

Boring Logs

Note: A boring log for well MW-8 was not prepared.

ICF KAISER ENGINEERS

BORING LOG

PROJECT NAME <u>PPG Non-Residential Chrome Sites</u>	WATER LEVELS RELATIVE TO G.SURFACE <u>DURING DRILLING 4.0</u>	BORING NO. <u>PPG1-M01</u>
PROJECT LOCATION <u>Site 156, Jersey City</u>	WELL LEVEL <u>1.59 FT - MSL 01/20/93</u>	G.S. ELEV <u>7.56</u>
DRILLING FIRM <u>Hardin and Huber, Inc.</u>	NORTHING <u>687267.33</u>	CASING ELEV. _____
DRILLING METHOD <u>Hollow Stem Auger</u>	EASTING <u>2173404.90</u>	START DATE <u>12/09/92</u>
LOGGED BY <u>Don Wendt</u>		FINISH DATE <u>12/09/92</u>

DEPTH	S.S. SAMPLE RECOVERY	BLOWS/ft.	FID (ppm)	SAMPLE DEPTH AND ID	MATERIAL DESCRIPTION	TOTAL/HEX CHROMIUM (PPM)	SYMBOL	WELL DIAGRAM	DEPTH
	1.0	85	0.5	1580M01001	Asphalt top 8 inches.	3.3/5.3 U			
		45		1580M01002	Gray brown coarse to fine SAND, and GRAVEL, trace Silt, moist. (QP/FILL)				
	0.4	50/4	0.3		Same as above, moist. (QP/FILL)				
					Same as above, moist to wet. (QP/FILL)				
	1.3	43	0.2	1580M01003		5.7/5.4 U			
				1580M01004					
		58	0.2	1580M01005	Same as above, wet.				
	1.3	47		1580M01006	Brown coarse to fine SAND, little coarse to fine Gravel, little red Brick, trace Coal, trace Shell, wet.				
		41	0.3	1580M01007	Same as above, wet. (Large Brick in tip of spoon)	33/7.0 U			
	1.3	50/3							
5			N/A	No Sample	No Sample				
	0	50/1							
	1.0	12	0.2	1580M01008	Red brown/olive gray coarse to fine SAND, trace medium to fine Gravel, trace Silt, wet. (SW)	10/8.0 U			
		14							
	0		N/A	No Sample	MEADOW MAT in tip of spoon.				
15		11							
					End of boring at 18.0 ft.				

NOTES:

1. Depths and Elevations in feet unless otherwise noted
2. USCS Classification based on visual-manual procedures
3. Blow counts based on 3 inch split-spoon

Sheet 1 of 1

AECOM						Boring ID: MW-1R	
30 Knightsbridge Road, Piscataway, NJ 08854						Sheet 1 of 1	
Project: PPG Site 156			Drilling Company: Advanced Drilling			Coordinate (NJSPNAD83) x: 619430	
Project Number: 60493065			Drilling Method: Direct Push/H.S.A.			Coordinate (NJSPNAD83) y: 686981	
Date Start Drilling: 04/21/2016			Rig Type: Geoprobe 7825D/H.S.A.			Drilling Water Level (ft bgs): 5.50	
Date Finished Drilling: 04/21/2016			Core Size (inches): 2/8 OD			Boring Total Depth (ft bgs): 15.5	
Physical Location: 270 Marin Boulevard, Jersey City, NJ						Logged By: M. Irving	
Depth (ft)	Recovery (ft)	PID (ppm)	Moisture Content	GA Class.	USCS	Surface Cover and Thickness	Sample Name
1	0			NA	NR	Soft Dug	
2							
3							
4							
5	4			NA	FILL	Grayish brown dense graded aggregate	
6			Wet				
7					FILL	Dark brown fine to coarse SAND, little silt, wood fragments, brick fragments, trace ash, concrete lens @ 7.0-7.5.	
8							
9					NR	Refusal @ 9.0' bgs, No Recovery.	
10	5			NA	FILL	Grayish Brown fine to medium SAND, some silt, little wood fragments, trace ash, no odor, no staining.	
11							
12							
13				NA	FILL	Light brown fine to medium SAND, wet, no odor, no staining, trace ash.	
14				NA	FILL	Light brown fine to medium SAND, wet, no odor, no staining, trace ash.	
15	0.5			NA	FILL	Gray fine SAND, little vegetation, trace ash, gray, no odor, no staining.	
16					PT	PEAT (80% organic fibers, 20% organic silt, moderate organic odor, no staining	
17							
18							
19							
20							

Note: MW-1R is outside of the soil remediation excavation.

Sampled with direct push rig. Well installed with H.S.A. rig.

ICF KAISER ENGINEERS

BORING LOG

PROJECT NAME <u>PPG Non-Residential Chrome Sites</u>	WATER LEVELS RELATIVE TO G.SURFACE	BORING NO. <u>PPG1-M02</u>
PROJECT LOCATION <u>Site 156, Jersey City</u>	DURING DRILLING <u>6.0</u>	G.S. ELEV. <u>9.47</u>
DRILLING FIRM <u>Hardin and Huber, Inc.</u>	WELL LEVEL <u>2.80 FT-MSL</u> <u>01/20/93</u>	CASING ELEV. _____
DRILLING METHOD <u>Hollow Stem Auger</u>	NORTHING <u>687020.84</u>	START DATE <u>12/08/92</u>
LOGGED BY <u>Don Wendt</u>	EASTING <u>2173359.35</u>	FINISH DATE <u>12/08/92</u>

DEPTH	S.S. SAMPLE RECOVERY	BLOWS/ft.	FID (ppm)	SAMPLE DEPTH AND ID	MATERIAL DESCRIPTION	TOTAL/HEX CHROMIUM (PPM)	SYMBOL	WELL DIAGRAM	DEPTH
				1580M02001	Ornamental Stone top 1 inch.	16.2/5.5 U	+		
	0.4	3	0		Gray brown coarse to fine SAND, and GRAVEL, moist. (FILL)		+		
		8			Same as above.		+		
		12		1580M02002			+		
	0.8	35	N/A	1580M02003	Red brown medium to fine SAND, some Silt, little coarse to fine Gravel, moist. (Chromite Ore Residue?)		+		
		12					+		
		9			Same as above, trace Chrome Nodules.		+		
	1.2	7	0	1580M02005	Red brown/blue green SILT, some coarse to fine Sand, some Chrome Nodules, trace coarse Gravel, moist. (Chromite Ore Residue)	8310/1410	+		
5		13					+		
		15					+		
		5		1580M02008	Same as above, wet. (Chromite Ore Residue)		+		
	0.8	7	0.4		Gray brown/brown coarse to fine SAND, and GRAVEL, little red Brick, wet. (FILL)		+		
		12					+		
		15					+		
	1.5	51/5	1.0	1580M02008	Red brown SILT, trace coarse to fine Sand, trace coarse to fine Gravel, trace Chrome Nodules, little red Brick, little Gravel, last 8 inches, wet. (Chromite Ore Residue)	4570/2270	+		
		18					+		
		22					+		
10		51/3		1580M02009	Gray medium to fine SAND, some Wood, little red Brick, wet. (FILL)		+		
	0.5	33	0.1				+		
		51/4					+		
				1580M02010	Gray brown medium to fine SAND, trace Silt, trace medium to fine Gravel, wet.	22/5.8 J	+		
	1.4	7	0.8	1580M02011	Olive gray medium to fine SAND, trace Silt, wet. (SW)		+		
		11			Same as above, little Silt.		+		
		12					+		
		12		1580M02012	Same as above, little Silt.		+		
15		17	0.2				+		
		11					+		
		12					+		
		13		1580M02013	Same as above, little Silt.	42/8.0 J	+		
	1.8	5	0.8				+		
		7					+		
		9					+		
		13		1580M02014	Dark gray SILT and CLAY, trace Meadow Mat.		+		
	1.5	1	0.8				+		
		2					+		
20		2					+		

NOTES:
 1. Depths and Elevations in feet unless otherwise noted
 2. USCS Classification based on visual-manual procedures
 3. Blow counts based on 3 inch split-spoon

Sheet 1 of 1

BORING LOG

PROJECT NAME <u>PPG Non-Residential Chrome Sites</u>	WATER LEVELS RELATIVE TO G.SURFACE	BORING NO. <u>PPG1-M03</u>
PROJECT LOCATION <u>Site 158, Jersey City</u>	DURING DRILLING <u>4.0</u>	G.S. ELEV. <u>7.05</u>
DRILLING FIRM <u>Hardin and Huber, Inc.</u>	WELL LEVEL <u>1.59 FT-MSL</u> <u>01/20/93</u>	CASING ELEV. _____
DRILLING METHOD <u>Hollow Stem Auger</u>	NORTHING <u>686870.26</u>	START DATE <u>12/09/92</u>
LOGGED BY <u>Don Wendt</u>	EASTING <u>2173192.8</u>	FINISH DATE <u>12/08/92</u>

[illegible]

NOTES:

- NOTES:
1. Depths and Elevations in feet unless otherwise noted
2. USCS Classification based on visual-manual procedures
3. Blow counts based on 3 inch split-spoon

Sheet 1 of 1

ICF KAISER ENGINEERS

BORING LOG

PROJECT NAME <u>PPG Non-Residential Chrome Sites</u>	WATER LEVELS RELATIVE TO G.SURFACE	BORING NO. <u>PPG1-M04</u>
PROJECT LOCATION <u>Site 156, Jersey City</u>	DURING DRILLING <u>5.9</u>	G.S. ELEV. <u>8.67</u>
DRILLING FIRM <u>Hardin and Huber, Inc.</u>	WELL LEVEL <u>2.24 FT-MSL (01-20-93)</u>	CASING ELEV. _____
DRILLING METHOD <u>Hollow Stem Auger</u>	NORTHING <u>686873.23</u>	START DATE <u>12/08/92</u>
LOGGED BY <u>Don Wendt</u>	EASTING <u>2173483.43</u>	FINISH DATE <u>12/08/92</u>

