27	1.10	0.0	N	Gravel, tr. Silt.	Dry, No Odors
24									
25	9	13	17	22	1.65	0.0	N	24' - 26' Light Brown and Tan F-C SAND.	Dry, No Odors
29									
30	9	14	17	20	1.70	0.0	N	29' - 31' Light Brown and Tan F-C SAND.	Dry, No Odors
34									
35	9	12	14	23	1.40	0.0	N	34' - 36' Light Brown and Tan F-M SAND.	Dry, No Odors
39									
40	8	11	14	15	1.50	0.0	N	39' - 40' Light Brown F SAND	
41								40' - 41' Light Brown and Tan M-C SAND	Dry, No Odors
44									
45	9	14	26	32	1.55	0.0	N	44' - 46' Light Brown and Tan F-C SAND	Dry, No Odors
49									
50								49' - 50.5' Light Brown and Tan F-C SAND	
51	10	15	17	23	1.50	0.0	Y	50.5' - 51' Medium Brown F SAND and Silt	Dry, No Odors
54									
55	9	16	21	25	1.30	0.0	N	54' - 56' Dark Brown F-C SAND	Wet, No Odor
59									
60								59' - 59.5' Dark Brown F-C SAND	
61	6	11	14	19	1.50	0.0	N	59.5' - 61' Med Brown F SAND	Wet, No Odor
64									
65								64' - 65' Dark Brown F SAND, tr. Rd F Gravel	
66	4	8	9	12	0.90	0.0	N	65' - 66' Dark Brown M-C SAND	Wet, No Odor
69									
70									
71	4	7	8	10	1.40	2.7	N	69' - 71' Dark and Med Brown and Tan F-C SAND	Wet, No Odor

EOB

**Soil Sample Collected:**

ID: WB-MW2-SS-50-0

**Monitor Well Installed:**

2in PVC, 15 Ft Screen

55 Ft Riser



# Test Boring Log

Boring No.: MW-3I

Sheet 1 of 1

Project Name: NYSDEC Woodhaven Blvd.

Project No.: 135583

Client: NYSDEC

Date: Start 1 Sept 2010

Driller: LAWES - Scott

Finish 1 Sept 2010

Drilling Method: 4.25 HSA

Total Depth: 110

Boring Location: Queens, NY

Depth To Water: 54

Coordinates:

Surf. Elevation:

Logged By: E. Brandt

Hole Diameter: 8 inch

Monitoring Instrument(s): Multi-RAE Plus

Depth (ft)	Blows On Sampler				Recovery (ft)	Instrument Reading (ppm)	Sample Retained	Classification Of Material f - fine m - medium c - coarse and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	Remarks
	0"-6"	6"-12"	12"-18"	18"-24"					
49								49' - 50' Light Brown and Tan M-C SAND	No Samples
51	7	11	12	14	1.2	0.0	Y	50' - 51' Medium Brown F-M SAND	Dry, No Odor
64									
66	5	9	16	17	1.2	0.0	N	64' - 66' Medium Brown F SAND, tr, F Gravel	Wet, No Odor
69									
71	30	36	45	50-	1.1	0.0	N	69' - 71' Med Dark Brown F-MSAND, Tr. F Gravel	Wet, No Odor
74									
76	17	22	36	40	1.7	0.0	N	74' - 76' Medium Brown F-C SAND	Wet, No Odor
79									
81	16	21	23	28	1.6	0.0	N	79' - 81' Medium Brown F-C SAND	Wet, No Odor
85									
110									No Samples Due to Sand Heaving

EOB

**Soil Sample Collected:**

ID: WB-MW3-SS-50-0

**Monitor Well Installed:**

2 in PVC

10Ft Screen

100Ft Riser





# Test Boring Log

**Boring No.:** MW-3S  
**Sheet** 1 of 1  
**Project No.:** 135583  
**Date:** Start 27 Aug 2010  
 Finish 27 Aug 2010  
**Total Depth:** 65  
**Depth To Water:** 54  
**Surf. Elevation:**  
**Hole Diameter:** 8 inch

**Project Name:** NYSDEC Woodhaven Blvd.  
**Client:** NYSDEC  
**Driller:** LAWES - Kevin  
**Drilling Method:** 4.25 HSA  
**Boring Location:** Queens, NY  
**Coordinates:**  
**Logged By:** E. Brandt

**Monitoring Instrument(s):** Multi-RAE Plus

Depth (ft)	Blows On Sampler				Recovery (ft)	Instrument Reading (ppm)	Sample Retained	Classification Of Material f - fine m - medium c - coarse and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	Remarks
	0"-6"	6"-12"	12"-18"	18"-24"					
4								4' - 4.5' Dark Brown F-M SAND	Fill
5					1.3	1.2	N	4.5' - 6' Dark Gray and White Cinders and Ash.	Dry, No Odors
9								9' - 9.5' Black F SAND, tr. Angular Gravel	
10					1.5	0.0	N	9.5' - 11' Light Brown F SAND and Silt	Dry, No Odors
14									
15					NR	na	N	No Recovery	Rock in Shoe
19									
20					0.2	0.0	N	Dark Brown F SAND, some C Gravel	Rock in Shoe, Dry
24									
25					0.6	0.0	N	Dark Brown F-M SAND, some Silt	Dry, No Odors
29									
30									
31	8	9	11	13	1.7	0.0	N	29' - 31' Medium Tan M-C SAND	Dry, No Odors
34								34' - 35' Medium Tan and Brown M-C SAND	
35								35' - 36' Med Tan and Brown F SAND	Dry, No Odors
36	10	11	11	11	1.6	0.0	N		
39									
40									
41	10	14	15	15	2	0.0	N	39' - 41' Medium Tan and Brown F-M SAND	Dry, No Odors
44									
45									
46	9	10	14	15	1.7	0.0	N	44' - 46' Tan and Brown M-C SAND	Dry, No Odors
49									
50									
51	15	18	21	20	1.4	0.0	N	49' - 51' Tan M-C SAND	Dry, No Odors
54									
55									
56	22	13	44	19	1.3	0.1	N	54' - 56' Brown F-C SAND, tr. Cobble	Wet
59									
60									
61	12	14	19	19	1.8	0.0	N	59' - 61' Brown F SAND, some Silt, Little C Sand tr. Cobble	Wet

EOB

Auger to 65 ft. Set bottom of well at 65 feet.  
 Screen 55-65 ft. 2 inch PVC.  
 Riser to surface.



# Test Boring Log

Boring No.: MW-4I

Sheet 1 of 1

Project Name: NYSDEC Woodhaven Blvd.

Project No.: 135583

Client: NYSDEC

Date: Start 10 Sept 2010

Driller: LAWES - Carl

Finish !0 Sept 2010

Drilling Method: 4.25 HSA

Total Depth: 120

Boring Location: Queens, NY

Depth To Water: 73

Coordinates:

Surf. Elevation:

Logged By: E. Brandt

Hole Diameter: 8 inch

Monitoring Instrument(s): Multi-RAE Plus

Depth (ft)	Blows On Sampler				Recovery (ft)	Instrument Reading (ppm)	Sample Retained	Classification Of Material f - fine m - medium c - coarse and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	Remarks
	0"-6"	6"-12"	12"-18"	18"-24"					
4									
5									
6	4	3	4	3	1.1	0.0	N	4' - 6' Medium Brown F SAND, tr. F Gravel	Dry, No Odors
9									
10									
11	5	3	2	2	0.9	0.0	N	9' - 11' Medium Brown F SAND and C Sand tr. F Gravel	Dry, No Odors
14									
15									
16	5	7	13	16	1.9	0.0	N	14' - 16' Medium Brown F Sand and SILT, tr. Rounded F Gravel	Moist, No Odors
19									
20									
21	5	7	50/3		1.2	0.0	N	19' - 20' Medium Brown SILT 20' - 21' Medium Brown F SAND, tr. F Gravel	Moist, No Odors
24									
25									
26	14	19	23	27	1.5	0.0	N	24' - 25' Medium Brown SILT 25' - 26' Medium Brown F SAND, some C Sand	Moist, No Odors
39									
40									
41	8	9	12	12	1.5	0.0	N	39' - 41' Tan and Brwon F-C SAND	Dry, No Odors
49									
50									
51	9	14	15	18	1.4	0.0	N	49' - 51' Tan and Medium Brown F-C SAND	Dry, No Odors
59									
60									
61	10	16	20	24	1.7	0.0	N	59' - 61' Tan F-C SAND	Dry, No Odors
69									
70									
71	13	16	18	20	1.9	0.0	Y	69' - 71' Medium Brown F SAND, tr. Silt	Moist, No Odors
74									
75									
76	6	7	9	10	1.6	0.0	N	74' - 76' Medium Brown F-M SAND	Wet, No Odors
84									
85									
86	6	7	10	14	1.7	0.0	N	84' - 86' Medium Brown F-C SAND	Wet, No Odors
120	EOB								No Samples
<p><b>Soil Sample Collected:</b> ID: WB-MW4-SS-70-0</p> <p><b>Monitor Wel Installed:</b> 10 Ft Screen set at 111 ft.</p>									



# Test Boring Log

Boring No.: MW-5I

Sheet 1 of 1

Project Name: NYSDEC Woodhaven Blvd.

Project No.: 135583

Client: NYSDEC

Date: Start 9 Spet 2010

Driller: LAWES - Carl

Finish 9 Sept 2010

Drilling Method: 4.25 HSA

Total Depth: 112

Boring Location: Queens, NY

Depth To Water: 63

Coordinates:

Surf. Elevation:

Logged By: E. Brandt

Hole Diameter: 8 inch

Monitoring Instrument(s): Multi-RAE Plus

Depth (ft)	Blows On Sampler				Recovery (ft)	Instrument Reading (ppm)	Sample Retained	Classification Of Material f - fine m - medium c - coarse and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	Remarks
	0"-6"	6"-12"	12"-18"	18"-24"					
4								4' - 6' Medium and Dark Brown F SAND, some M Sand and tr. C Gravel	Dry, No Odor
6	10	16	23	27	1.1	0.0	N		
9								9' - 11' Medium Brown F SAND, some F-C Gravel tr. C Sand	
11	11	13	20	20	1.3	0.0	N		
14								14' - 16' Medium Brown F-M SAND, some C Sand and F Gravel	
16	6	7	14	11	1.0	0.0	N		
19								No Sample - Rock	
21					NR		N		
29								29' - 31' Tan and Medium Brown F-M SAND	
31	10	16	23	25	1.6	0.0	N		
39								39' - 41' Tan and Brown F-M SAND	
41	8	12	20	19	1.6	0.0	N		
49								49' - 51' Tan and Light Brown F-M SAND	
51	10	15	23	27	1.5	0.0	N		
54								54' - 56' Tan and Light Brown F-M SAND	
56	9	15	24	28	1.5	0.0	N		
59								59' - 61' Light Brown F SAND	
61	13	17	20	31	1.8	0.0	Y		
64								64' - 66' Medium Brown F SAND, some Silt	
66	7	10	13	17	1.4	0.0	N		
79								79' - 81' Medium Brown F-C SAND, tr. Silt	
81	9	12	15	19	0.9	0.0	N		
99								99' - 101' Dark Brown F SAND	
101	7	13	18	19	1.0	0.0	N		
112	EOB								
<p><b>Soil Sample Collected:</b> ID: WB-MW5-SS-60-0</p> <p><b>Monitor Well Installed:</b> 10 ft 2in PVC, 102 ft Riser</p>									



# Test Boring Log

Boring No.: MW-6I

Sheet 1 of 1

Project Name: NYSDEC Woodhaven Blvd.