DEPTH	S.S. SAMPLE RECOVERY	BLOWS/Blr.	FID (ppm)	SAMPLE DEPTH AND ID	MATERIAL DESCRIPTION	TOTAL/HEX CHROMIUM (PPM)	SYMBOL	WELL DIAGRAM	DEPTH
5	1.8	5	0.2	No Sample	No Sample		+	<p>2" Sch. 40 PVC</p> <p>0.01 slotted 2" PVC Screen</p> <p>grout</p> <p>Bentonite seal</p> <p>#00H Marine Sand</p>	5
		4		No Sample	No Sample		+		
		5		No Sample	No Sample		+		
		8		1580M04001	Brown coarse to fine SAND, little coarse to fine Gravel, trace Coal, trace red Brick, moist. (SP/FILL)		+		
				1580M04002	Yellow brown coarse to fine SAND, little coarse to fine Gravel, wet. (SP/FILL)		+		
				No Sample	No Sample		+		
10	1.7	2	0	1580M04003	Red brown coarse to fine SAND, some coarse to fine Gravel, trace Wood, wet. (SP/FILL)	8.5/7.1 UJ	+		10
		3		1580M04004	Gray coarse to fine SAND, trace coarse to fine Gravel, wet. (SP/FILL)	9.8/5.9 UJ	+		
		7		No Sample	No Sample		+		
		9		No Sample	No Sample		+		
15	1.9	12	0.4	1580M04005	Olive gray/red brown medium to fine SAND, trace Silt, wet. (SW)	11/8.0 UJ	+	<p>2" Sch. 40 PVC</p> <p>0.01 slotted 2" PVC Screen</p> <p>grout</p> <p>Bentonite seal</p> <p>#00H Marine Sand</p>	15
		13		1580M04008	Light brown/dark gray MEADOW MAT, and CLAY and SILT, moist.	17/9.3 UJ	+		
		7			End of Boring at 18.0 ft.		+		

NOTES:

1. Depths and Elevations in feet unless otherwise noted
2. USCS Classification based on visual-manual procedures
3. Blow counts based on 3 inch spft-spoon

Sheet 1 of 1

PPG 0143 1280

CONFIDENTIAL - PPG(N.J.)

PPGNJC0102186

ICF KAISER ENGINEERS

BORING LOG

PROJECT NAME <u>PPG Non-Residential Chrome Sites</u>	WATER LEVELS RELATIVE TO G.SURFACE	BORING NO. <u>PPGI-M05</u>
PROJECT LOCATION <u>Site 158, Jersey city</u>	DURING DRILLING _____	G.S. ELEV. <u>8.20</u>
DRILLING FIRM <u>Hardin and Huber Inc.</u>	WELL LEVEL <u>3.88 FT-MSL 01/20/93</u>	CASING ELEV. _____
DRILLING METHOD <u>Hollow Stem Auger</u>	NORTHING <u>687199.97</u>	START DATE <u>12/11/92</u>
LOGGED BY <u>D. Wendt</u>	EASTING <u>2173268.38</u>	FINISH DATE <u>12/11/92</u>

DEPTH	S.S. SAMPLE	RECOVERY	BLOWS/ft.	FID (ppm)	SAMPLE DEPTH AND ID	MATERIAL DESCRIPTION	TOTAL/HEX CHROMIUM (PPM)	SYMBOL	WELL DIAGRAM	DEPTH
						Not sampled				
5					1580M05001	Gray brown coarse to fine SAND and GRAVEL, wet. (FILL)				5
			0.8 36	0						
			50/1'							
			N/A	0	1580M05002	Red brown coarse to fine SAND, some Gravel, little Chrome Nodules, wet.	4720			
					1580M05003	Gray coarse to fine SAND, little coarse to fine Gravel, little blue green staining, wet. (SW)	128			
10			1.0	0.3	1580M05004	Olive gray medium to fine SAND, little Silt, wet. (SW)				10
			0.5	0.8	1580M05005	Red brown medium to fine SAND, little Silt, wet. (SW)	12.8			
15			1.0	9.5	1580M05006	Light brown/dark gray MEADOW MAT and SILT and CLAY, moist.				15
						Bottom of boring at 18.0 ft.				

NOTES:
 1. Depths and Elevations in feet unless otherwise noted
 2. USCS Classification based on visual-manual procedures
 3. Blow counts based on 3 inch split-spoon

Sheet 1 of 1

CONFIDENTIAL - PPG(N.J.)

PPG 0143 1281

PPGNJC0102187

AECOM						Boring ID: MW-5R	
30 Knightsbridge Road, Piscataway, NJ 08854						Sheet 1 of 1	
Project: PPG Site 156			Drilling Company: Advanced Drilling			Coordinate (NJSPNAD83) x: 619294	
Project Number: 60493065			Drilling Method: Direct Push/H.S.A.			Coordinate (NJSPNAD83) y: 686914	
Date Start Drilling: 04/21/2016			Rig Type: Geoprobe 7825D/H.S.A.			Drilling Water Level (ft bgs): 4.70	
Date Finished Drilling: 04/22/2016			Core Size (inches): 2/8 OD			Boring Total Depth (ft bgs): 15.75	
Physical Location: 270 Marin Boulevard, Jersey City, NJ						Logged By: M. Irving	
Depth (ft)	Recovery (ft)	PID (ppm)	Moisture Content	GA Class.	USCS	Surface Cover and Thickness	Sample Name
	0			NA	Asphalt	Asphalt	
1				NA	FILL	Backfill Quarry Process	
2						Drillers advance boring to 10 feet below ground surface	
3						(no soil characterization)	
4							
5			Wet @4.70				
6							
7							
8							
9							
10							
11	1		Wet	NA	FILL	Grayish brown fine to medium SAND, wet, no odor, no staining.	
12							
13							
14							
15							
16	1.75			NA	FILL	Grayish brown fine to medium SAND, wet, no odor, no staining.	
17					PT	PEAT (80% organic fibers, 20% organic silt, slight organic odor, no staining	
18							
19							
20							

Note: MW-5R is located in the test pit excavation at MW-5.

Sampled with direct push rig. Well installed with H.S.A. rig.

AECOM						Boring ID: MW-6	
30 Knightsbridge Road, Piscataway, NJ 08854						Sheet 1 of 1	
Project: PPG Site 156			Drilling Company: Advanced Drilling			Coordinate (NJSPNAD83) x: 619111	
Project Number: 60493065			Drilling Method: Direct Push/H.S.A.			Coordinate (NJSPNAD83) y: 686739	
Date Start Drilling: 04/14/2016			Rig Type: Geoprobe 7825D/H.S.A.			Drilling Water Level (ft bgs): 4.94	
Date Finished Drilling: 04/14/2016			Core Size (inches): 2/8 OD			Boring Total Depth (ft bgs): 14	
Physical Location: 270 Marin Boulevard, Jersey City, NJ						Logged By: M. Irving	
Depth (ft)	Recovery (ft)	PID (ppm)	Moisture Content	GA Class.	USCS	Surface Cover and Thickness	Sample Name
1	0	0.0	Wet @ 4.94	NA	NR	Soft Dug	
2							
3							
4							
5							
6	3	0.0	Wet	NA	FILL	Dense graded aggregate, with medium coarse gravel, no odor, no staining.	
7				NA	FILL	Reddish brown fine SAND, slight black staining, no odor, slightly moist.	
8				As-built surface 7.9 feet below ground surface			
9	4	0.0	Wet	NA	FILL	Dark brown silty fine SAND, wet, trace fine gravel, saturated @ 11.5'-13.8'	
10							
11							
12							
13							
14			Moist	NA	PT	PEAT (70% organic fibers, 30% organic silt), slightly moist.	
15							
16							
17							
18							
19							
20							

Notes: Sampled with direct push rig. Well installed with H.S.A. rig.

AECOM						Boring ID: CS H5A	
30 Knightsbridge Road, Piscataway, NJ 08854						Sheet 1 of 1	
Project: PPG Site 156			Drilling Company: Advanced Drilling			Coordinate (NJSPNAD83) x: 619390	
Project Number: 60493065			Drilling Method: Direct Push/H.S.A.			Coordinate (NJSPNAD83) y: 686805	
Date Start Drilling: 04/15/2016			Rig Type: Geoprobe 7825D/H.S.A.			Drilling Water Level (ft bgs): 6.00	
Date Finished Drilling: 04/15/2016			Core Size (inches): 2/8 OD			Boring Total Depth (ft bgs): 16	
Physical Location: 270 Marin Boulevard, Jersey City, NJ						Logged By: M. Irving	
Depth (ft)	Recovery (ft)	PID (ppm)	Moisture Content	GA Class.	USCS	Surface Cover and Thickness	Sample Name
1	0	0.0		NA	FILL	Soft Dug	
2							
3							
4							
5	4	0.0		NA	FILL	Dense graded aggregate	
6			Wet				
7							
8							
9							
10							
11	5	0.0	Wet	NA	FILL	Dense graded aggregate	
12							156-CS H5A_-5 TO -5.5 (13.5 - 14 feet)
13	As-built surface 12.9 feet below ground surface						
14					FILL	Reddish brown fine to medium SAND, trace brick fragments, little fine gravel	
15	1		Wet	NA	FILL	Black fine SAND, ash(soot), trace cinders, no odor, no staining, saturated, reddish brown sand first 3 inches	
16					OL	UND organic SILT (80% organic silt, 20% organic fibers), slight organic odor, no staining remaining 9 inches	
17							
18							
19							
20							

As-built surface 12.9 feet below ground surface

Note: Sampled with direct push rig. Well installed with H.S.A. rig. Converted to MW-7

AECOM						Boring ID: MW-9	
30 Knightsbridge Road, Piscataway, NJ 08854						Sheet 1 of 1	
Project: PPG Site 156			Drilling Company: Advanced Drilling			Coordinate (NJSPNAD83) x: 619192	
Project Number: 60493065			Drilling Method: Direct Push/H.S.A.			Coordinate (NJSPNAD83) y: 686976	
Date Start Drilling: 04/21/2016			Rig Type: Geoprobe 7825D/H.S.A.			Drilling Water Level (ft bgs): 5.40	
Date Finished Drilling: 04/21/2016			Core Size (inches): 2/8 OD			Boring Total Depth (ft bgs): 16	
Physical Location: 270 Marin Boulevard, Jersey City, NJ						Logged By: M. Irving	
Depth (ft)	Recovery (ft)	PID (ppm)	Moisture Content	GA Class.	USCS	Surface Cover and Thickness	Sample Name
1	0	0.0		NA	FILL	Backfilled with Quarry Process.	
2							
3							
4							
5							
6	3	0.0	Moist	NA	FILL	Grayish brown fine to coarse SAND, brick lens at 5.5-5.6, no odor, no staining, slightly moist.	
7				NA	FILL	Light brown fine to medium SAND, wood fragments, moist, wet @ 7.0'bgs, no odor, no staining.	
8				NR	No recovery		
9	5	0.0		NA	FILL	Brown fine to medium SAND, trace silt, trace wood fragments, moist to wet.	
10							
11							
12							
13							
14							
15	1			NA	FILL	Brown SILT with trace vegetation (grass),no odor, no staining.	
16				NA	PT	PEAT (80% organic fibers, 20% organic silt), moderate organic odor, no staining	
17							
18							
19							
20							

Note: MW-9 is located in the shallow excavation at test pit TO-2 and boring LA1-1.
Sampled with direct push rig. Well installed with H.S.A. rig.