Project No.: 135583

Client: NYSDEC

Date: Start 7 Sept 2010

Driller: LAWES - Carl

Finish 7 Sept 2010

Drilling Method: 4.25 HSA

Total Depth: 110

Boring Location: Queens, NY

Depth To Water: 63

Coordinates:

Surf. Elevation:

Logged By: E. Brandt

Hole Diameter: 8 inch

Monitoring Instrument(s): Multi-RAE Plus

Depth (ft)	Blows On Sampler				Recovery (ft)	Instrument Reading (ppm)	Sample Retained	Classification Of Material f - fine m - medium c - coarse and - 35-50% some - 20-35% little - 10-20% trace - 0-10%	Remarks
	0"-6"	6"-12"	12"-18"	18"-24"					
4									
5									
6	4	7	10	10	1.50	0.0	N	4' - 6' Mdium Brown F SAND; tr Silt	Dry, No Odors
9									
10									
11	7	7	6	10	1.30	0.0	N	9' - 11' Medium Brown F SAND and Silt.	Dry, No Odors
14									
15									
16	7	10	23	52	1.40	0.0	N	14' - 16' Medium and Dark Brown F-M SAND; some Silt; tr. C Sand	Dry, No Odors
19									
20									
21	26	39	50/1	-	1.00	0.0	N	19' - 21' Medium Brown F-C SAND; tr. C Gravel	Dry, No Odors
24									
25									
26	16	28	35	38	1.35	0.0	N	24' - 26' Medium Brown and Tan F-C SAND	Dry, No Odors
29									
30									
31	13	18	20	19	1.70	0.0	N	29' - 31' Medium Brown and Tan F-C SAND	Dry, No Odors
34									
35									
36	6	7	13	17	1.50	0.0	N	34' - 36' Medium Brown and Tan F-C SAND	Dry, No Odors
39									
40									
41	8	13	20	20	1.40	0.0	N	39' - 41' Medium Brown and Tan F-M SAND	Dry, No Odors
44									
45									
46	10	13	16	20	1.50	0.0	N	44' - 46' Medium Brown and Tan F-M SAND	Dry, No Odors
49									
50									
51	11	15	19	24	1.20	0.0	N	49' - 51' Medium Brown and Tan F-M SAND	Dry, No Odors
54									
55									
56	14	16	18	23	1.50	0.0	N	54' - 56' Medium Brown and Tan F-M SAND	Moist, No Odors
59									
60									
61	6	10	13	15	1.65	0.0	Y	59' - 61' Medium Brown F SAND; little M Sand	Moist, No Odors
64									
65									
66	6	9	15	24	1.60	0.0	N	64' - 66' Medium Brown F-C SAND	Wet, No Odors
69									
70									
71	7	10	12	15	1.50	0.0	N	69' - 71' Medium Brown and Tan F-C SAND	Wet, No Odors
74									
75									
76	6	8	12	17	1.50	0.0	N	74' - 76' Medium Brown and Tan F-M SAND	Wet, No Odors
79									
80									
81	6	9	12	21	1.70	0.0	N	79' - 81' Medium Brown and Tan F-M SAND	Wet, No Odors
84									
85									
86	7	9	14	22	1.65	0.0	N	84' - 86' Medium Brown and Tan F-M SAND	Wet, No Odors
110	EOB								No Sample

Soil Sample Collected:  
ID: WB-MW6-SS-60-0

Monitor Well Installed:  
Set at 110.5 ft bgs.  
10 ft 2in PVC Screen  
100ft Riser

# MONITORING WELL COMPLETION LOG

PROJECT NUMBER: 147-135583

PROJECT NAME: NYSDEC Woodhaven Blvd.

WELL No.: MW-1S

CLIENT: NYSDEC

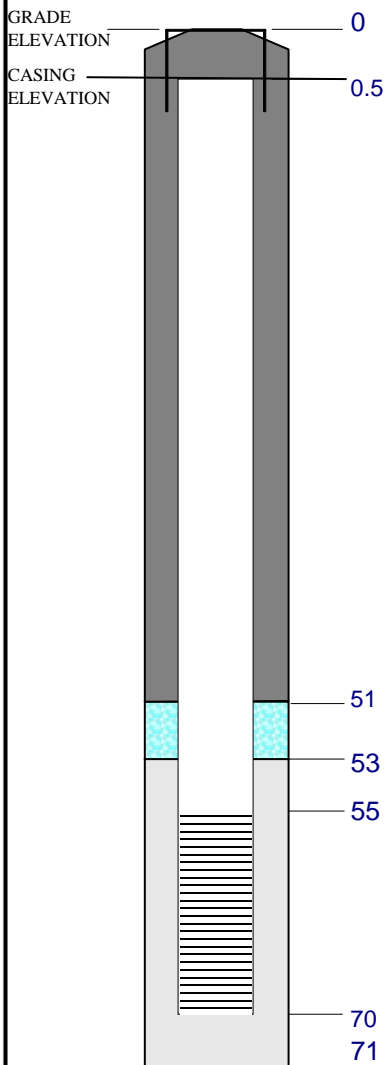
LOCATION: Queens, NY

DATE DRILLED: 27-Aug-10

DATE DEVELOPED: 15-Sep-10

CONSTRUCTION COMPLETED: 27-Aug-10

DEVELOPING METHOD: Over pumping.



INSPECTOR: E. Brandt

DRILLING CONTRACTOR: LAWES

TYPE OF WELL: Overburden

STATIC WATER LEVEL: 55.17 DATE: 09/13/10

MEASURING POINT: Top of PVC - North Side

TOTAL DEPTH OF WELL: 70.55 TOTAL DEPTH OF BORING: 71

## DRILLING METHOD

TYPE: H.S.A.

DIAMETER: 4.25"

CASING: PVC

## SAMPLING METHOD

TYPE:

DIAMETER:

WEIGHT:

FALL:

INTERVAL:

## RISER PIPE LEFT IN PLACE

MATERIAL: PVC

DIAMETER: 2 inch

LENGTH:

JOINT TYPE: Flush Thread

## SCREEN

MATERIAL: PVC

INTERVAL: 55.00 - 70.00

DIAMETER: 2 inch

STRATIGRAPHIC UNITS SCREENED:

SLOT SIZE: 0.01

## FILTER PACK

GRADE:

SAND: #1

GRAVEL:

NATURAL:

AMOUNT:

INTERVAL: 53.00 - 71.00

## SEAL(s)

## NOTES:

Portland Cement

INTERVAL:

AMOUNT:

Bentonite Slurry

INTERVAL: 51.00 - 1.00

AMOUNT:

Bentonite Pellets

INTERVAL: 51.00 - 53.00

AMOUNT:

Other:

INTERVAL:

AMOUNT:

LOCKING CASING:  YES  NO

KEY NO: 18032

# MONITORING WELL COMPLETION LOG

PROJECT NUMBER: 147-135583

PROJECT NAME: NYSDEC Woodhaven Blvd.

WELL No.: MW-2I

CLIENT: NYSDEC

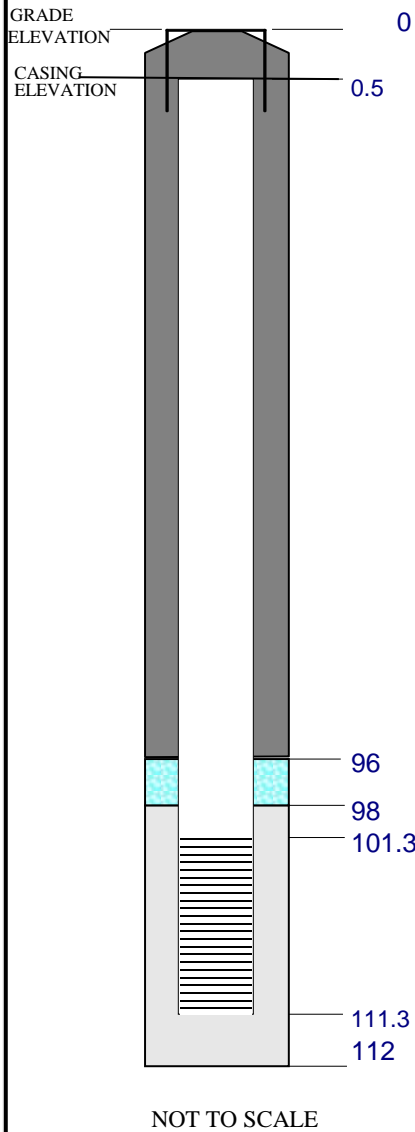
LOCATION: Queens, NY

DATE DRILLED: September 8, 2010

DATE DEVELOPED: 14-Sep-10

CONSTRUCTION COMPLETED: 8-Sep-10

DEVELOPING METHOD: Over pumping.



INSPECTOR: E. Brandt  
 DRILLING CONTRACTOR: LAWES  
 TYPE OF WELL: Overburden  
 STATIC WATER LEVEL: 57.53 DATE: 09/13/10  
 MEASURING POINT: Top of PVC - North Side  
 TOTAL DEPTH OF WELL: 111.3 TOTAL DEPTH OF BORING: 112

**DRILLING METHOD** TYPE: H.S.A.

DIAMETER: 4.25" CASING: PVC

**SAMPLING METHOD** TYPE:

DIAMETER: WEIGHT:

FALL: INTERVAL:

**RISER PIPE LEFT IN PLACE** MATERIAL: PVC

DIAMETER: 2 inch LENGTH: 100 JOINT TYPE: Flush Thread

**SCREEN** MATERIAL: PVC

INTERVAL: 101.3 - 111.30 DIAMETER: 2 inch

STRATIGRAPHIC UNITS SCREENED: SLOT SIZE: 0.01

**FILTER PACK** GRADE:

SAND: #0 GRAVEL: NATURAL:

AMOUNT: INTERVAL: 112 - 98

**SEAL(s)**

NOTES:

Portland Cement INTERVAL: AMOUNT:

Bentonite Slurry INTERVAL: 96 - 1.5 AMOUNT:

Bentonite Pellets INTERVAL: 98 - 96 AMOUNT:

Other: INTERVAL: AMOUNT:

LOCKING CASING:  YES  NO KEY NO: 18032

# MONITORING WELL COMPLETION LOG

PROJECT NUMBER: **147-135583**

PROJECT NAME: **NYSDEC Woodhaven Blvd.**

WELL No.: **MW-2S**

CLIENT: **NYSDEC**

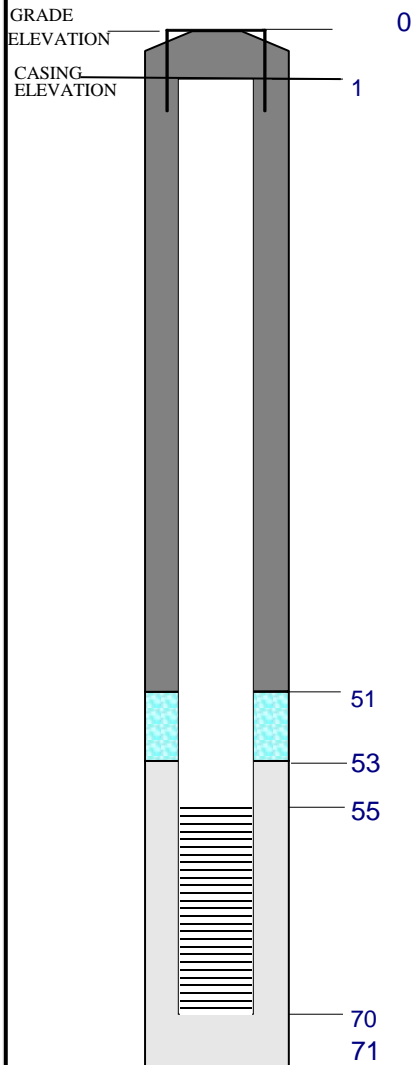
LOCATION: **Queens, NY**

DATE DRILLED: **August 30, 2010**

DATE DEVELOPED: **3-Sep-10**

CONSTRUCTION COMPLETED: **30-Aug-10**

DEVELOPING METHOD: **Over pumping.**



NOT TO SCALE

INSPECTOR: **E. Brandt**  
 DRILLING CONTRACTOR: **LAWES**  
 TYPE OF WELL: **Overburden**  
 STATIC WATER LEVEL: **57.77** DATE: **09/13/10**  
 MEASURING POINT: **Top of PVC - North Side**  
 TOTAL DEPTH OF WELL: **70.82** TOTAL DEPTH OF BORING: **71**

**DRILLING METHOD** TYPE: **H.S.A.**

DIAMETER: **4.25"** CASING: **PVC**

**SAMPLING METHOD** TYPE:

DIAMETER: WEIGHT:

FALL: INTERVAL:

**RISER PIPE LEFT IN PLACE** MATERIAL: **PVC**

DIAMETER: **2 inch** LENGTH: **55** JOINT TYPE: **Flush Thread**

**SCREEN** MATERIAL: **PVC**

INTERVAL: **55-70** DIAMETER: **2 inch**

STRATIGRAPHIC UNITS SCREENED: SLOT SIZE: **0.01**

**FILTER PACK** GRADE:

SAND: **#0** GRAVEL: NATURAL:

AMOUNT: INTERVAL: **71 - 53**

**SEAL(s)**

**NOTES:**

Portland Cement	INTERVAL:	AMOUNT:
Bentonite Slurry	INTERVAL: <b>1.5 - 51</b>	AMOUNT:
Bentonite Pellets	INTERVAL: <b>51 - 53</b>	AMOUNT:
Other:	INTERVAL:	AMOUNT:

LOCKING CASING:  YES  NO KEY NO: **18032**

# MONITORING WELL COMPLETION LOG

PROJECT NUMBER: 147-135583

PROJECT NAME: NYSDEC Woodhaven Blvd.

WELL No.: MW-3S

CLIENT: NYSDEC

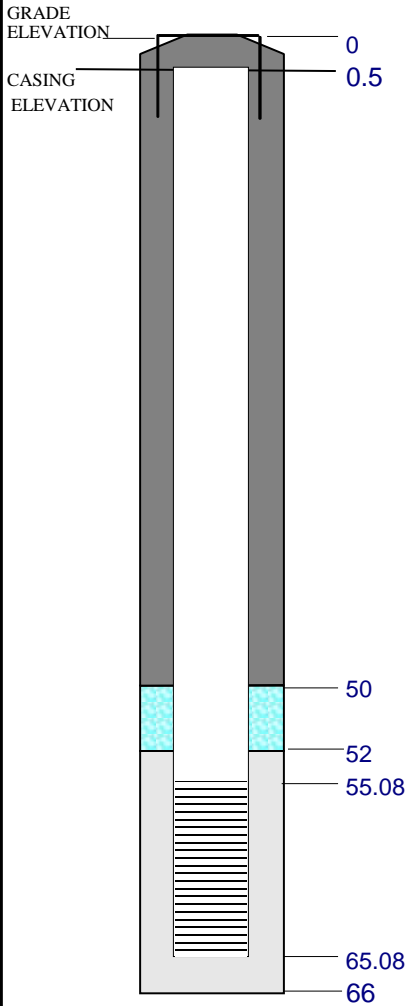
LOCATION: Queens, NY

DATE DRILLED: 27-Aug-2010

DATE DEVELOPED: 15-Sep-10

CONSTRUCTION COMPLETED: 27-Aug-2010

DEVELOPING METHOD: Over pumping.



INSPECTOR: E. Brandt  
 DRILLING CONTRACTOR: LAWES  
 TYPE OF WELL: Overburden  
 STATIC WATER LEVEL: 56.48 DATE: 09/13/10  
 MEASURING POINT: Top of PVC - North Side  
 TOTAL DEPTH OF WELL: 65.08 TOTAL DEPTH OF BORING: 66

**DRILLING METHOD**

TYPE: H.S.A.

DIAMETER: 4.25"

CASING: PVC

**SAMPLING METHOD**

TYPE:

DIAMETER:

WEIGHT:

FALL:

INTERVAL:

**RISER PIPE LEFT IN PLACE**

MATERIAL: PVC

DIAMETER: 2 inch

LENGTH:

JOINT TYPE: Flush Thread

**SCREEN**

INTERVAL: 55.08 - 65.08

MATERIAL: PVC  
 DIAMETER: 2 inch

STRATIGRAPHIC UNITS SCREENED:

SLOT SIZE: 0.01

**FILTER PACK**

GRADE:

SAND: #0  
 AMOUNT:

GRAVEL:

NATURAL:

INTERVAL: 52.00 - 65.08

**SEAL(s)**

NOTES:

Portland Cement	INTERVAL:	AMOUNT:
Bentonite Slurry	INTERVAL: 50.00 - 1.5	AMOUNT:
Bentonite Pellets	INTERVAL: 53.00 - 50.00	AMOUNT:
Other:	INTERVAL:	AMOUNT:

LOCKING CASING:  YES  NO KEY NO: 18032



# MONITORING WELL COMPLETION LOG

PROJECT NUMBER: 147-135583

PROJECT NAME: NYSDEC Woodhaven Blvd.

WELL No.: MW-3I

CLIENT: NYSDEC

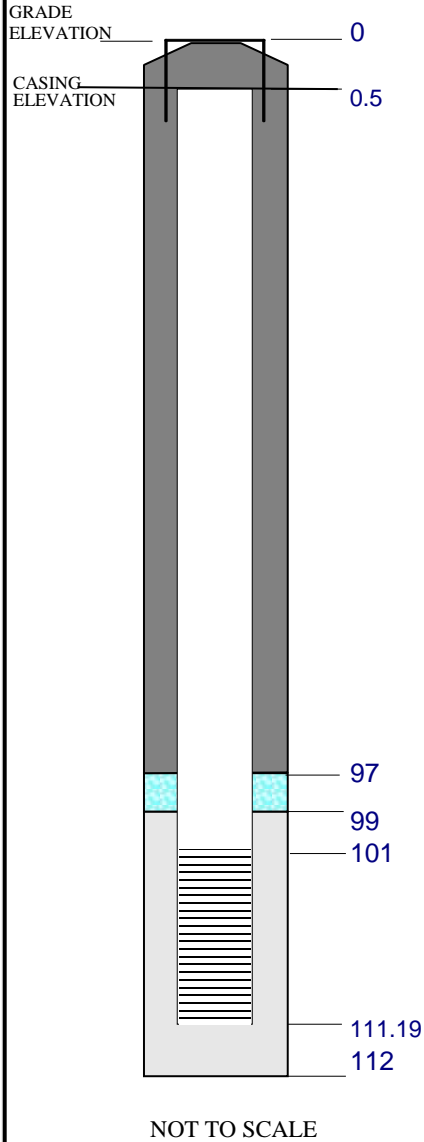
LOCATION: Queens, NY

DATE DRILLED: September 1, 2010

DATE DEVELOPED: 14-Sep-10

CONSTRUCTION COMPLETED: 1-Sep-10

DEVELOPING METHOD: Over pumping.



INSPECTOR: E. Brandt

DRILLING CONTRACTOR: LAWES  
TYPE OF WELL: Overburden

STATIC WATER LEVEL: 57.39 DATE: 09/13/10

MEASURING POINT: Top of PVC - North Side

TOTAL DEPTH OF WELL: 111.19 TOTAL DEPTH OF BORING: 112

### DRILLING METHOD

TYPE: H.S.A.

DIAMETER: 4.25"

CASING: PVC

### SAMPLING METHOD

TYPE:

DIAMETER:

WEIGHT:

FALL:

INTERVAL:

### RISER PIPE LEFT IN PLACE

MATERIAL: PVC

DIAMETER: 2 inch

LENGTH: 100

JOINT TYPE: Flush Thread

### SCREEN

MATERIAL: PVC

INTERVAL: 111.19 - 101

DIAMETER: 2 inch

STRATIGRAPHIC UNITS SCREENED:

SLOT SIZE: 0.01

### FILTER PACK

GRADE:

SAND: #1

GRAVEL:

NATURAL:

AMOUNT:

INTERVAL: 112 - 99

### SEAL(s)

### NOTES:

Portland Cement INTERVAL: AMOUNT:

Bentonite Slurry INTERVAL: 97 - 1 AMOUNT:

Bentonite Pellets INTERVAL: 99 - 97 AMOUNT:

Other: INTERVAL: AMOUNT:

LOCKING CASING:  YES  NO KEY NO: 18032

# MONITORING WELL COMPLETION LOG

PROJECT NUMBER: 147-135583

PROJECT NAME: NYSDEC Woodhaven Blvd.

WELL No.: MW-4I

CLIENT: NYSDEC

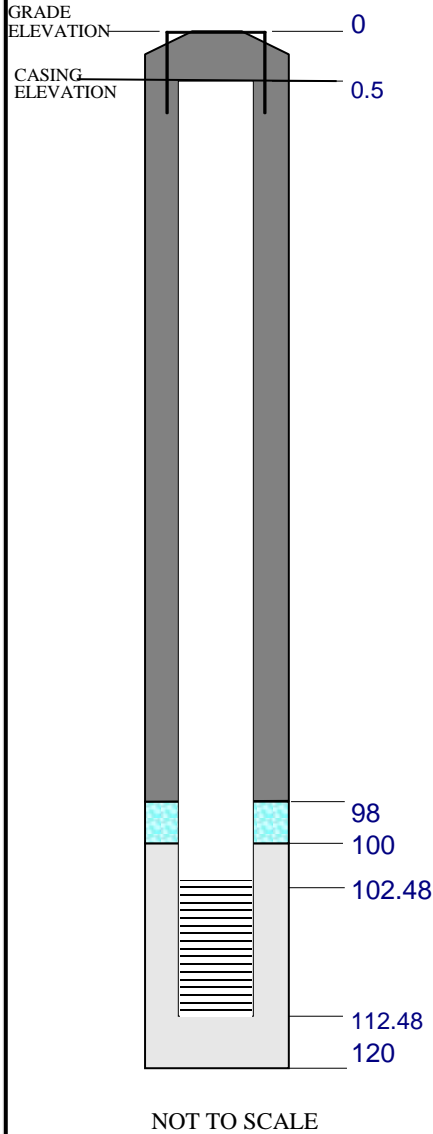
LOCATION: Queens, NY

DATE DRILLED: September 10, 2010

DATE DEVELOPED: 15-Sep-10

CONSTRUCTION COMPLETED: 10-Sep-10

DEVELOPING METHOD: Over pumping.



INSPECTOR: E. Brandt

DRILLING CONTRACTOR: LAWES

TYPE OF WELL: Overburden

STATIC WATER LEVEL: 72.52 DATE: 09/15/10

MEASURING POINT: Top of PVC - North Side

TOTAL DEPTH OF WELL: 112.48 TOTAL DEPTH OF BORING: 120

### DRILLING METHOD

TYPE: H.S.A.

DIAMETER: 4.25"

CASING: PVC

### SAMPLING METHOD

TYPE:

DIAMETER:

WEIGHT:

FALL:

INTERVAL:

### RISER PIPE LEFT IN PLACE

MATERIAL: PVC

DIAMETER: 2 inch

LENGTH: 100

JOINT TYPE: Flush Thread

### SCREEN

MATERIAL: PVC

INTERVAL: 112.48 - 102

DIAMETER: 2 inch

STRATIGRAPHIC UNITS SCREENED:

SLOT SIZE: 0.01

### FILTER PACK

GRADE:

SAND: #1

GRAVEL:

NATURAL:

AMOUNT:

INTERVAL: 120 - 100

### SEAL(s)

### NOTES:

Portland Cement

INTERVAL:

AMOUNT:

Bentonite Slurry

INTERVAL: 98 - 2

AMOUNT:

Bentonite Pellets

INTERVAL: 100 - 98

AMOUNT:

Other:

INTERVAL:

AMOUNT:

LOCKING CASING:  YES  NO

KEY NO: 18032

# MONITORING WELL COMPLETION LOG

PROJECT NUMBER: 147-135583

PROJECT NAME: NYSDEC Woodhaven Blvd.

WELL No.: MW-5I

CLIENT: NYSDEC

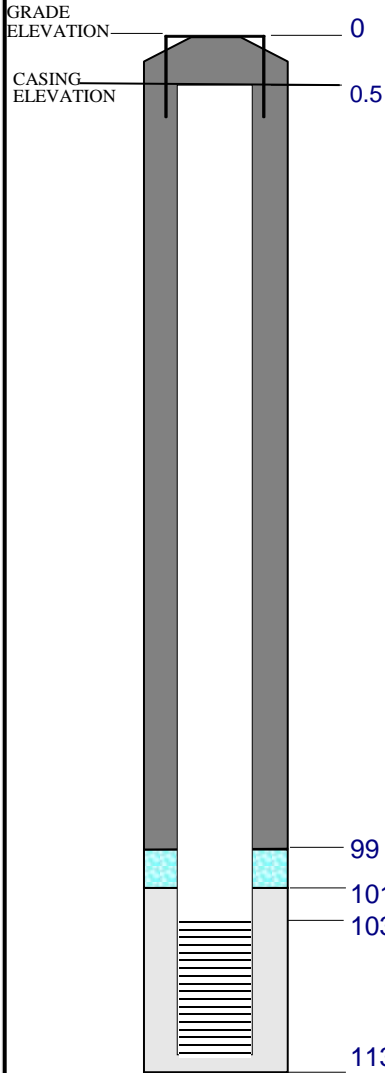
LOCATION: Queens, NY

DATE DRILLED: September 9, 2010

DATE DEVELOPED: 15-Sep-10

CONSTRUCTION COMPLETED: 9-Sep-10

DEVELOPING METHOD: Over pumping.



INSPECTOR: E. Brandt

DRILLING CONTRACTOR: LAWES

TYPE OF WELL: Overburden

STATIC WATER LEVEL: 63.89 DATE: 09/15/10

MEASURING POINT: Top of PVC - North Side

TOTAL DEPTH OF WELL: 113 TOTAL DEPTH OF BORING: 113

### DRILLING METHOD

TYPE: H.S.A.

DIAMETER: 4.25"

CASING: PVC

### SAMPLING METHOD

TYPE:

DIAMETER:

WEIGHT:

FALL:

INTERVAL:

### RISER PIPE LEFT IN PLACE

MATERIAL: PVC

DIAMETER: 2 inch

LENGTH: 102

JOINT TYPE: Flush Thread

### SCREEN

MATERIAL: PVC

INTERVAL: 113 - 103

DIAMETER: 2 inch

STRATIGRAPHIC UNITS SCREENED:

SLOT SIZE: 0.01

### FILTER PACK

GRADE:

SAND: #1

GRAVEL:

NATURAL:

AMOUNT:

INTERVAL: 113 - 100

### SEAL(s)

### NOTES:

Portland Cement INTERVAL: AMOUNT:

Bentonite Slurry INTERVAL: 98 - 2 AMOUNT:

Bentonite Pellets INTERVAL: 100 - 98 AMOUNT:

Other: INTERVAL: AMOUNT:

LOCKING CASING:  YES  NO KEY NO: 18032

# MONITORING WELL COMPLETION LOG

PROJECT NUMBER: **147-135583**

PROJECT NAME: **NYSDEC Woodhaven Blvd.**

WELL No.: **MW-6I**

CLIENT: **NYSDEC**

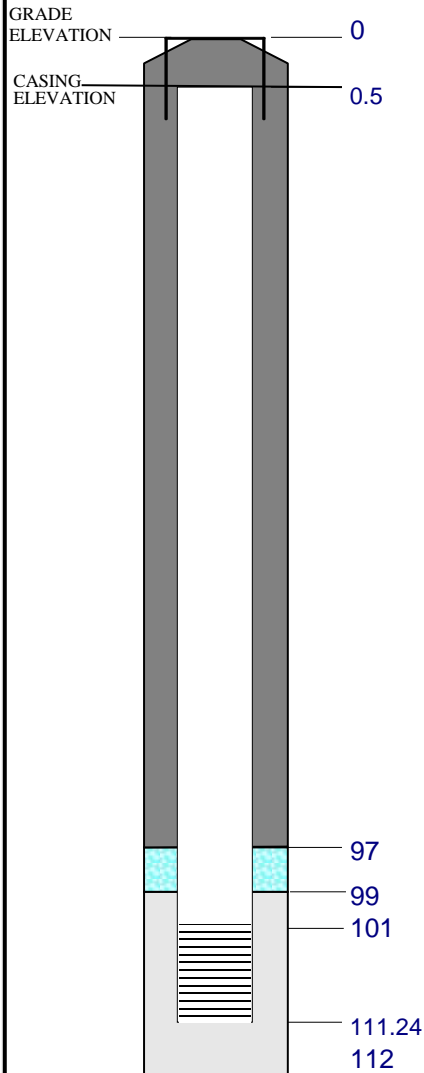
LOCATION: **Queens, NY**

DATE DRILLED: **September 7, 2010**

DATE DEVELOPED: **14-Sep-10**

CONSTRUCTION COMPLETED: **7-Sep-10**

DEVELOPING METHOD: **Over pumping.**



NOT TO SCALE

INSPECTOR: **E. Brandt**

DRILLING CONTRACTOR: **LAWES**

TYPE OF WELL: **Overburden**

STATIC WATER LEVEL: **62.67** DATE: **09/13/10**

MEASURING POINT: **Top of PVC - North Side**

TOTAL DEPTH OF WELL: **111.24** TOTAL DEPTH OF BORING: **112**

## DRILLING METHOD

TYPE: **H.S.A.**

DIAMETER: **4.25"**

CASING: **PVC**

## SAMPLING METHOD

TYPE:

DIAMETER:

WEIGHT:

FALL:

INTERVAL:

## RISER PIPE LEFT IN PLACE

MATERIAL: **PVC**

DIAMETER: **2 inch** LENGTH: **100**

JOINT TYPE: **Flush Thread**

## SCREEN

MATERIAL: **PVC**

INTERVAL: **111.24 - 101**

DIAMETER: **2 inch**

STRATIGRAPHIC UNITS SCREENED:

SLOT SIZE: **0.01**

## FILTER PACK

GRADE:

SAND: **#1** GRAVEL: NATURAL:

AMOUNT: INTERVAL: **112 - 99**

## SEAL(s)

## NOTES:

Portland Cement INTERVAL: AMOUNT:

Bentonite Slurry INTERVAL: **97 - 3** AMOUNT:

Bentonite Pellets INTERVAL: **99 - 97** AMOUNT:

Other: INTERVAL: AMOUNT:

LOCKING CASING:  YES  NO KEY NO: **18032**

Assumptions

Monitoring well has a sand pack of 2' above the screen  
 Porosity of sand pack is .3

Enter This Information

Static Water Level	56.48	
Total Depth of Well	65.08	ft
Number Of Feet Of Screen	10	ft
Diameter of Screen/Riser	2	in
Dia Well Boring	8	in

water column height  
8.6

0.163 gal/ft  
2.611 gal/ft

Results

Volume For Screen Sand Pack	6.3	gal
Volume for Screen and Riser	1.4	gal
Total Volume of Water	7.7	gal
3 Volumes	23.2	gal

Volume for Screen Sand Pack  
 $=(((\text{screened}+2)*\text{Dia hole})-(\text{screened}+2)*\text{Dia Screen}))\text{porosity}$   
 Volume for Screen and Riser  
 $=(\text{totaldepth} - \text{swl})*\text{Dia Screen}$   
 1 Volume  
 $= \text{volume for SSP} + \text{voulume SAR}$





















## 2011 DATA/ LOGS


 <b>Soil - Gas Sampling Log</b>									Crew:	SGE, BAF, EB
<b>Project Name:</b>						NYSDEC 75-09 Woodhaven Boulevard Off-Site RI			<b>Project No.:</b>	147-135583
<b>Client:</b>						NYSDEC			<b>Date:</b>	Start 10/10/2011 Finish 10/13/2011
<b>Drilling/Boring Method:</b>						GeoProbe 7720			<b>Pump ID</b>	
<b>Pumping Method:</b> Personal air sampling pump (GilAir 5)						1L Summa, 2hr Regulator			<b>Depth to Water:</b> 50+ ft bgs	
<b>Boring Location:</b> various locations - primarily W of Woodhaven Blvd						Queens, NY			<b>Surf. Elevation</b> varies	
<b>Coordinates:</b>									<b>Hole Diameter:</b> 1"	
<b>Logged By:</b>						E. Brandt				
<b>Monitoring Instrument:</b> miniRae ppbRae; Teledyne Helium detector (to detect short circuit of vapor pathways in shallow soil)										
Sample ID	Start Time	End Time	Start Pressure	End Pressure	Purge Rate	Sample Depth (ft)	Cannister ID	Regulator ID	Remarks And Observations	
SG-23	10/10 1342	1546	-30	-7.5	0.13	8	1907	3421	167 ppb PID; 15 min purge; no He detected	
SG-22	10/10 1410	1630	-31	-7.5	0.21	8	1603	3431	470 ppb PID; 15 min purge; no He	
SG-1	10/11 0855	1055	-31	-8	0.2	8	1432	3403	trouble with purge due to back pressure	
SG-2	10/11 0950	1148	-29	-7	0.2	8	1549	3352	178 ppb PID; 15 min purge; no He detect	
SG-14	10/11 1020	1215	-29	-8	0.2	8	1530	3282	no response PID; 15 min purge; no He detect	
SG-25	10/11 1055	1310	-31	-8.5	0.2	8	1406	3078	no response PID; purge 10 min; no He	
SG-15	10/11 1135	1355	-31	-8	0.2	8	1563	3178	no response PID; purge 10 min; no He	
SG-3	10/11 1238	1530	-29	-13	0.2	8	1890	3090	100 ppb PID; purge 10 min; no He	