AECOM						Boring ID: MW-10																																																																																																																																																																																	
30 Knightsbridge Road, Piscataway, NJ 08854						Sheet 1 of 1																																																																																																																																																																																	
Project: PPG Site 156			Drilling Company: Enviroprobe			Coordinate (NJSPNAD83) x: 619564																																																																																																																																																																																	
Project Number: 60493065			Drilling Method: Direct Push			Coordinate (NJSPNAD83) y: 686780																																																																																																																																																																																	
Date Start Drilling: 04/08/2016			Rig Type: Geoprobe 7825DT			Drilling Water Level (ft bgs): 4.00																																																																																																																																																																																	
Date Finished Drilling: 04/08/2016			Core Size (inches): 1.5			Boring Total Depth (ft bgs): 7																																																																																																																																																																																	
Physical Location: 270 Marin Boulevard, Jersey City, NJ						Logged By: M. Irving																																																																																																																																																																																	
<table border="1"> <thead> <tr> <th>Depth (ft)</th> <th>Recovery (ft)</th> <th>PID (ppm)</th> <th>Moisture Content</th> <th>GA Class.</th> <th>USCS</th> <th>Surface Cover and Thickness</th> <th>Sample Name</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> <td></td> <td></td> <td>NA</td> <td>NR</td> <td>No lithology recorded.</td> <td></td> </tr> <tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>11</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>12</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>13</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>14</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>15</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>16</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>17</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>18</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>19</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>20</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>								Depth (ft)	Recovery (ft)	PID (ppm)	Moisture Content	GA Class.	USCS	Surface Cover and Thickness	Sample Name	0				NA	NR	No lithology recorded.		1								2								3								4								5								6								7								8								9								10								11								12								13								14								15								16								17								18								19								20							
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Note: MW-10 is outside of the soil remediation excavation.
 Sampled with direct push rig. Well installed with H.S.A. rig.

Client: PYG		BORING ID: 156-MW 8A
Project Number: 60493065.18		
Site Location: METRO TOWERS, JERSEY CITY		
Coordinates:	Elevation:	Sheet: 1 OF 1
Drilling Method: AUGERS		Monitoring Well Installed: YES
Sample Type(s):	Boring Diameter:	Screened Interval: 8.0 - 13.0
Logged By: E.ACS	Date/Time Started: 11/3/17	Depth of Boring: 13.0
Ground Elevation:	Date/Time Finished: 11/3/17	Water Level:

[illegible]

NOTES:

[illegible]



Client: <u>PPG</u>	BORING ID: <u>156-MW8B</u>	
Project Number: <u>60493065.18</u>		
Site Location: <u>METRO TOWERS, JERSEY CITY</u>		
Coordinates:	Elevation:	Sheet: <u>1 OF 2</u>
Drilling Method: <u>AUGERS</u>	Monitoring Well Installed: <u>YES</u>	
Sample Type(s): <u>MACROCORE</u>	Boring Diameter: <u>14" / 6"</u>	Screened Interval: <u>20.0 - 25.0</u>
Weather: <u>SUNNY 70°</u>	Logged By: <u>E. FCS</u>	Date/Time Started: <u>11/2/17</u>
Drilling Contractor: <u>SGS</u>	Ground Elevation:	Date/Time Finished: <u>11/3/17</u>
		Water Level:

Depth (ft)	Geologic Sample ID	Sample Depth	Blows per 6"	Recovery (inches)	Headspace (ppm)	U.S.C.S.	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)	FLUSHING WELL CONST.	Lab Sample Depth (ft)
1							ASPHALT 4"		
2							GRAY DGA BACKFILL		
3							(EXCAVATED AND BACKFILLED SEPTEMBER 2017)		
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14							13.5-16.5 PEAT 75% FIBER, 25% SILT, SLIGHT ORGANIC ODOR, MOIST (PT)		
15		13.5-16.5				PT			
16	C-1		NA	4.5'					13.5'
17		16.5-18.0				ML	16.5-18.0 GRAY ORGANIC SILT OR CLAY, MOIST-WET, SOFT, NO ODORS/STAINING (ML)		6"
18						SP	18.0-18.5 GRAY FINE SAND, BR SILT WET, MEDIUM DENSE, NO ODORS/STAINING (SP)		
19		18.0-22.0				ML	18.5-22.0 DARK GRAY SILT, LITTLE FINE SAND, BR CLAY SOFT, NO ODOR/STAINING (ML)		18.0
20									19.5
									20.0
									21.0
									22.0
									23.0
									24.0
									25.0

NOTES:

Date	Time	Depth to groundwater while drilling

Checked by

Date:



Client:

Project Number:

SEE PAGE 1

Site Location:

Coordinates:

Elevation:

Drilling Method:

Sample Type(s):

Boring Diameter:

BORING ID: 156-MW 8B

Sheet: 2 OF 2

Monitoring Well Installed:

Screened Interval:

Weather:

Logged By:

Date/Time Started:

Depth of Boring:

Drilling Contractor:

Ground Elevation:

Date/Time Finished:

Water Level:

Depth (ft)	Geologic Sample ID	Sample Depth	Blows per 6"	Recovery (inches)	Headspace (ppm)	U.S.C.S.	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)	Lab Sample ID	Lab Sample Depth (ft)
21	C-2	NA	4.5	↓		SM	22.0 - 23.5 DARK GRAY FINE SAND, SOME SILT, WET MEDIUM DENSE, NO STAINING / ODORS (SM)		10 SLOT PVC SCREEN BORE HOLE 6" #1 SAND
22									
23	C-3	NA	1.5	↑		ML	23.5 - 25.0 DARK GRAY SILT, LITTLE FINE SAND, WET SOFT, NO ODOR / STAINING (ML)		
24									
25									
6							FOR @ 25'		
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

NOTES:

Date Time Depth to groundwater while drilling

Well Decommissioning Records

Note: No well decommissioning record was located for MW-8.

This document has not yet been reviewed and approved or denied by the NJ DEP. Deficiencies in submittal information or actual construction may result in denial.

WELL DECOMMISSIONING SUBMITTAL PDF

PROPERTY OWNER: METROPOLIS TOWERS
Organization: METROPOLIS TOWERS
Address: 280 GREGORY PARK PLAZA, Jersey City (Hudson), New Jersey 07302
WELL LOCATION: Metro Towers
Well Location Description: 72' from Christopher Columbus Dr & 206' from Henderson St
Address: 280 GREGORY PARK PLAZA
County: Hudson **Municipality:** Jersey City **Lot:** 1 **Block:** 13101
Easting(X): 619434 **Northing(Y):** 686980 **Coordinate System:** NJ State Plane (NAD83) - USFEET
Method: GPS **Point of Reference:** Well
GPS Manufacturer: **Surveyor Name:**
GPS Model: **Surveyor License #:**
Accuracy: 10 **Accuracy units:** Feet

WELL USE: Monitoring **DATE WELL**
Other Use(s): **DECOMMISSIONED:** 04/29/2016

Reason for Decommissioning: Project ended, no longer used
Was a New Well Drilled? No **New Well Permit Number:**

WELL DECOMMISSIONING INFORMATION

Permit Number: 2600031329
Local ID: MW-1 **Drilling Company:** ADVANCED DRILLING INC
Finished Well Depth (ft.): 17.6 **235 Van Syclopedia Rd, Hampton**
Formation Type: Unconsolidated **Address:** (Hunterdon), New Jersey 08827
Well Search Completed? No **Driller Name and Lic.:** Scott Alberalla, 0001087

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating/Screen Slot # (lbs/sch no.)
Borehole(s)				N/A	N/A
Casing(s)	0	7.4	2	PVC	sch 40
Screen(s)	7.4	17.6	2	PVC	.010

MATERIALS USED

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	17.6	2	0	5	94	8
Gravel Pack							

This document has not yet been reviewed and approved or denied by the NJ DEP. Deficiencies in submittal information or actual construction may result in denial.

WELL DECOMMISSIONING SUBMITTAL PDF

PROPERTY OWNER: METROPOLIS TOWERS

Organization: METROPOLIS TOWERS

Address: 280 GREGORY PARK PLAZA, Jersey City (Hudson), New Jersey 07302

WELL LOCATION: Metro Towers

Well Location Description: 320' from Christopher Columbus Dr & 340' from Henderson St

Address: 280 GREGORY PARK PLAZA

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting(X): 619362 Northing(Y): 686739 Coordinate System: NJ State Plane (NAD83) - USFEET

Method: GPS

Point of Reference: Well

GPS Manufacturer: _____

Surveyor Name: _____

GPS Model: _____

Surveyor License #: _____

Accuracy: 10

Accuracy units: Feet

WELL USE: Monitoring

DATE WELL

Other Use(s): _____

DECOMMISSIONED: 04/29/2016

Reason for Decommissioning: Project ended, no longer used

Was a New Well Drilled? No

New Well Permit Number: _____

WELL DECOMMISSIONING INFORMATION

Permit Number: 2600031323

Local ID: MW-2

Drilling Company: ADVANCED DRILLING INC

235 Van Syckels Rd, Hampton

Finished Well Depth (ft.): 17.4

Address: (Hunterdon), New Jersey 08827

Formation Type: Unconsolidated

Driller Name and Lic.: Scott Alberalla, 0001087

Well Search Completed? No

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating/Screen Slot # (lbs/sch no.)
Borehole(s)				N/A	N/A
Casing(s)	0	7.4	2	PVC	sch 40
Screen(s)	7.4	17.4	2	PVC	.010

MATERIALS USED

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	17.4	2	0	5	94	8
Gravel Pack							

This document has not yet been reviewed and approved or denied by the NJ DEP. Deficiencies in submittal information or actual construction may result in denial.

WELL DECOMMISSIONING SUBMITTAL PDF

PROPERTY OWNER: METROPOLIS TOWERS
Organization: METROPOLIS TOWERS
Address: 280 GREGORY PARK PLAZA, Jersey City (Hudson), New Jersey 07302
WELL LOCATION: Metro Towers
Well Location Description: 171' from Christopher Columbus Dr & 119' from Henderson St
Address: 280 GREGORY PARK PLAZA
County: Hudson **Municipality:** Jersey City **Lot:** 1 **Block:** 13101
Easting(X): 619293 **Northing(Y):** 686916 **Coordinate System:** NJ State Plane (NAD83) - USFEET
Method: GPS **Point of Reference:** Well
GPS Manufacturer: _____ **Surveyor Name:** _____
GPS Model: _____ **Surveyor License #:** _____
Accuracy: 10 **Accuracy units:** Feet

WELL USE: Monitoring **DATE WELL**
Other Use(s): _____ **DECOMMISSIONED:** 04/29/2016

Reason for Decommissioning: Project ended, no longer used

Was a New Well Drilled? No **New Well Permit Number:** _____

WELL DECOMMISSIONING INFORMATION

Permit Number: _____
Local ID: MW-5 **Drilling Company:** ADVANCED DRILLING INC
235 Van Syckels Rd, Hampton
Finished Well Depth (ft.): 14 **Address:** (Hunterdon), New Jersey 08827
Formation Type: Unconsolidated **Driller Name and Lic.:** Scott Alberalla, 0001087
Well Search Completed? No

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating/Screen Slot # (lbs/sch no.)
Borehole(s)					
Casing(s)	0	4	2	N/A	N/A
Screen(s)	4	14	2	PVC	sch 40
				PVC	.010

MATERIALS USED

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	14	2	0	2.5	47	4
Gravel Pack							

WELL DECOMMISSIONING REPORT

PROPERTY OWNER: NA METROPOLIS TOWERS APT.CORP MGMT.

Company/Organization: Metropolis Towers Apt.Corp Mgmt.

Address: 280 Gregory Park Plaza Jersey City, New Jersey 07302

WELL LOCATION: Metropolis Towers Apt. Corp MGMT

Address: 280 Gregory Park Plaza / MW-8R Address confirmed by client T Hanley

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619314 Northing (Y): 686712
Coordinate System: NJ State Plane (NAD83) - USFEET

**DATE WELL
DECOMMISSIONED:** September 25, 2017

WELL USE: MONITORING

Other Use(s): _____ **Local ID:** MW-8R

Reason for Decommissioning: No longer in use

Finished Well Depth (ft.): 16

Was a New Well Drilled? N

Formation Type: Unconsolidated

New Well Permit Number: _____

WELL DECOMMISSIONING INFORMATION

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole					
Casing	0	11	2	PVC	sch 40
Screen	11	16	2	PVC	.010

MATERIALS USED

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in.)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	16	2	0	2	42	3
Sand/Gravel							

ADDITIONAL INFORMATION

Obstructions: No

Authorization Official: _____

Obstruction Type: _____

Authorization Number: _____

Alternative Decomm. Method? No

Authorization Date: _____

Method Used _____

ATTACHMENTS: _____

Nicholas A Fallucca
MASTER
Sealing Driller: LICENSE # 749523

SGS NORTH AMERICA INC.
PO BOX 423
Company: West Creek (Ocean), NJ 08092

WELL DECOMMISSIONING REPORT

PROPERTY OWNER: METROPOLIS TOWERS APT.CORP MGMT METROPOLIS TOWERS APT. CORP MGMT

Company/Organization: Metropolis Towers

Address: 270 Gregory Park Plaza Jersey City, New Jersey 07302

WELL LOCATION: Metropolis Towers

Address: 270 Gregory Park Plaza

County: Hudson Municipality: Jersey City Lot: 2 Block: 13101

Easting (X): 619563 Northing (Y): 686784
Coordinate System: NJ State Plane (NAD83) - USFEET

**DATE WELL
DECOMMISSIONED:** September 21, 2016

WELL USE: MONITORING

Other Use(s): _____ **Local ID:** MW-10

Reason for Decommissioning: No longer in use

Finished Well Depth (ft.): 7 Was a New Well Drilled? N

Formation Type: Unconsolidated New Well Permit Number: _____

WELL DECOMMISSIONING INFORMATION

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole					
Casing	0	2	1.5	PVC	sch40
Screen	2	7	1.5	pvc	.010

MATERIALS USED

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in.)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	7	1.5	0	5	94	5
Sand/Gravel							

ADDITIONAL INFORMATION

Obstructions: No Authorization Official: _____

Obstruction Type: _____ Authorization Number: _____

Alternative Decomm. Method? No Authorization Date: _____

Method Used _____

ATTACHMENTS: _____

Form As

Note: Form As were not located for the wells installed in 1992 (MW-1, MW-2, MW-3, MW-4, and MW-5).

The Form A for well MW-1 could not be located.

ICF KAISER ENGINEERS

BORING LOG

PROJECT NAME <u>PPG Non-Residential Chrome Sites</u>	WATER LEVELS RELATIVE TO G.SURFACE	BORING NO. <u>PPG1-M01</u>
PROJECT LOCATION <u>Site 156, Jersey City</u>	DURING DRILLING <u>4.0</u>	G.S. ELEV. <u>7.56</u>
DRILLING FIRM <u>Hardin and Huber, Inc.</u>	WELL LEVEL <u>1.59 FT-MSL 01/20/93</u>	CASING ELEV. _____
DRILLING METHOD <u>Hollow Stem Auger</u>	NORTHING <u>687267.33</u>	START DATE <u>12/09/92</u>
LOGGED BY <u>Don Wendt</u>	EASTING <u>2173404.90</u>	FINISH DATE <u>12/09/92</u>

DEPTH	S.S. SAMPLE RECOVERY	BLOWS (6in.)	FID (ppm)	SAMPLE DEPTH AND ID	MATERIAL DESCRIPTION	TOTAL/HEX CHROMIUM (PPM)	SYMBOL	WELL DIAGRAM	DEPTH
	1.0	85	0.5	1580M01001	Asphalt top 8 inches.	3.3/5.3 U	+		
		45		1580M01002	Gray brown coarse to fine SAND, and GRAVEL, trace Silt, moist. (QP/FILL)		+		
	0.4	50/4	0.3		Same as above, moist. (QP/FILL)		+		
					Same as above, moist to wet. (QP/FILL)		+		
5	1.3	43	0.2	1580M01003		5.7/5.4 U	+		
				1580M01004			+		
		58	0.2	1580M01005	Same as above, wet.		+		
	1.3	47		1580M01006	Brown coarse to fine SAND, little coarse to fine Gravel, little red Brick, trace Coal, trace Shell, wet.		+		
		41					+		
	1.3	50/3	0.3	1580M01007	Same as above, wet. (Large Brick in tip of spoon)	33/7.0 U	+		
10	0	50/1	N/A	No Sample	No Sample				10
	1.0	12	0.2	1580M01008	Red brown/olive gray coarse to fine SAND, trace medium to fine Gravel, trace Silt, wet. (SW)	10/8.0 U			
		14							
15	0	N/A		No Sample	MEADOW MAT in tip of spoon.				15
		11							
					End of boring at 18.0 ft.				20

NOTES:
 1. Depths and Elevations in feet unless otherwise noted
 2. USCS Classification based on visual-manual procedures
 3. Blow counts based on 3 inch split-spoon

Sheet 1 of 1

The Form A for well MW-2 could not be located.

ICF KAISER ENGINEERS

BORING LOG

PROJECT NAME <u>PPG Non-Residential Chrome Sites</u>	WATER LEVELS RELATIVE TO G.SURFACE <u>DURING DRILLING 8.0</u>	BORING NO. <u>PPG1-M02</u>
PROJECT LOCATION <u>Site 156, Jersey City</u>	WELL LEVEL <u>2.80 FT-MSL 01/20/93</u>	G.S. ELEV. <u>9.47</u>
DRILLING FIRM <u>Hardin and Huber, Inc.</u>	NORTHING <u>687020.84</u>	CASING ELEV. _____
DRILLING METHOD <u>Hollow Stem Auger</u>	EASTING <u>2173359.35</u>	START DATE <u>12/08/92</u>
LOGGED BY <u>Don Wendt</u>		FINISH DATE <u>12/08/92</u>

DEPTH	S.S. SAMPLE RECOVERY	BLOWS/lin.	FID (ppm)	SAMPLE DEPTH AND ID	MATERIAL DESCRIPTION	TOTAL/HEX CHROMIUM (PPM)	SYMBOL	WELL DIAGRAM	DEPTH
				1580M02001	Ornamental Stone top 1 inch.	18.2/5.5 U	+		
	0.4	3	0		Gray brown coarse to fine SAND, and GRAVEL, moist. (FILL)		+		
		8			Same as above.		+		
		12	N/A	1580M02002			+		
	0.8	35		1580M02003	Red brown medium to fine SAND, some Silt, little coarse to fine Gravel, moist. (Chromite Ore Residue?)		o		
		12					o		
		12			Same as above, trace Chrome Nodules.		o		
		9					o		
	1.2	7	0	1580M02005	Red brown/blue green SILT, some coarse to fine Sand, some Chrome Nodules, trace coarse Gravel, moist. (Chromite Ore Residue)	8310/1410	o		
5		13					o		
		15					o		
		5					o		
	0.8	7	0.4	1580M02008	Same as above, wet. (Chromite Ore Residue)		+		
		12			Gray brown/brown coarse to fine SAND, and GRAVEL, little red Brick, wet. (FILL)		+		
		15					+		
	1.5	51/5'	1.0	1580M02008	Red brown SILT, trace coarse to fine Sand, trace coarse to fine Gravel, trace Chrome Nodules, little red Brick, little Gravel, last 8 inches, wet. (Chromite Ore Residue)	4570/2270	o		
		18					o		
		22					o		
10		51/3'					o		
	0.5	33	0.1	1580M02009	Gray medium to fine SAND, some Wood, little red Brick, wet. (FILL)		+		
		51/4'					+		
				1580M02010	Gray brown medium to fine SAND, trace Silt, trace medium to fine Gravel, wet.	22/5.8 J	+		
	1.4	7	0.8	1580M02011	Olive gray medium to fine SAND, trace Silt, wet. (SW)		+		
		11					+		
		12			Same as above, little Silt.		+		
		12					+		
15	1.7	7	0.2	1580M02012			+		
		11					+		
		12			Same as above, little Silt.		+		
							+		
	1.8	13	0.8	1580M02013		42/8.0 J	+		
		5					+		
		7					+		
		9					+		
	1.5	13	0.8	1580M02014	Dark gray SILT and CLAY, trace Meadow Mat.		hatched		
		1					hatched		
		2					hatched		
		2					hatched		
20									20

NOTES:
 1. Depths and Elevations in feet unless otherwise noted.
 2. USCS Classification based on visual-manual procedures.
 3. Blow counts based on 3 inch split-spoon

Sheet 1 of 1

CONFIDENTIAL - PPG(N.J.)