Note: Start Time end Time refers to Start and end time for sample collection only. n/a: not applicable


 <b>Soil - Gas Sampling Log</b>								Crew: SGE, BAF, EB	
<b>Project Name:</b> NYSDEC 75-09 Woodhaven Boulevard Off-Site RI						<b>Project No.:</b> 147-135583			
<b>Client:</b> NYSDEC						<b>Date:</b> Start 10/10/2011			
<b>Drilling/Boring Method:</b> GeoProbe 7720						Finish 10/13/2011			
<b>Pumping Method:</b> Personal air sampling pump (GilAir 5) 1L Summa, 2hr Regulator						<b>Pump ID</b>			
<b>Boring Location:</b> various locations - primarily W of Woodhaven Blvd Queens, NY						<b>Depth to Water:</b> 50+ ft bgs			
<b>Coordinates:</b>						<b>Surf. Elevation</b> varies			
<b>Logged By:</b> E. Brandt						<b>Hole Diameter:</b> 1"			
<b>Monitoring Instrument:</b> miniRae ppbRae; Teledyne Helium detector (to detect short circuit of vapor pathways in shallow soil)									
Sample ID	Start Time	End Time	Start Pressure	End Pressure	Purge Rate	Sample Depth (ft)	Cannister ID	Regulator ID	Remarks And Observations
SG-40	10/11 1440	1640	-29	-14	0.2	8	1762	3090	no response PID; purge 10 min; no He
SG-16	10/11 1318	1605	-35	-9	0.3	8	1561	3433	65 ppb PID; purge 10 min; no He
SG-24	10/11 1351	1610	-31	-4	0.3	8	1557	3415	330 ppb PID; purge 10 min; no He
SG-17	10/11 1421	1625	-31	-7	0.3	8	1540	3193	40 ppb PID; purge 10 min; no He
SG-4	10/11 1600	1800	-31	-8.5	0.3	8	1551	3046	520 ppb max PID; purge 10 min; no He
SG-6	10/11 1633	1840	-31	-9	0.3	8	1599	3354	252 ppb max PID; purge 10 min; no He
SG-20	10/12 0925	1135	-31	-8	0.7	8	1428	3400	no response PID; purge 15 min; no He
SG-21	10/12 1005	1305	-28	-7.5	0.7	8	1550	3254	no response PID; 2.4% He detected

Note: Start Time end Time refers to Start and end time for sample collection only. n/a: not applicable



 <b>Soil - Gas Sampling Log</b>								Crew: SGE, BAF, EB	
<b>Project Name:</b> NYSDEC 75-09 Woodhaven Boulevard Off-Site RI						<b>Project No.:</b> 147-135583			
<b>Client:</b> NYSDEC						<b>Date:</b> Start 10/10/2011			
<b>Drilling/Boring Method:</b> GeoProbe 7720						Finish 10/13/2011			
<b>Pumping Method:</b> Personal air sampling pump (GilAir 5) 1L Summa, 2hr Regulator						<b>Pump ID</b>			
<b>Boring Location:</b> various locations - primarily W of Woodhaven Blvd Queens, NY						<b>Depth to Water:</b> 50+ ft bgs			
<b>Coordinates:</b>						<b>Surf. Elevation</b> varies			
<b>Logged By:</b> E. Brandt						<b>Hole Diameter:</b> 1"			
<b>Monitoring Instrument:</b> miniRae ppbRae; Teledyne Helium detector (to detect short circuit of vapor pathways in shallow soil)									
Sample ID	Start Time	End Time	Start Pressure	End Pressure	Purge Rate	Sample Depth (ft)	Cannister ID	Regulator ID	Remarks And Observations
SG-7	10/12 1115	1312	-31	-10.5	0.7	8	1847	3361	no response PID: purge 10 min; no He
SG-26	10/12 1203	1405	-27.5	-7	0.7	8	1601	3333	no response PID: purge 10 min; no He
SG-11	10/12 1415	1615	-27.5	-8	0.7	8	1415	3095	no response PID: purge 10 min; no He
SG-12	10/12 1515	1715	-30	-6	0.7	8	1420	3290	no response PID; 1.2% He detected
SG-13	10/12 1557	1753	-29	-7	0.7	8	1605	3434	no response PID: purge 10 min; no He
SG-19	10/12 1631	1835	-30	-7.5	0.7	8	1541	3216	no response PID: purge 10 min; no He
SG-5	10/12 1702	1920	-28	-7	0.7	8	1419	3410	no response PID: purge 10 min; no He
SG-18	10/12 1728	1915	-28	-9.5	0.7	8	1438	3060	no response PID: purge 10 min; no He

Note: Start Time end Time refers to Start and end time for sample collection only. n/a: not applicable

 <b>Soil - Gas Sampling Log</b>									Crew:	SGE, BAF, EB	
<b>Project Name:</b>						NYSDEC 75-09 Woodhaven Boulevard Off-Site RI			<b>Project No.:</b>	147-135583	
<b>Client:</b>						NYSDEC			<b>Date:</b>	Start 10/10/2011 Finish 10/13/2011	
<b>Drilling/Boring Method:</b>						GeoProbe 7720			<b>Pump ID</b>		
<b>Pumping Method:</b>						Personal air sampling pump (GilAir 5) 1L Summa, 2hr Regulator			<b>Depth to Water:</b>		50+ ft bgs
<b>Boring Location:</b>						various locations - primarily W of Woodhaven Blvd Queens, NY			<b>Surf. Elevation</b>		varies
<b>Coordinates:</b>									<b>Hole Diameter:</b>		1"
<b>Logged By:</b>						E. Brandt					
<b>Monitoring Instrument:</b> miniRae ppbRae; Teledyne Helium detector (to detect short circuit of vapor pathways in shallow soil)											
Sample ID	Start Time	End Time	Start Pressure	End Pressure	Purge Rate	Sample Depth (ft)	Cannister ID	Regulator ID	Remarks And Observations		
SG-29	10/13 1035	1450	-31	-8	0.18	8	1446	3076	Split with another consultant using same reg.		
SG-30	10/13 1105	1706	-27	-9.5	0.18	8	1892	3365	Split with another consultant using same reg.		
SG-28	10/13 1140	1523	-27.5	-8	0.18	8	1440	3366	Split with another consultant using same reg.		
SG-27	10/13 1210	1536	-30	-8	0.18	8	1532	3105	Split with another consultant using same reg.		
SG-10	10/13 1525	1728	-30	-7	0.18	8	1529	3136	no response PID: purge 10 min; no He		
SG-9	10/13 1405	1600	-29	-7	0.18	8	1604	3019	no response PID: purge 10 min; no He		
SG-8	10/13 1400	1813	-30	-8	0.5	8	1429	3275	no response PID: purge 10 min; no He		
SG-43	10/13 1600	2013	-30	-8	0.5	8	1423	3275	no response PID: purge 10 min; no He		

Note: Start Time end Time refers to Start and end time for sample collection only. n/a: not applicable



# Test Boring Log

Boring No.: MW-5D

Sheet 1 of 1

Project Name: NYSDEC Woodhaven Blvd

Project No.: 135583

Client: NYSDEC

Date: Start 8 Nov 2011

Driller: LAWES: Carl, John

Finish 10 Nov 2011

Drilling Method: 4.25 Inch HSA

Total Depth: 150

Boring Location: Queens, NY

Depth To Water: ~63

Coordinates:

Surf. Elevation:

Logged By: E.Brandt

Hole Diameter: 8 Inch

Monitoring Instrument(s): MultiRAE Plus

Depth (ft)	Blows On Sampler				Recovery (ft)	Instrument Reading (ppm)			Classification Of Material f - fine and - 35-50% m - medium some - 20-35% c - coarse little - 10-20% trace - 0-10%	Remarks
	0'-6"	6'-12"	12'-18"	18'-24"						
0									0'-120' Medium Brown F-C SAND and F Rounded Gravel, Trace C. Rounded Gravel and Silt.	No Spoons - A/C Water @ ~63'
119									119' - 121' Medium Brown F SAND, Trace C SAND, Silt.	No Odors, Wet
121	30	6	-	-		0.0				
124										
126	-	-	-	-		0.0			Heave in Auger - 4.5' No Sample	No Sample
129										
131	6	10	15	21	0.80	0.0			129' - 131' Medium Brown F SAND, some Silt.	Wet, No Odors
134									134' - 136' Medium Brown F-C SAND, some F Rounded Gravel	Wet, No Odors
136	9	17	23	27	0.90	0.0				
139									139' - 141' Medium Brown F SAND, some Silt and Trace C Sand.	Wet, No Odors
141	8	5	6	11	1.20	0.0				
144									144' - 146' Medium Brown F-M SAND, some Silt and Trace F Gravel.	Wet, No Odors
146	6	9	10	12	1.50	0.0				
149									149' - 150' Medium Brown F-M SAND, some Silt.	
151	7	7	8	10	1.30	0.0			150' - 151' Dark Grey Silty CLAY	Wet, No Odors

EOB

Well Constructed - MW-05D

Well set at 150'

10 foot 0.010" screen.

2 Inch PVC.



# Test Boring Log

Boring No.: MW-7D

Sheet 1 of 1

Project Name: NYSDEC Brandt-Airflex

Project No.: 135583

Client: NYSDEC

Date: Start 11 Nov, 2011

Driller: LAWES: Carl, Scott, John

Finish 1 Dec, 2011

Drilling Method: Mud Rotary

Total Depth: 168ft

Boring Location: Glendale, NY

Depth To Water: ~83ft

Coordinates:

Surf. Elevation:

Logged By: E.Brandt

Hole Diameter: 8 Inch

Monitoring Instrument(s): MultiRAE Plus

Depth (ft)	Blows On Sampler				Recovery (ft)	Instrument Reading (ppm)			Classification Of Material f - fine and - 35-50% m - medium some - 20-35% c - coarse little - 10-20% trace - 0-10%	Remarks
	0"-6"	6"-12"	12"-18"	18"-24"						
0									Note MW-7I Log for 0 - 120'	
120										No Samples
144									144' - 146' Medium Brown and Dark Grey F-C SAND and F-C Rounded Gravel, trace Silt	No Odors, Wet
146	100	50/5			0.50	0.0				
154									154' - 156' Med Brown F-C Rounded Gravel, little F-C Sand.	No Odors, Wet
156	No Count				1.10	0.0				
162									162' - 163' F-C Rounded Gravel, Little Sand	
164	No Count				1.20	0.0			163' - 164' Brown, Tan, and Grey Molted F SAND with trace Mica Flakes.	No Odors, Wet

**End Of Boring**

Well set at 166' in Sand.  
 10', 2" PVC 0.010 slot Screen 156-166'  
 2" PVC Riser to surface.  
 #1 Sand in Filterpack.