PPG 0143 1278

PPGNJC0102184

The Form A for well MW-3 could not be located.

ICF KAISER ENGINEERS

BORING LOG

PROJECT NAME <u>PPG Non-Residential Chrome Sites</u>	WATER LEVELS RELATIVE TO G.SURFACE	BORING NO. <u>PPG1-M03</u>
PROJECT LOCATION <u>Site 158, Jersey City</u>	DURING DRILLING <u>4.0</u>	G.S. ELEV. <u>7.05</u>
DRILLING FIRM <u>Hardin and Huber, Inc.</u>	WELL LEVEL <u>1.59 FT-MSL</u> <u>01/20/93</u>	CASING ELEV. _____
DRILLING METHOD <u>Hollow Stem Auger</u>	NORTHING <u>686870.26</u>	START DATE <u>12/09/92</u>
LOGGED BY <u>Don Wendt</u>	EASTING <u>2173192.8</u>	FINISH DATE <u>12/09/92</u>

DEPTH	S.S. SAMPLE RECOVERY	BLOWS/bln.	FTD (ppm)	SAMPLE DEPTH AND ID	MATERIAL DESCRIPTION	TOTAL/HEX CHROMIUM (PPM)	SYMBOL	WELL DIAGRAM	DEPTH
				No Sample	No Sample				
				1580M03001	Brown coarse to fine SAND, trace coarse to fine Gravel, trace Coal, wet. (SP/FILL)				
				1580M03002	Olive gray medium to fine SAND, little Silt. (SP/FILL)				
				1580M03003	Olive gray medium to fine SAND, little Silt, trace medium Gravel, trace Coal, wet. (Coal from above?) (SP/FILL)	2.7/6.4 U.L.			
				No Sample	No Sample				
				No Sample	No Sample				
				No Sample	No Sample				
				No Sample	No Sample				
				No Sample	No Sample				
				1580M03004	Red brown coarse to fine SAND, little Silt, wet. (SW)				
				1580M03005	Light brown/dark gray MEADOW MAT, and CLAY and SILT, moist. (PT/OL)				
					End of Boring at 14.0 ft.				

NOTES:
 1. Depths and Elevations in feet unless otherwise noted
 2. USCS Classification based on visual-manual procedures
 3. Blow counts based on 3 inch split-spoon

Sheet 1 of 1

PPG 0143 1279

CONFIDENTIAL - PPG(N.J.)

PPGNJC0102185

The Form A for well MW-4 could not be located.

ICF KAISER ENGINEERS

BORING LOG

PROJECT NAME <u>PPG Non-Residential Chrome Sites</u>	WATER LEVELS RELATIVE TO G.SURFACE	BORING NO. <u>PPG1-M04</u>
PROJECT LOCATION <u>Site 156, Jersey City</u>	DURING DRILLING <u>5.9</u>	G.S. ELEV. <u>8.67</u>
DRILLING FIRM <u>Hardin and Huber, Inc.</u>	WELL LEVEL <u>2.24 FT-MSL (01-20-93)</u>	CASING ELEV. _____
DRILLING METHOD <u>Hollow Stem Auger</u>	NORTHING <u>686873.23</u>	START DATE <u>12/08/92</u>
LOGGED BY <u>Don Wendt</u>	EASTING <u>2173483.43</u>	FINISH DATE <u>12/08/92</u>

DEPTH	S.S. SAMPLE RECOVERY	BLOWS/6in.	FID (ppm)	SAMPLE DEPTH AND ID	MATERIAL DESCRIPTION	TOTAL/HEX CHROMIUM (PPM)	SYMBOL	WELL DIAGRAM	DEPTH
5	1.8	5	0.2	No Sample	No Sample		+	<p>2" Sch. 40 PVC</p> <p>0.01 slotted 2" PVC Screen</p> <p>grout</p> <p>Bentonite seal</p> <p>#00M Marie Sand</p>	5
		4		No Sample	No Sample		+		
		5		No Sample	No Sample		+		
		8		1560M04001	Brown coarse to fine SAND, little coarse to fine Gravel, trace Coal, trace red Brick, moist. (SP/FILL)		+		
				1560M04002	Yellow brown coarse to fine SAND, little coarse to fine Gravel, wet. (SP/FILL)		+		
				No Sample	No Sample		+		
10	1.7	2	0	1560M04003	Red brown coarse to fine SAND, some coarse to fine Gravel, trace Wood, wet. (SP/FILL)	8.5/7.1 UJ	+		10
		3		1560M04004	Gray coarse to fine SAND, trace coarse to fine Gravel, wet. (SP/FILL)	9.8/5.9 UJ	+		
		7		No Sample	No Sample		+		
		9		No Sample	No Sample		+		
15	1.9	12	0.4	1560M04005	Olive gray/red brown medium to fine SAND, trace Silt, wet. (SW)	11/8.0 UJ	+		15
		13		1560M04008	Light brown/dark gray MEADOW MAT, and CLAY and SILT, moist.	17/9.3 UJ	+		
		7			End of Boring at 18.0 ft.		+		

NOTES:
 1. Depths and Elevations in feet unless otherwise noted
 2. USCS Classification based on visual-manual procedures
 3. Blow counts based on 3 inch split-spoon

Sheet 1 of 1

PPG 0143 1280

CONFIDENTIAL - PPG(N.J.)

PPGNJC0102186

The Form A for well MW-5 could not be located.

ICF KAISER ENGINEERS

BORING LOG

PROJECT NAME <u>PPG Non-Residential Chrome Sites</u>	WATER LEVELS RELATIVE TO G.SURFACE	BORING NO. <u>PPGI-M05</u>
PROJECT LOCATION <u>Site 158, Jersey city</u>	DURING DRILLING _____	G.S. ELEV. <u>8.20</u>
DRILLING FIRM <u>Hardin and Huber Inc.</u>	WELL LEVEL <u>3.88 FT-MSL 01/20/93</u>	CASING ELEV. _____
DRILLING METHOD <u>Hollow Stem Auger</u>	NORTHING <u>687199.97</u>	START DATE <u>12/11/92</u>
LOGGED BY <u>D. Wendt</u>	EASTING <u>2173268.38</u>	FINISH DATE <u>12/11/92</u>

DEPTH	S.S. SAMPLE RECOVERY	BLOWS/6in.	FIID (ppm)	SAMPLE DEPTH AND ID	MATERIAL DESCRIPTION	TOTAL/HEX CHROMIUM (PPM)	SYMBOL	WELL DIAGRAM	DEPTH
					Not sampled				
5				1580M05001	Gray brown coarse to fine SAND and GRAVEL, wet. (FILL)				5
0.8	38	0							
10				1580M05002	Red brown coarse to fine SAND, some Gravel, little Chrome Nodules, wet.	4720			10
10				1580M05003	Gray coarse to fine SAND, little coarse to fine Gravel, little blue green staining, wet. (SW)	128			10
10				1580M05004	Olive gray medium to fine SAND, little Silt, wet. (SW)				10
0.5	4	0.8		1580M05005	Red brown medium to fine SAND, little Silt, wet. (SW)	12.8			10
15				1580M05008	Light brown/dark gray MEADOW MAT and SILT and CLAY, moist.				15
15					Bottom of boring at 18.0 ft.				15

NOTES:
 1. Depths and Elevations in feet unless otherwise noted
 2. USCS Classification based on visual-manual procedures
 3. Blow counts based on 3 inch split-spoon

Sheet 1 of 1

CONFIDENTIAL - PPG(N.J.)

PPG 0143 1281

PPGNJC0102187



New Jersey Department of Environmental Protection
Site Remediation Program

**MONITORING WELL CERTIFICATION FORM A - AS-BUILT
CERTIFICATION**

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hudson County Chromate 156

List all AKAs: HCC Site 156; Metropolis Towers; Gregory Park Apartments; 270 Henderson St.; 280 Gregory Park Plaza

Street Address: 270-280 Luis Munoz Marin Blvd (aka 270-280 Henderson Street)

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07302

Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner PPG

2. Well Location (Street Address) 280 Luis Munoz Marin Blvd

3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

- | | |
|--|--------------------------|
| 1. Well Permit Number (This number must be permanently affixed to the well casing):... | <u>E201604598</u> |
| 2. Site Well Number as shown on application or plans): | <u>MW-1R</u> |
| 3. Well Completion Date: | <u>4/21/2016</u> |
| 4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): | <u>0.57 feet</u> |
| 5. Total Depth of Well to the nearest ½ foot: | <u>15.5 feet</u> |
| 6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):..... | <u>9.93 feet</u> |
| 7. Screen Length (or length of open hole) in feet: | <u>5 feet</u> |
| 8. Screen or Slot Size: | <u>010</u> |
| 9. Screen or Slot Material: | <u>PVC</u> |
| 10. Casing Material (PVC, steel, or other – specify): | <u>PVC</u> |
| 11. Casing Diameter (inches): | <u>2</u> |
| 12. Static Water Level from top of casing at the time of installation (nearest 0.01'): | <u>5.50</u> |
| 13. Yield (gallons per minute): | <u>2</u> |
| 14. Development Technique (specify): | <u>pump and surge</u> |
| 15. Length of Time well is developed/pumped or bailed (hours and minutes): | <u>0 hour 45 minutes</u> |



New Jersey Department of Environmental Protection
Site Remediation Program

**MONITORING WELL CERTIFICATION FORM A - AS-BUILT
CERTIFICATION**

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hudson County Chromate 156

List all AKAs: HCC Site 156; Metropolis Towers; Gregory Park Apartments; 270 Henderson St.; 280 Gregory Park Plaza

Street Address: 270-280 Luis Munoz Marin Blvd (aka 270-280 Henderson Street)

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07302

Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner PPG

2. Well Location (Street Address) 280 Luis Munoz Marin Blvd

3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

- | | |
|--|-------------------------|
| 1. Well Permit Number (This number must be permanently affixed to the well casing):... | <u>E201604599</u> |
| 2. Site Well Number as shown on application or plans): | <u>MW-5R</u> |
| 3. Well Completion Date: | <u>4/22/2016</u> |
| 4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): | <u>0.75 feet</u> |
| 5. Total Depth of Well to the nearest ½ foot: | <u>15 feet</u> |
| 6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):..... | <u>2.35 feet</u> |
| 7. Screen Length (or length of open hole) in feet: | <u>5 feet</u> |
| 8. Screen or Slot Size: | <u>010</u> |
| 9. Screen or Slot Material: | <u>PVC</u> |
| 10. Casing Material (PVC, steel, or other – specify): | <u>PVC</u> |
| 11. Casing Diameter (inches): | <u>2</u> |
| 12. Static Water Level from top of casing at the time of installation (nearest 0.01'): | <u>4.70</u> |
| 13. Yield (gallons per minute): | <u>1.5</u> |
| 14. Development Technique (specify): | <u>pump and surge</u> |
| 15. Length of Time well is developed/pumped or bailed (hours and minutes): | <u>1 hour 0 minutes</u> |