# Test Boring Log

**Boring No.:** MW-71  
**Sheet** 1 of 1  
**Project No.:** 135583  
**Date:** Start 18 Oct 2011  
 Finish 21 Oct 2011  
**Total Depth:** 119  
**Depth To Water:** ~83  
**Surf. Elevation:**  
**Hole Diameter:** 8 Inch

**Project Name:** NYSDEC Woodhaven Blvd  
**Client:** NYSDEC  
**Driller:** LAWES: Carl, Scott, John  
**Drilling Method:** 4.25 Inch HSA  
**Boring Location:** Glendale, NY  
**Coordinates:**  
**Logged By:** E.Brandt

### Monitoring Instrument(s): MultiRAE Plus

Depth (ft)	Blows On Sampler				(ft)	(ppm)			Classification Of Material f - fine and - 35-50% m - medium some - 20-35% c - coarse little - 10-20% trace - 0-10%	Remarks
	0"-6"	6"-12"	12"-18"	18"-24"						
0									Note MW-7S Log for 0 - 34'	
34									34' - 36' Medium Brown F-C SAND and F-C	
36	16	34	35	38	0.85	0.0			Rounded Gravel, Trace Silt.	Dry, No Odors
39										
41	38	50/5			N/R				39' - 41' Rock in Shoe.	No Recovery
44									44' - 46' Medium Brown F-C SAND and F-C	
46	8	23	26	28	1.10	0.0			F-C Rounded Gravel.	Dry, No Odors
49									49' - 51' Medium Brown F-C SAND and F-C	
51	15	21	33	36	1.50	0.0			F-C Rounded Gravel.	Dry, No Odors
54									54' - 56' Medium Brown F-C SAND and F-C	
56	12	23	27	32	1.25	0.0			F-C Rounded Gravel.	Dry, No Odors
59									59' - 61' Medium Brown F-C SAND trace F-C	
61	11	22	23	19	1.60	0.0			F-C Rounded Gravel.	Dry, No Odors
64									64' - 66' Medium Brown F-C SAND trace F-C	
66	9	14	18	22	1.25	0.0			F-C Rounded Gravel.	Dry, No Odors
69									69' - 71' Medium Brown and Tan F-M SAND	
71	12	21	27	31	1.30	0.0			Trace F Rounded Gravel, Trace Silt	Dry, No Odors
74									74' - 76' Medium Brown and Tan F-M SAND	
76	11	17	20	23	1.40	0.0			Trace F Rounded Gravel, Trace Silt	Dry, No Odors
79									79' - 81' Medium Brown and Tan F-M SAND	
81	7	7	8	10	1.30	0.0			Trace F Rounded Gravel, Trace Silt	Dry, No Odors
84									84' - 86' Medium Brown and Tan F-M SAND	
86	8	11	17	23	1.50	0.0			Trace Silt and Mica Flakes.	Wet, No Odors
89									89' - 91' Medium Brown and Tan F-C SAND	
91	7	11	12	11	1.50	0.0			Trace Silt and Mica Flakes.	Wet, No Odors
94									94' - 96' Medium Brown and Tan F-C SAND	
96	7	11	13	16	1.00	1.1			Trace Silt and Mica Flakes.	
99									99' - 101' Medium Brown and Tan F-C SAND	Wet, No Odors
101	8	13	17	25	1.50	0.0			Trace Silt and Mica Flakes.	Wet, No Odors
104									104' - 106' Medium Brown and Tan M-C SAND and	
106	9	12	17	19	1.30	0.0			F Rounded Gravel, trace F Sand.	Wet, No Odors
109									109' - 111' Medium Brown and Tan M-C SAND and	
111	9	14	19	24	0.80	0.0			F Rounded Gravel, trace F Sand.	Wet, No Odors
114									114' - 116' Medium Brown and Tan M-C SAND and	
116	7	8	7	10	0.70	0.0			F Rounded Gravel, little F Sand.	Wet, No Odors
119									119' - 121' Medium Brown and Tan M-C SAND and	
121	7	9	21	19	1.25	0.0			F Rounded Gravel, little F Sand.	Wet, No Odors

### EOB

Well set at 119' in Silt.  
 10', 2" PVC 0.010 slot Screen 109-119'  
 2" PVC Riser to surface.  
 #1 Sand in Filterpack.



# Test Boring Log

**Boring No.:** MW-7S  
**Sheet** 1 of 1  
**Project No.:** 135583  
**Date:** Start 14 Oct 2011  
 Finish 14 Oct 2011  
**Total Depth:** 100  
**Depth To Water:** ~83  
**Surf. Elevation:**  
**Hole Diameter:** 8 Inch

**Project Name:** NYSDEC Brandt-Airflex  
**Client:** NYSDEC  
**Driller:** LAWES: Carl, Scott, John  
**Drilling Method:** 4.25 Inch HSA  
**Boring Location:** Glendale, NY  
**Coordinates:**  
**Logged By:** E.Brandt

### Monitoring Instrument(s): MultiRAE Plus

Depth (ft)	Blows On Sampler				Recovery (ft)	Instrument Reading (ppm)			Classification Of Material f - fine and - 35-50% m - medium some - 20-35% c - coarse little - 10-20% trace - 0-10%	Remarks
	0'-6"	6'-12"	12'-18"	18'-24"						
0									Medium to Dark Brown F-C SAND with some F-C Rounded Gravel and trace Cobbles.	Hand Cleared
5									5' - 7' Medium Dark Brown F-C SAND with trace F Rounded Gravel.	Dry, No Odors
7	2	9	24	9	0.60	N/A				
9									9' - 11' Medium Brown and Dark Brown F-M SAND trace F Rounded Gravel.	Dry, No Odors
11	3	2	3	4	1.30					
14									14' - 16' Medium Brown and Dark Brown F-M SAND trace F Rounded Gravel.	Dry, No Odors
16	5	7	8	10	0.90					
19									19' - 21' Medium Brown and Dark Brown F-M SAND trace F Rounded Gravel.	Rock in Shoe Dry, No Odors
21	25	50/1			0.60					
24										
26	100/4				NR				24' - 26' No Recovery	
29									29' - 31' Dark Brown F-M SAND, some F Rounded Gravel.	Dry, No Odors
31	12	15	14	17	1.10					

Auger Refusal.  
 Moved to MW-7I Boring. Refer to MW-7I Log for Lithology.

Well set at 100' in Sand.  
 10', 2" PVC 0.010 slot Screen 90-100'  
 2" PVC Riser to surface.  
 #1 Sand in Filterpack.

**EOB**

Well set at 120' in Silt.  
 10', 2" PVC 0.010 slot Screen 110-120'  
 2" PVC Riser to surface.  
 #1 Sand in Filterpack.

<b>HDR</b>	<b>Test Boring Log</b>	<b>Boring No.: MW-8S</b>
		<b>Sheet 1 of 1</b>
<b>Project Name: NYSDEC Brandt-Airflex</b>		<b>Project No.: 135583</b>
<b>Client: NYSDEC</b>		<b>Date: Start 24 Oct 2011</b>
<b>Driller: LAWES: Carl, Scott</b>		<b>Finish 25 Oct 2011</b>
<b>Drilling Method: 4.25 Inch HSA</b>		<b>Total Depth: 80</b>
<b>Boring Location: Glendale, NY</b>		<b>Depth To Water: ~64</b>
<b>Coordinates:</b>		<b>Surf. Elevation:</b>
<b>Logged By: M. Pantliano, E.Brandt</b>		<b>Hole Diameter: 8 Inch</b>

**Monitoring Instrument(s): MultiRAE Plus**

Depth (ft)	Blows On Sampler				(ft)	(ppm)	Instrument Reading	Classification Of Material f - fine and - 35-50% m - medium some - 20-35% c - coarse little - 10-20% trace - 0-10%	Remarks
	0"-6"	6"-12"	12"-18"	18"-24"					
0								0' - 5' Asphalt, Concrete Road Base. Medium	
5								Brown F-C SAND and F-C Rounded Gravel.	Dry, No Odors
7	6	9	20/1		NR	n/a		Rock in Shoe	No Recovery
9								9' - 11' Dark Brown F-C SAND and F-C	
11	9	14	19	23	0.65			Rounded Gravel	Dry, No Odors
14								14' - 16' Medium Dark Brown F-M SAND	
16	9	12	13	12	1.10	0.0		some Gravel and Silt	Dry, No Odors
19									
21	6	8	13	15	1.30	0.0		19' - 21' Tan/Pink F SAND, some Cobbles and Silt.	Dry
24									
26	10	16	30	16	1.20	0.0		24' - 26' Light Brown F-M SAND, little Silt, Cobbles	Dry
29									
31	14	22	24	24	1.70	0.0		29' - 31' Light Brown M-C SAND	Dry
34									
36	10	12	17	16	1.40	0.9		34' - 36' Light Brown M-C SAND	Dry
39									
41	14	23	23	26	1.80	0.0		39' - 41' Light Brown M-C SAND	Hard, Dry
44									
46	12	13	15	19	1.80	0.0		44' - 46' Light Brown M SAND	Soft, Dry
49									
51	12	19	30	41	1.60	0.0		49' - 51' Light Brown M SAND	Little Hard, Dry
54									
56	14	15	19	30	2.00	0.0		54' - 56' Light Brown F-C SAND	Dry
59									
61	29	30/3			0.10	0.0		59' - 61' Brown F SAND and Clay.	Moist
64									
66	8	16	15	23	1.15	0.0		64' - 66' Medium Brown F SAND and F Rounded Gravel	Moist, No Odors
69									
71	10	14	17	21	1.15	0.0		69' - 71' Medium Brown F-C SAND and F Rounded Gravel	Wet, No Odors
74									
76	10	23	50/5		1.30	0.0		74' - 76' Medium Brown F-C SAND and F Rounded Gravel	Wet, No Odors
79									
81	12	18	25	33	1.25	0.0		79' - 81' Medium Brown F-C SAND and F Rounded Gravel	Wet, No Odors

**EOB**

Well set at 80' in Sand.  
10', 2" PVC 0.010 slot Screen 70-80"  
2" PVC Riser to surface.  
#1 Sand in Filterpack.

# MONITORING WELL COMPLETION LOG

PROJECT NUMBER: 147-135583

PROJECT NAME: NYSDEC Woodhaven Blvd.