New Jersey Department of Environmental Protection
Site Remediation Program

**MONITORING WELL CERTIFICATION FORM A - AS-BUILT
CERTIFICATION**

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hudson County Chromate 156

List all AKAs: HCC Site 156; Metropolis Towers; Gregory Park Apartments; 270 Henderson St.; 280 Gregory Park Plaza

Street Address: 270-280 Luis Munoz Marin Blvd (aka 270-280 Henderson Street)

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07302

Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner PPG

2. Well Location (Street Address) 280 Luis Munoz Marin Blvd

3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

- | | |
|--|-------------------------|
| 1. Well Permit Number (This number must be permanently affixed to the well casing):... | <u>E201604281</u> |
| 2. Site Well Number as shown on application or plans): | <u>MW-6</u> |
| 3. Well Completion Date: | <u>4/14/2016</u> |
| 4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): | <u>0.98 feet</u> |
| 5. Total Depth of Well to the nearest ½ foot: | <u>14 feet</u> |
| 6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):..... | <u>8.02 feet</u> |
| 7. Screen Length (or length of open hole) in feet: | <u>5 feet</u> |
| 8. Screen or Slot Size: | <u>010</u> |
| 9. Screen or Slot Material: | <u>PVC</u> |
| 10. Casing Material (PVC, steel, or other – specify): | <u>PVC</u> |
| 11. Casing Diameter (inches): | <u>2</u> |
| 12. Static Water Level from top of casing at the time of installation (nearest 0.01'): | <u>4.94</u> |
| 13. Yield (gallons per minute): | <u>1.5</u> |
| 14. Development Technique (specify): | <u>pump and surge</u> |
| 15. Length of Time well is developed/pumped or bailed (hours and minutes): | <u>1 hour 0 minutes</u> |



New Jersey Department of Environmental Protection
Site Remediation Program

**MONITORING WELL CERTIFICATION FORM A - AS-BUILT
CERTIFICATION**

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hudson County Chromate 156

List all AKAs: HCC Site 156; Metropolis Towers; Gregory Park Apartments; 270 Henderson St.; 280 Gregory Park Plaza

Street Address: 270-280 Luis Munoz Marin Blvd (aka 270-280 Henderson Street)

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07302

Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner PPG

2. Well Location (Street Address) 280 Luis Munoz Marin Blvd

3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

- | | |
|--|--------------------------|
| 1. Well Permit Number (This number must be permanently affixed to the well casing):... | <u>E201604282</u> |
| 2. Site Well Number as shown on application or plans): | <u>MW-7</u> |
| 3. Well Completion Date: | <u>4/15/2016</u> |
| 4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): | <u>0.62 feet</u> |
| 5. Total Depth of Well to the nearest ½ foot: | <u>16 feet</u> |
| 6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):..... | <u>10.38 feet</u> |
| 7. Screen Length (or length of open hole) in feet: | <u>5 feet</u> |
| 8. Screen or Slot Size: | <u>010</u> |
| 9. Screen or Slot Material: | <u>PVC</u> |
| 10. Casing Material (PVC, steel, or other – specify): | <u>PVC</u> |
| 11. Casing Diameter (inches): | <u>2</u> |
| 12. Static Water Level from top of casing at the time of installation (nearest 0.01'): | <u>6.00</u> |
| 13. Yield (gallons per minute): | <u>2.9</u> |
| 14. Development Technique (specify): | <u>pump and surge</u> |
| 15. Length of Time well is developed/pumped or bailed (hours and minutes): | <u>0 hour 50 minutes</u> |



New Jersey Department of Environmental Protection
Site Remediation Program

**MONITORING WELL CERTIFICATION FORM A - AS-BUILT
CERTIFICATION**

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hudson County Chromate 156

List all AKAs: HCC Site 156; Metropolis Towers; Gregory Park Apartments; 270 Henderson St.; 280 Gregory Park Plaza

Street Address: 270-280 Luis Munoz Marin Blvd (aka 270-280 Henderson Street)

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07302

Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner PPG

2. Well Location (Street Address) 280 Luis Munoz Marin Blvd

3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

- | | |
|--|--------------------------|
| 1. Well Permit Number (This number must be permanently affixed to the well casing):... | <u>E201604283</u> |
| 2. Site Well Number as shown on application or plans): | <u>MW-8</u> |
| 3. Well Completion Date: | <u>4/15/2016</u> |
| 4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): | <u>0.4 feet</u> |
| 5. Total Depth of Well to the nearest ½ foot: | <u>16.5 feet</u> |
| 6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):..... | <u>11.10 feet</u> |
| 7. Screen Length (or length of open hole) in feet: | <u>5 feet</u> |
| 8. Screen or Slot Size: | <u>010</u> |
| 9. Screen or Slot Material: | <u>PVC</u> |
| 10. Casing Material (PVC, steel, or other – specify): | <u>PVC</u> |
| 11. Casing Diameter (inches): | <u>2</u> |
| 12. Static Water Level from top of casing at the time of installation (nearest 0.01'): | <u>4.34</u> |
| 13. Yield (gallons per minute): | <u>1.5</u> |
| 14. Development Technique (specify): | <u>pump and surge</u> |
| 15. Length of Time well is developed/pumped or bailed (hours and minutes): | <u>0 hour 50 minutes</u> |



New Jersey Department of Environmental Protection
Site Remediation Program

**MONITORING WELL CERTIFICATION FORM A - AS-BUILT
CERTIFICATION**

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hudson County Chromate 156

List all AKAs: HCC Site 156; Metropolis Towers; Gregory Park Apartments; 270 Henderson St.; 280 Gregory Park Plaza

Street Address: 270-280 Luis Munoz Marin Blvd (aka 270-280 Henderson Street)

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07302

Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner PPG

2. Well Location (Street Address) 270 Luis Munoz Marin Blvd

3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 2

SECTION C. WELL LOCATION SPECIFICS

- | | |
|--|----------------------|
| 1. Well Permit Number (This number must be permanently affixed to the well casing):... | <u>E201612502</u> |
| 2. Site Well Number as shown on application or plans): | <u>MW-8R</u> |
| 3. Well Completion Date: | <u>10/26/2016</u> |
| 4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): | <u>NOT SURVEYED</u> |
| 5. Total Depth of Well to the nearest ½ foot: | <u>16.0 feet</u> |
| 6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):..... | <u>11.1 feet</u> |
| 7. Screen Length (or length of open hole) in feet: | <u>5 feet</u> |
| 8. Screen or Slot Size: | <u>10</u> |
| 9. Screen or Slot Material: | <u>PVC</u> |
| 10. Casing Material (PVC, steel, or other – specify): | <u>PVC</u> |
| 11. Casing Diameter (inches): | <u>2 inches</u> |
| 12. Static Water Level from top of casing at the time of installation (nearest 0.01'): | <u>NOT GAUGED</u> |
| 13. Yield (gallons per minute): | <u>0.188</u> |
| 14. Development Techinque (specify): | <u>NOT DEVELOPED</u> |
| 15. Length of Time well is developed/pumped or bailed (hours and minutes): | <u>NOT DEVELOPED</u> |



New Jersey Department of Environmental Protection
Site Remediation Program

**MONITORING WELL CERTIFICATION FORM A - AS-BUILT
CERTIFICATION**

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hudson County Chromate 156

List all AKAs: HCC Site 156; Metropolis Towers; Gregory Park Apartments; 270 Henderson St.; 280 Gregory Park Plaza

Street Address: 270-280 Luis Munoz Marin Blvd (aka 270-280 Henderson Street)

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07302

Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner PPG

2. Well Location (Street Address) 280 Luis Munoz Marin Blvd

3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

- | | |
|--|--------------------------|
| 1. Well Permit Number (This number must be permanently affixed to the well casing):... | <u>E201604284</u> |
| 2. Site Well Number as shown on application or plans): | <u>MW-9</u> |
| 3. Well Completion Date: | <u>4/21/2016</u> |
| 4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): | <u>0.53 feet</u> |
| 5. Total Depth of Well to the nearest ½ foot: | <u>15 feet</u> |
| 6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):..... | <u>9.47 feet</u> |
| 7. Screen Length (or length of open hole) in feet: | <u>5 feet</u> |
| 8. Screen or Slot Size: | <u>010</u> |
| 9. Screen or Slot Material: | <u>PVC</u> |
| 10. Casing Material (PVC, steel, or other – specify): | <u>PVC</u> |
| 11. Casing Diameter (inches): | <u>2</u> |
| 12. Static Water Level from top of casing at the time of installation (nearest 0.01'): | <u>5.40</u> |
| 13. Yield (gallons per minute): | <u>0.06</u> |
| 14. Development Technique (specify): | <u>pump and surge</u> |
| 15. Length of Time well is developed/pumped or bailed (hours and minutes): | <u>0 hour 35 minutes</u> |



New Jersey Department of Environmental Protection
Site Remediation Program

**MONITORING WELL CERTIFICATION FORM A - AS-BUILT
CERTIFICATION**

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Hudson County Chromate 156

List all AKAs: HCC Site 156; Metropolis Towers; Gregory Park Apartments; 270 Henderson St.; 280 Gregory Park Plaza

Street Address: 270-280 Luis Munoz Marin Blvd (aka 270-280 Henderson Street)

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07302

Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner PPG

2. Well Location (Street Address) 270 Luis Munoz Marin Blvd

3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 2

SECTION C. WELL LOCATION SPECIFICS

- | | |
|--|-------------------------|
| 1. Well Permit Number (This number must be permanently affixed to the well casing):.. | <u>E201603654</u> |
| 2. Site Well Number as shown on application or plans): | <u>MW-10</u> |
| 3. Well Completion Date: | <u>4/8/2016</u> |
| 4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): | <u>0.18 feet</u> |
| 5. Total Depth of Well to the nearest ½ foot: | <u>7 feet</u> |
| 6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):..... | <u>1.82 feet</u> |
| 7. Screen Length (or length of open hole) in feet: | <u>5 feet</u> |
| 8. Screen or Slot Size: | <u>10</u> |
| 9. Screen or Slot Material: | <u>PVC</u> |
| 10. Casing Material (PVC, steel, or other – specify): | <u>PVC</u> |
| 11. Casing Diameter (inches): | <u>1.5</u> |
| 12. Static Water Level from top of casing at the time of installation (nearest 0.01'): | <u>4.00</u> |
| 13. Yield (gallons per minute): | <u>0.188</u> |
| 14. Development Technique (specify): | <u>pump and surge</u> |
| 15. Length of Time well is developed/pumped or bailed (hours and minutes): | <u>1 hour 0 minutes</u> |



New Jersey Department of Environmental Protection
Site Remediation Program

**MONITORING WELL CERTIFICATION FORM A - AS-BUILT
CERTIFICATION**

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Site 156

List all AKAs: Former PPG

Street Address: 280 Gregory Park Plaza

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07302

Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Alki Antonopoulos / Metropolis Towers Apt. Corp. Mgmt.

2. Well Location (Street Address) 280 Gregory Park Plaza

3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):... E201712247
2. Site Well Number as shown on application or plans): 156-MW8A
3. Well Completion Date: 11/3/2017
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): 0.32 feet
5. Total Depth of Well to the nearest ½ foot: 13.0 feet
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):..... 8.00 feet
7. Screen Length (or length of open hole) in feet: 5.0 feet
8. Screen or Slot Size: 0.010 (10 slot)
9. Screen or Slot Material: PVC
10. Casing Material (PVC, steel, or other – specify): PVC
11. Casing Diameter (inches): 2
12. Static Water Level from top of casing at the time of installation (nearest 0.01'): 9.0
13. Yield (gallons per minute): N/A
14. Development Technique (specify): Pump / Surge
15. Length of Time well is developed/pumped or bailed (hours and minutes): 3 hours



New Jersey Department of Environmental Protection
Site Remediation Program

**MONITORING WELL CERTIFICATION FORM A - AS-BUILT
CERTIFICATION**

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Site 156

List all AKAs: Former PPG

Street Address: 280 Gregory Park Plaza

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07302

Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Alki Antonopoulos / Metropolis Towers Apt. Corp. Mgmt.

2. Well Location (Street Address) 280 Gregory Park Plaza

3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):... E201712248
2. Site Well Number as shown on application or plans): 156-MW8B
3. Well Completion Date: 11/3/2017
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): 0.53 feet
5. Total Depth of Well to the nearest ½ foot: 25.0 feet
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):..... 20.0 feet
7. Screen Length (or length of open hole) in feet: 5 feet
8. Screen or Slot Size: 0.010 (10-slot)
9. Screen or Slot Material: PVC
10. Casing Material (PVC, steel, or other – specify): Steel (outer), PVC (inner)
11. Casing Diameter (inches): 8 (outer), 2 (inner)
12. Static Water Level from top of casing at the time of installation (nearest 0.01'): 16.0
13. Yield (gallons per minute): N/A
14. Development Technique (specify): Pump / Surge
15. Length of Time well is developed/pumped or bailed (hours and minutes): 4 hours

Form Bs

Note: Form Bs were not located for the wells installed in 1992 (MW-1, MW-2, MW-3, MW-4, and MW-5). A Form B was not prepared for well MW-8R because the well was not surveyed.



New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Metropolis Towers
List all AKAs: Former PPG
Street Address: 280 Marin Blvd.
Municipality: Jersey City (Township, Borough or City)
County: Hudson Zip Code: 07302
Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Metropolis Towers Apt. Mgmt.
2. Well Location (Street Address) 280 Marin Blvd.
3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201604598
2. Site Well Number (As shown on application or plans): MW-1R
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
Latitude: North 40-43-06.58 Longitude: West 74-02-26.52
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
North 686976 East 619432
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 5.74
Elevation Top of Outer casing: 6.30 Elevation of ground: 6.31
Check one: ☒ NAVD 88 ☐ NVDG29 ☐ On Site Datum ☐ Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
GPS Control using Keynet VRS solution NAVD88
7. Significant observations and notes:

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: R. Thomas Hugg Date 5/29/16
Surveyor's Name: R. Thomas Hugg License Number: 24GS03673700
Firm Name: Maser Consulting P.A. Certificate of Authorization #: 24GA27986500
Mailing Address 156 Stagecoach Road
City/Town: Marmora State New Jersey Zip Code: 08223
Phone Number 609-390-1927 Ext.: 4419 Fax: 609-390-0040



New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Metropolis Towers

List all AKAs: Former PPG

Street Address: 280 Marin Blvd.

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07302

Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Metropolis Towers Apt. Mgmt.

2. Well Location (Street Address) 280 Marin Blvd.

3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201604599

2. Site Well Number (As shown on application or plans): MW-5R

3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:

Latitude: North 40-43-05.98

Longitude: West 74-02-28.32

4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:

North 686914

East 619294

5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 6.18

Elevation Top of Outer casing: 6.92

Elevation of ground: 6.93

Check one: ☒ NAVD 88 ☐ NVDG29 ☐ On Site Datum ☐ Other

6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).

GPS Control using Keynet VRS solution NAVD88

7. Significant observations and notes:

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SEAL

Professional Land Surveyor's Signature: R. Thomas Hugg

Date 5/24/16

Surveyor's Name: R. Thomas Hugg

License Number: 24GS03673700

Firm Name: Maser Consulting P.A.

Certificate of Authorization #: 24GA27986500

Mailing Address 156 Stagecoach Road

City/Town: Marmora

State

New Jersey

Zip Code: 08223

Phone Number 609-390-1927

Ext.: 4419

Fax: 609-390-0040



New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Metropolis Towers

List all AKAs: Former PPG

Street Address: 280 Marin Blvd.

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07302

Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Metropolis Towers Apt. Mgmt.

2. Well Location (Street Address) 280 Marin Blvd.

3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201604281

2. Site Well Number (As shown on application or plans): MW-6

3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:

Latitude: North 40-43-04.25 Longitude: West 74-02-30.71

4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:

North 686739 East 619111

5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 4.54

Elevation Top of Outer casing: 5.52 Elevation of ground: 5.52

Check one: ☒ NAVD 88 ☐ NVGD29 ☐ On Site Datum ☐ Other

6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).

GPS Control using Keynet VRS solution NAVD88

7. Significant observations and notes:

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SEAL

Professional Land Surveyor's Signature: R. Thomas Hugg

Date 5/24/16

Surveyor's Name: R. Thomas Hugg

License Number: 24GS03673700

Firm Name: Maser Consulting P.A.

Certificate of Authorization #: 24GA27986500

Mailing Address 156 Stagecoach Road

City/Town: Marmora State New Jersey Zip Code: 08223

Phone Number 609-390-1927 Ext.: 4419 Fax: 609-390-0040



New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Metropolis Towers
List all AKAs: Former PPG
Street Address: 280 Marin Blvd.
Municipality: Jersey City (Township, Borough or City)
County: Hudson Zip Code: 07302
Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Metropolis Towers Apt. Mgmt.
2. Well Location (Street Address) 280 Marin Blvd.
3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201604282
2. Site Well Number (As shown on application or plans): MW-7
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
Latitude: North 40-43-04.89 Longitude: West 74-02-27.08
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
North 686805 East 619390
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 7.29
Elevation Top of Outer casing: 7.89 Elevation of ground: 7.91
Check one: ☒ NAVD 88 ☐ NVDG29 ☐ On Site Datum ☐ Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
GPS Control using Keynet VRS solution NAVD88
7. Significant observations and notes:

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SEAL

Professional Land Surveyor's Signature: R. Thomas Hugg Date: 5/24/16
Surveyor's Name: R. Thomas Hugg License Number: 24GS03673700
Firm Name: Maser Consulting P.A. Certificate of Authorization #: 24GA27986500
Mailing Address: 156 Stagecoach Road
City/Town: Marmora State: New Jersey Zip Code: 08223
Phone Number: 609-390-1927 Ext.: 4419 Fax: 609-390-0040



New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Metropolis Towers

List all AKAs: Former PPG

Street Address: 280 Marin Blvd.

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07302

Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Metropolis Towers Apt. Mgmt.

2. Well Location (Street Address) 280 Marin Blvd.

3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201604283

2. Site Well Number (As shown on application or plans): MW-8

3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:

Latitude: North 40-43-03.93

Longitude: West 74-02-28.25

4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:

North 686707

East 619300

5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 5.59

Elevation Top of Outer casing: 5.99

Elevation of ground: 5.99

Check one: ☒ NAVD 88 ☐ NVDG29 ☐ On Site Datum ☐ Other

6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).

GPS Control using Keynet VRS solution NAVD88

7. Significant observations and notes:

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SEAL

Professional Land Surveyor's Signature: R. Thomas Hugg

Date 5/24/16

Surveyor's Name: R. Thomas Hugg

License Number: 24GS03673700

Firm Name: Maser Consulting P.A.

Certificate of Authorization #: 24GA27986500

Mailing Address 156 Stagecoach Road

City/Town: Marmora

State

New Jersey

Zip Code: 08223

Phone Number 609-390-1927

Ext.: 4419

Fax: 609-390-0040



New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Metropolis Towers
List all AKAs: Former PPG
Street Address: 280 Marin Blvd.
Municipality: Jersey City (Township, Borough or City)
County: Hudson Zip Code: 07302
Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Metropolis Towers Apt. Mgmt.
2. Well Location (Street Address) 280 Marin Blvd.
3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201604284
2. Site Well Number (As shown on application or plans): MW-9
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
Latitude: North 40-43-06.60 Longitude: West 74-02-29.64
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
North 686977 East 619192
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 6.18
Elevation Top of Outer casing: 6.69 Elevation of ground: 6.71
Check one: ☒ NAVD 88 ☐ NVDG29 ☐ On Site Datum ☐ Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
GPS Control using Keynet VRS solution NAVD88
7. Significant observations and notes:

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Professional Land Surveyor's Signature: R. Thomas Hugg Date 5/29/16
Surveyor's Name: R. Thomas Hugg License Number: 24GS03673700
Firm Name: Maser Consulting P.A. Certificate of Authorization #: 24GA27986500
Mailing Address 156 Stagecoach Road
City/Town: Marmora State New Jersey Zip Code: 08223
Phone Number 609-390-1927 Ext.: 4419 Fax: 609-390-0040