WELL No.: MW-5D

CLIENT: NYSDEC

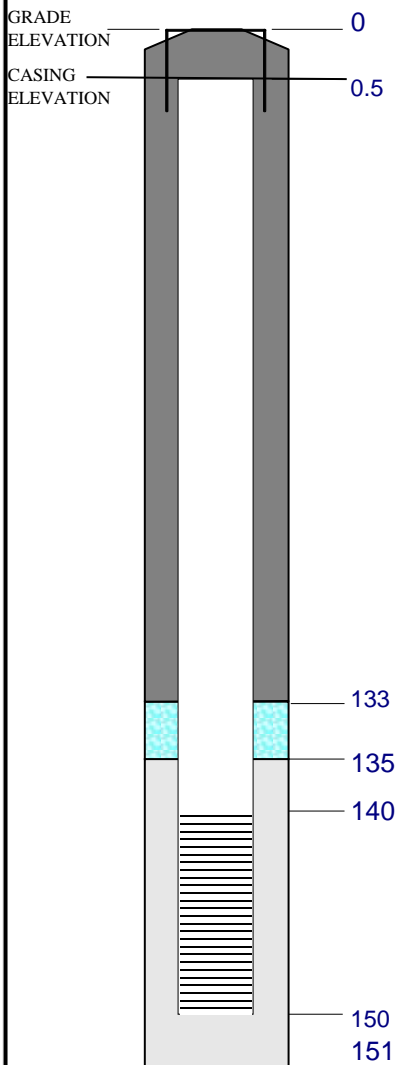
LOCATION: Queens, NY

DATE DRILLED: 8-Nov-11

DATE DEVELOPED: 5-Dec-11

CONSTRUCTION COMPLETED: 10-Nov-11

DEVELOPING METHOD: Over pumping with Hurricane Pump.



INSPECTOR: E. Brandt

DRILLING CONTRACTOR: LAWES

TYPE OF WELL: Overburden

STATIC WATER LEVEL: 63.48 DATE: 12/19/11

MEASURING POINT: Top of PVC - North Side

TOTAL DEPTH OF WELL: 150.34 TOTAL DEPTH OF BORING: 151

## DRILLING METHOD

TYPE: H.S.A.

DIAMETER: 4.25"

CASING: PVC

## SAMPLING METHOD

TYPE:

DIAMETER:

WEIGHT:

FALL:

INTERVAL:

## RISER PIPE LEFT IN PLACE

MATERIAL: PVC

DIAMETER: 2 inch

LENGTH: 140

JOINT TYPE: Flush Thread

## SCREEN

MATERIAL: PVC

INTERVAL: 140.00 - 150.00

DIAMETER: 2 inch

STRATIGRAPHIC UNITS SCREENED:

SLOT SIZE: 0.010

## FILTER PACK

GRADE:

SAND: #1

GRAVEL:

NATURAL:

AMOUNT:

INTERVAL: 135.00 - 151.00

## SEAL(s)

## NOTES:

Portland Cement INTERVAL: AMOUNT:

Bentonite Slurry INTERVAL: 133.00 - 1.00 AMOUNT:

Bentonite Pellets INTERVAL: 133.00 - 135.00 AMOUNT:

Other: INTERVAL: AMOUNT:

LOCKING CASING:  YES  NO KEY NO:



# MONITORING WELL COMPLETION LOG

PROJECT NUMBER: 147-135583

PROJECT NAME: NYSDEC Woodhaven Blvd.

WELL No.: MW-5S

CLIENT: NYSDEC

LOCATION: Queens, NY

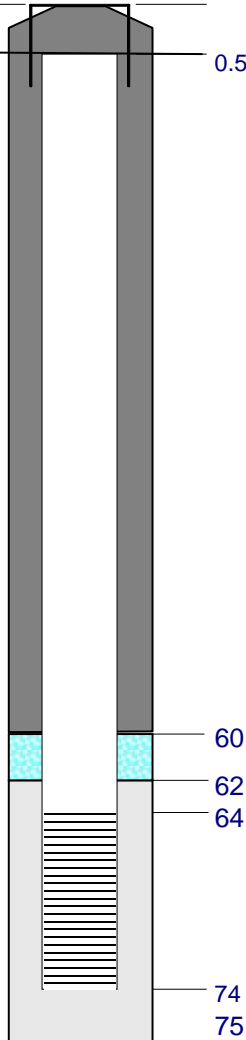
DATE DRILLED: October 12, 2011

DATE DEVELOPED: 1-Nov-11

CONSTRUCTION COMPLETED: 12-Oct-11

DEVELOPING METHOD: Over pumping with Hurricane Pump.

GRADE ELEVATION: 0  
CASING ELEVATION: 0.5



NOT TO SCALE

INSPECTOR: E. Brandt  
DRILLING CONTRACTOR: LAWES  
TYPE OF WELL: Overburden  
STATIC WATER LEVEL: 61.97 DATE: 12/19/11  
MEASURING POINT: Top of PVC - North Side  
TOTAL DEPTH OF WELL: 74.44 TOTAL DEPTH OF BORING: 75

### DRILLING METHOD

TYPE: H.S.A.

DIAMETER: 4.25"

CASING: PVC

### SAMPLING METHOD

TYPE:

DIAMETER:

WEIGHT:

FALL:

INTERVAL:

### RISER PIPE LEFT IN PLACE

MATERIAL: PVC

DIAMETER: 2 inch

LENGTH: 64

JOINT TYPE: Flush Thread

### SCREEN

MATERIAL: PVC

INTERVAL: 64 - 74

DIAMETER: 2 inch

STRATIGRAPHIC UNITS SCREENED:

SLOT SIZE: 0.010

### FILTER PACK

GRADE:

SAND: #0

GRAVEL:

NATURAL:

AMOUNT:

INTERVAL: 75 - 62

### SEAL(s)

### NOTES:

Portland Cement INTERVAL: AMOUNT:  
Bentonite Slurry INTERVAL: 60 - 1 AMOUNT:  
Bentonite Pellets INTERVAL: 62 - 60 AMOUNT:  
Other: INTERVAL: AMOUNT:

LOCKING CASING:  YES  NO KEY NO:

# MONITORING WELL COMPLETION LOG

PROJECT NUMBER: **147-135583**

PROJECT NAME: **NYSDEC Woodhaven Blvd.**

WELL No.: **MW-6S**

CLIENT: **NYSDEC**

LOCATION: **Queens, NY**

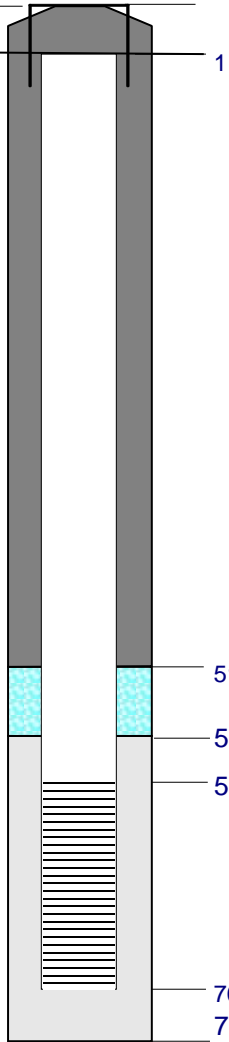
DATE DRILLED: **October 19, 2011**

DATE DEVELOPED: **1-Nov-11**

CONSTRUCTION COMPLETED: **19-Oct-11**

DEVELOPING METHOD: **Over pumping with Hurracane Pump.**

GRADE ELEVATION: **0**  
CASING ELEVATION: **1**



INSPECTOR: **E. Brandt**

DRILLING CONTRACTOR: **LAWES**  
TYPE OF WELL: **Overburden**  
STATIC WATER LEVEL: **62.22** DATE: **12/19/11**  
MEASURING POINT: **Top of PVC - North Side**  
TOTAL DEPTH OF WELL: **70.15** TOTAL DEPTH OF BORING: **71**

### DRILLING METHOD

TYPE: **H.S.A.**

DIAMETER: **4.25"**

CASING: **PVC**

### SAMPLING METHOD

TYPE:

DIAMETER:

WEIGHT:

FALL:

INTERVAL:

### RISER PIPE LEFT IN PLACE

MATERIAL: **PVC**

DIAMETER: **2 inch**

LENGTH: **60**

JOINT TYPE: **Flush Thread**

### SCREEN

MATERIAL: **PVC**

INTERVAL: **60-70**

DIAMETER: **2 inch**

STRATIGRAPHIC UNITS SCREENED:

SLOT SIZE: **0.010**

### FILTER PACK

GRADE:

SAND: **#0**

GRAVEL:

NATURAL:

AMOUNT:

INTERVAL: **55 - 71**

### SEAL(s)

### NOTES:

Portland Cement	INTERVAL:	AMOUNT:
Bentonite Slurry	INTERVAL: <b>53 - 1</b>	AMOUNT:
Bentonite Pellets	INTERVAL: <b>51 - 53</b>	AMOUNT:
Other:	INTERVAL:	AMOUNT:

LOCKING CASING:  YES  NO KEY NO:

# MONITORING WELL COMPLETION LOG

PROJECT NUMBER: 147-135583

PROJECT NAME: NYSDEC Woodhaven Blvd.

WELL No.: MW-7S

CLIENT: NYSDEC

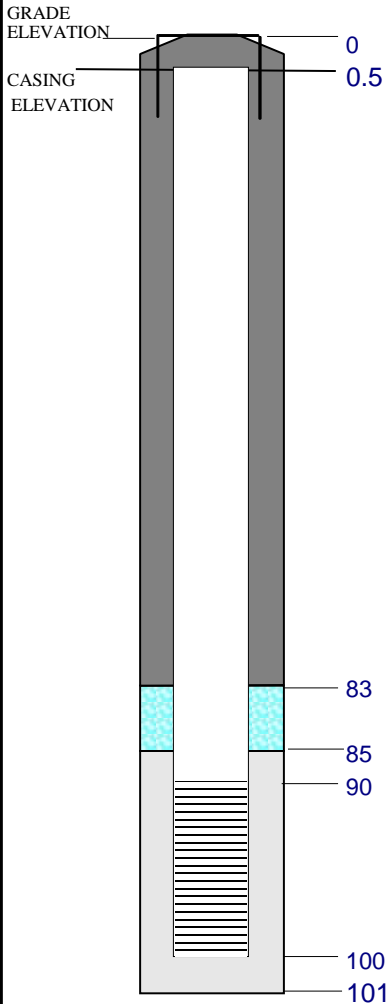
LOCATION: Queens, NY

DATE DRILLED: 26-Oct-2011

DATE DEVELOPED: 31-Oct-11

CONSTRUCTION COMPLETED: 27-Oct-2011

DEVELOPING METHOD: Over pumping with Hurricane Pump.



INSPECTOR: E. Brandt

DRILLING CONTRACTOR: LAWES

TYPE OF WELL: Overburden

STATIC WATER LEVEL: 84.43 DATE: 12/19/11

MEASURING POINT: Top of PVC - North Side

TOTAL DEPTH OF WELL: 100.14 TOTAL DEPTH OF BORING: 101

## DRILLING METHOD

TYPE: H.S.A.

DIAMETER: 4.25"

CASING: PVC

## SAMPLING METHOD

TYPE:

DIAMETER:

WEIGHT:

FALL:

INTERVAL:

## RISER PIPE LEFT IN PLACE

MATERIAL: PVC

DIAMETER: 2 inch

LENGTH: 90

JOINT TYPE: Flush Thread

## SCREEN

MATERIAL: PVC

INTERVAL: 90 - 100

DIAMETER: 2 inch

STRATIGRAPHIC UNITS SCREENED:

SLOT SIZE: 0.010

## FILTER PACK

GRADE:

SAND: #0

GRAVEL:

NATURAL:

AMOUNT:

INTERVAL: 85 - 101

## SEAL(s)

## NOTES:

Portland Cement

INTERVAL:

AMOUNT:

Bentonite Slurry

INTERVAL: 83 - 1

AMOUNT:

Bentonite Pellets

INTERVAL: 83 - 85

AMOUNT:

Other:

INTERVAL:

AMOUNT:

LOCKING CASING:  YES  NO KEY NO:

# MONITORING WELL COMPLETION LOG

PROJECT NUMBER: 147-135583

PROJECT NAME: NYSDEC Woodhaven Blvd.

WELL No.: MW-7I

CLIENT: NYSDEC

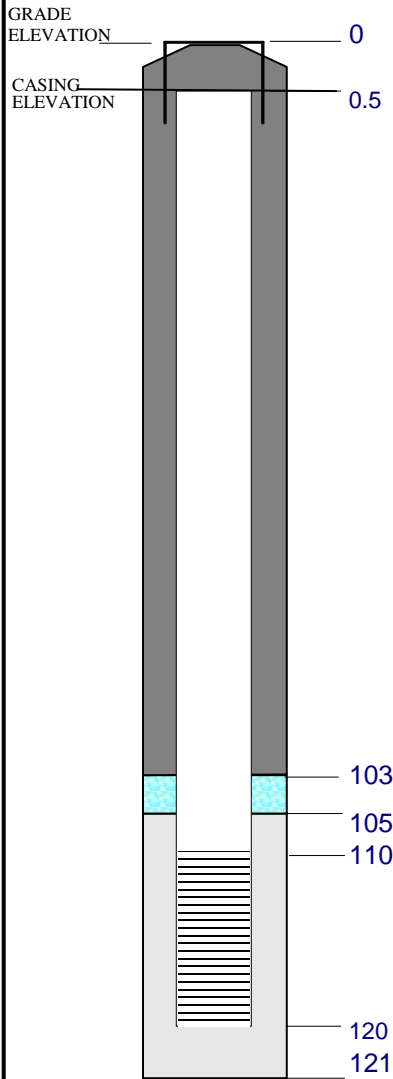
LOCATION: Queens, NY

DATE DRILLED: October 20, 2011

DATE DEVELOPED: 31-Oct-11

CONSTRUCTION COMPLETED: 21-Oct-11

DEVELOPING METHOD: Over pumping with Hurracane Pump.



NOT TO SCALE

INSPECTOR: E. Brandt

DRILLING CONTRACTOR: LAWES  
 TYPE OF WELL: Overburden  
 STATIC WATER LEVEL: 84.79 DATE: 12/19/11  
 MEASURING POINT: Top of PVC - North Side  
 TOTAL DEPTH OF WELL: 120.49 TOTAL DEPTH OF BORING: 121

**DRILLING METHOD**

TYPE: H.S.A.

DIAMETER: 4.25"

CASING: PVC

**SAMPLING METHOD**

TYPE:

DIAMETER:

WEIGHT:

FALL:

INTERVAL:

**RISER PIPE LEFT IN PLACE**

MATERIAL: PVC

DIAMETER: 2 inch

LENGTH: 110

JOINT TYPE: Flush Thread

**SCREEN**

MATERIAL: PVC

INTERVAL: 110 - 120

DIAMETER: 2 inch

STRATIGRAPHIC UNITS SCREENED:

SLOT SIZE: 0.010

**FILTER PACK**

GRADE:

SAND: #1

GRAVEL:

NATURAL:

AMOUNT:

INTERVAL: 105 - 121

**SEAL(s)**

**NOTES:**

Portland Cement	INTERVAL:	AMOUNT:
Bentonite Slurry	INTERVAL: 103 - 1	AMOUNT:
Bentonite Pellets	INTERVAL: 103 - 105	AMOUNT:
Other:	INTERVAL:	AMOUNT:

LOCKING CASING:  YES  NO KEY NO:

# MONITORING WELL COMPLETION LOG

PROJECT NUMBER: 147-135583

PROJECT NAME: NYSDEC Woodhaven Blvd.

WELL No.: MW-7D

CLIENT: NYSDEC

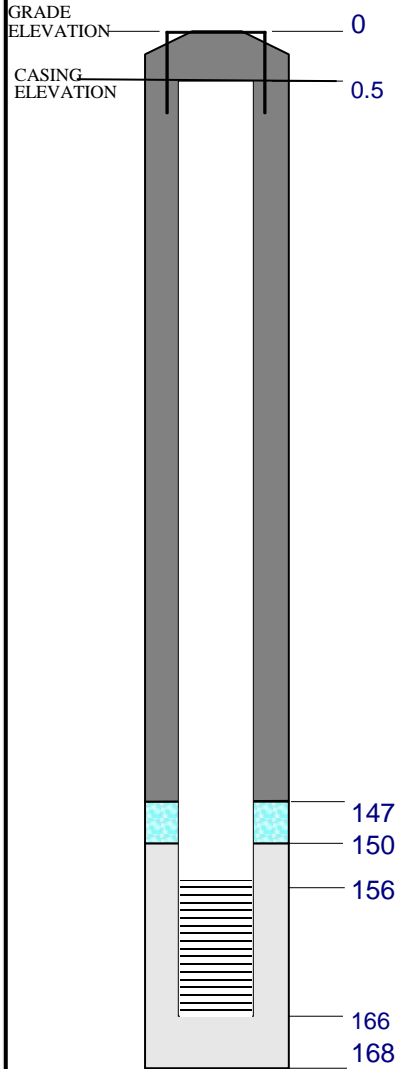
LOCATION: Queens, NY

DATE DRILLED: November 21, 2011

DATE DEVELOPED: 6-Dec-11

CONSTRUCTION COMPLETED: 2-Dec-11

DEVELOPING METHOD: Over pumping with Hurricane Pump.



NOT TO SCALE

INSPECTOR: E. Brandt

DRILLING CONTRACTOR: LAWES  
 TYPE OF WELL: Overburden  
 STATIC WATER LEVEL: 86.62 DATE: 12/19/11  
 MEASURING POINT: Top of PVC - North Side  
 TOTAL DEPTH OF WELL: 165.64 TOTAL DEPTH OF BORING: 168

**DRILLING METHOD** TYPE: Mud Rotary

DIAMETER: 4.25" CASING: PVC

**SAMPLING METHOD** TYPE:

DIAMETER: WEIGHT:

FALL: INTERVAL:

**RISER PIPE LEFT IN PLACE** MATERIAL: PVC  
 DIAMETER: 2 inch LENGTH: 155 JOINT TYPE: Flush Thread

**SCREEN** MATERIAL: PVC  
 INTERVAL: 156 - 166 DIAMETER: 2 inch  
 STRATIGRAPHIC UNITS SCREENED: SLOT SIZE: 0.010

**FILTER PACK** GRADE:  
 SAND: #1 GRAVEL: NATURAL:  
 AMOUNT: INTERVAL: 150 - 168

**SEAL(s)**

NOTES:

Portland Cement	INTERVAL:	AMOUNT:
Bentonite Slurry	INTERVAL: 147 - 1	AMOUNT:
Bentonite Pellets	INTERVAL: 147 - 150	AMOUNT:
Other:	INTERVAL:	AMOUNT:

LOCKING CASING:  YES  NO KEY NO:



# MONITORING WELL COMPLETION LOG

PROJECT NUMBER: 147-135583

PROJECT NAME: NYSDEC Woodhaven Blvd.

WELL No.: MW-8S

CLIENT: NYSDEC

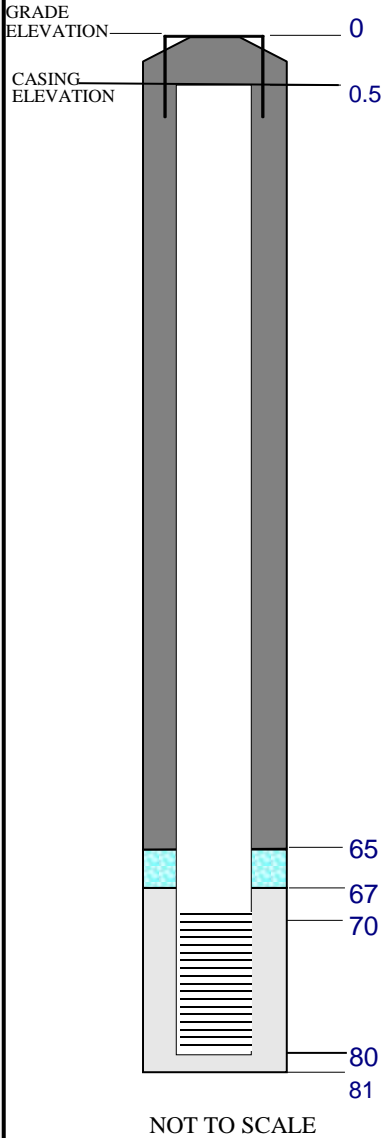
LOCATION: Queens, NY

DATE DRILLED: October 24, 2011

DATE DEVELOPED: 28-Oct-11

CONSTRUCTION COMPLETED: 24-Oct-11

DEVELOPING METHOD: Over pumping with Hurracane Pump.



INSPECTOR: E. Brandt

DRILLING CONTRACTOR: LAWES

TYPE OF WELL: Overburden

STATIC WATER LEVEL: 64.27 DATE: 12/19/11

MEASURING POINT: Top of PVC - North Side

TOTAL DEPTH OF WELL: 80.1 TOTAL DEPTH OF BORING: 81

### DRILLING METHOD

TYPE: H.S.A.

DIAMETER: 4.25"

CASING: PVC

### SAMPLING METHOD

TYPE:

DIAMETER:

WEIGHT:

FALL:

INTERVAL:

### RISER PIPE LEFT IN PLACE

MATERIAL: PVC

DIAMETER: 2 inch LENGTH: 70

JOINT TYPE: Flush Thread

### SCREEN

MATERIAL: PVC

INTERVAL: 70 - 80

DIAMETER: 2 inch

STRATIGRAPHIC UNITS SCREENED:

SLOT SIZE: 0.010

### FILTER PACK

GRADE:

SAND: #1 GRAVEL: NATURAL:

AMOUNT: INTERVAL: 67 - 81

### SEAL(s)

### NOTES:

Portland Cement INTERVAL: AMOUNT:

Bentonite Slurry INTERVAL: 65 - 1 AMOUNT:

Bentonite Pellets INTERVAL: 65 - 67 AMOUNT:

Other: INTERVAL: AMOUNT:

LOCKING CASING:  YES  NO KEY NO:

Assumptions

Monitoring well has a sand pack of 2' above the screen  
 Porosity of sand pack is .3

Enter This Information

Static Water Level	56.48	
Total Depth of Well	65.08	ft
Number Of Feet Of Screen	10	ft
Diameter of Screen/Riser	2	in
Dia Well Boring	8	in

water column height  
8.6

0.163 gal/ft  
2.611 gal/ft

Results

Volume For Screen Sand Pack	6.3	gal
Volume for Screen and Riser	1.4	gal
Total Volume of Water	7.7	gal
3 Volumes	23.2	gal

Volume for Screen Sand Pack  
 $=(((\text{screened}+2)*\text{Dia hole})-(\text{screened}+2)*\text{Dia Screen}))\text{porosity}$   
 Volume for Screen and Riser  
 $=(\text{totaldepth} - \text{swl})*\text{Dia Screen}$   
 1 Volume  
 $= \text{volume for SSP} + \text{voulume SAR}$

