New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Metropolis Towers
List all AKAs: Former PPG
Street Address: 280 Marin Blvd.
Municipality: Jersey City (Township, Borough or City)
County: Hudson Zip Code: 07302
Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Metropolis Towers Apt. Mgmt.
2. Well Location (Street Address) 280 Marin Blvd.
3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201603654
2. Site Well Number (As shown on application or plans): MW-10
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
Latitude: North 40-43-04.64 Longitude: West 74-02-24.83
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
North 686780 East 619564
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 5.47
Elevation Top of Outer casing: 5.63 Elevation of ground: 5.65
Check one: ☒ NAVD 88 ☐ NVDG29 ☐ On Site Datum ☐ Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
GPS Control using Keynet VRS solution NAVD88
7. Significant observations and notes:

SECTION D. LAND SURVEYOR'S CERTIFICATION

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SEAL

Professional Land Surveyor's Signature: R. Thomas Hugg Date 5/29/16
Surveyor's Name: R. Thomas Hugg License Number: 24GS03673700
Firm Name: Maser Consulting P.A. Certificate of Authorization #: 24GA27986500
Mailing Address 156 Stagecoach Road
City/Town: Marmora State New Jersey Zip Code: 08223
Phone Number 609-390-1927 Ext.: 4419 Fax: 609-390-0040



New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Site 156
List all AKAs: Former PPG
Street Address: 280 Gregory Park Plaza
Municipality: Jersey City (Township, Borough or City)
County: Hudson Zip Code: 07302
Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Alki Antonopoulos / Metropolis Towers Apt. Corp. Mgmt.
2. Well Location (Street Address) 280 Gregory Park Plaza
3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201712247
2. Site Well Number (As shown on application or plans): 156-MW8A
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
Latitude: North 40-43-03.96 Longitude: West 74-02-28.27
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
North 686710 East 619299
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 5.53
Elevation Top of Outer casing: 5.82 Elevation of ground: 5.85
Check one: ☒ NAVD 88 ☐ NVGD29 ☐ On Site Datum ☐ Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
GPS Control using Keynet VRS solution NAVD88
7. Significant observations and notes:

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SEAL

Professional Land Surveyor's Signature: R. Thomas Hugg Date 12/27/17
Surveyor's Name: R. Thomas Hugg License Number: 24GS03673700
Firm Name: Maser Consulting P.A. Certificate of Authorization #: 24GA27986500
Mailing Address 500 Scarborough Drive, Suite 108
City/Town: Egg Harbor Twp. State New Jersey Zip Code: 08234
Phone Number 609-390-1927 Ext.: 4419 Fax: 609-390-0040



New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Site 156

List all AKAs: Former PPG

Street Address: 280 Gregory Park Plaza

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07302

Program Interest (PI) Number(s): G000008770 Case Tracking Number(s): 104063

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Alki Antonopoulos / Metropolis Towers Apt. Corp. Mgmt.

2. Well Location (Street Address) 280 Gregory Park Plaza

3. Well Location (Municipal Block and Lot) Block# 13101 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201712248

2. Site Well Number (As shown on application or plans): 156-MW8B

3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:

Latitude: North 40-43-03.91

Longitude: West 74-02-28.29

4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:

North 686705

East 619298

5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 5.12

Elevation Top of Outer casing: 5.63 Elevation of ground: 5.65

Check one: ☒ NAVD 88 ☐ NVGD29 ☐ On Site Datum ☐ Other

6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).

GPS Control using Keynet VRS solution NAVD88

7. Significant observations and notes:

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Professional Land Surveyor's Signature: R. Thomas Hugg

Date 12/27/17

Surveyor's Name: R. Thomas Hugg

License Number: 24GS03673700

Firm Name: Maser Consulting P.A.

Certificate of Authorization #: 24GA27986500

Mailing Address 500 Scarborough Drive, Suite 108

City/Town: Egg Harbor Twp. State New Jersey Zip Code: 08234

Phone Number 609-390-1927 Ext.: 4419 Fax: 609-390-0040

Well Records

Note: Well Records were not located for the wells installed in 1992 (MW-1, MW-2, MW-3, MW-4, and MW-5). Well record information from New Jersey Department of Environmental Protection's DataMiner is provided for these wells.

Download PDF	Permit Number	Well Name	Well Use	Document	Date (Permitted/ Drilled/ Sealed)	Physical Address	County	Municipality	Block	Lot	Location Method	Easting (X)	Northing (Y)	Depth	Capacity (gal/min)
	2600031329	MW-1	Monitoring	Record	12/7/1992	280 MARIN BLVD	Hudson	Jersey City	170	4	Prop Loc - Dig Image	619026	686345	17.4	0
	2600031323	MW-2	Monitoring	Record	12/7/1992	280 MARIN BLVD	Hudson	Jersey City	170	1	Prop Loc - Dig Image	619026	686345	18	0
	2600031325	MW-3	Monitoring	Record	12/9/1992	280 MARIN BLVD	Hudson	Jersey City	170	1	Prop Loc - Dig Image	619026	686345	13	0
	2600031324	MW-4	Monitoring	Record	12/8/1992	280 MARIN BLVD	Hudson	Jersey City	170	1	Prop Loc - Dig Image	619026	686345	15	0
	2600031839	MW5	Monitoring	Record	12/9/1992	280 HENDERSON STREET	Hudson	Jersey City	170	1	Prop Loc - Hard Copy	618496	689682	13	

MONITORING WELL RECORD

PROPERTY OWNER: METROPOLIS TOWERS APT MGMT METROPOLIS TOWERS APT MGMT

Company/Organization: Metropolis Towers Apt Mgmt

Address: 280 Gregory Park Plaza Jersey City, New Jersey 07302

WELL LOCATION: Frmr PPG

Address: 280 Marin Blvd Address ok, please process as is

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619432 Northing (Y): 686976
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: April 21, 2016

DATE WELL COMPLETED: April 21, 2016

WELL USE: MONITORING

Other Use(s): _____

Local ID: MW-1R

WELL CONSTRUCTION

Total Depth Drilled (ft.): 15.5 Finished Well Depth (ft.): 15.5 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	15.5	6		
Casing	0	10.5	2	PVC	sch 40
Screen	10.5	15.5	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in.)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	6.5	6	2	10	188	16
Gravel Pack	6.5	7.5	6	2	00 sand		
Gravel Pack	7.5	15.5	6	2	01 sand		

Grouting Method: Pressure method (Tremie Pipe)

Drilling Method: Direct Push Probe

ADDITIONAL INFORMATION

Protective Casing: Yes

Static Water Level: 6 ft. below land surface

Water Level Measure Tool: tape

Well Development Period: .5 hrs.

Method of Development: pump

Pump Type: _____

Pump Capacity: gpm

Total Design Head: ft.

Drilling Fluid: _____

Drill Rig: Geoprobe 7822

Health and Safety Plan Submitted? No

ATTACHMENTS:

GEOLOGIC LOG

0 - 10: grey GM - Silty gravels, gravel-sand-silt mixtures

10 - 15.5: grey-black SM - Silty sands, sand-silt mixtures some peat

ADDITIONAL INFORMATION:

Driller of Record: Craig Jablonski,
JOURNEYMAN LICENSE # 0001320

Company: ADVANCED DRILLING INC

MONITORING WELL RECORD

PROPERTY OWNER: METROPOLIS TOWERS APT MGMT METROPOLIS TOWERS APT MGMT

Company/Organization: Metropolis Towers Apt Mgmt

Address: 280 Gregory Park Plaza Jersey City, New Jersey 07302

WELL LOCATION: Frmr PPG

Address: 280 Marin Blvd Address ok please process as is

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619294 Northing (Y): 686914
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: April 21, 2016

DATE WELL COMPLETED: April 22, 2016

WELL USE: MONITORING

Other Use(s): _____

Local ID: MW-5R

WELL CONSTRUCTION

Total Depth Drilled (ft.): 15 Finished Well Depth (ft.): 15 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	15	6		
Casing	0	10	2	PVC	sch 40
Screen	10	15	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in.)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	7	6	2	10	188	16
Gravel Pack	7	8	6	2	00 sand		
Gravel Pack	8	15	6	2	01 sand		

Grouting Method: Pressure method (Tremie Pipe)

Drilling Method: Direct Push Probe

ADDITIONAL INFORMATION

Protective Casing: Yes

Static Water Level: 6 ft. below land surface

Water Level Measure Tool: tape

Well Development Period: .5 hrs.

Method of Development: pump

Pump Type: _____

Pump Capacity: gpm

Total Design Head: ft.

Drilling Fluid: _____

Drill Rig: Geoprobe 7822

Health and Safety Plan Submitted? No

ATTACHMENTS:

GEOLOGIC LOG

0 - 10: brown GW - Well-graded gravels and gravel-sand mixtures, little or no fines

10 - 15: grey-black GM - Silty gravels, gravel-sand-silt mixtures

ADDITIONAL INFORMATION:

Driller of Record: Craig Jablonski,
JOURNEYMAN LICENSE # 0001320

Company: ADVANCED DRILLING INC

MONITORING WELL RECORD

PROPERTY OWNER: METROPOLIS TOWERS APT CORP MGMT METROPOLIS TOWERS APT CORP MGMT

Company/Organization: Metropolis Towers Apt Corp Mgmt

Address: 280 Gregory Park Plaza Jersey City, New Jersey 07302

WELL LOCATION: Frmr PPG

Address: 280 Marin Blvd

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619111 Northing (Y): 686739
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: April 14, 2016

DATE WELL COMPLETED: April 14, 2016

WELL USE: MONITORING

Other Use(s): _____

Local ID: MW-6

WELL CONSTRUCTION

Total Depth Drilled (ft.): 14 Finished Well Depth (ft.): 14 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	14	6		
Casing	0	9	2	PVC	sch 40
Screen	9	14	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in.)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	7	6	2	10	188	16
Gravel Pack	7	8	6	2	00 sand		
Gravel Pack	8	14	6	2	01 sand		

Grouting Method: Pressure method (Tremie Pipe)

Drilling Method: Direct Push Probe

ADDITIONAL INFORMATION

Protective Casing: Yes

Static Water Level: 10 ft. below land surface

Water Level Measure Tool: tape

Well Development Period: .5 hrs.

Method of Development: pump

Pump Type: _____

Pump Capacity: gpm

Total Design Head: ft.

Drilling Fluid: _____

Drill Rig: Geoprobe 7822

Health and Safety Plan Submitted? No

ATTACHMENTS:

GEOLOGIC LOG

0 - 1: black OT - Other asphalt

1 - 12: grey GW - Well-graded gravels and gravel-sand mixtures, little or no fines

12 - 14: grey SW - Well-graded sands and gravelly sands, little or no fines

ADDITIONAL INFORMATION:

Driller of Record: Craig Jablonski,
JOURNEYMAN LICENSE # 0001320

Company: ADVANCED DRILLING INC

MONITORING WELL RECORD

PROPERTY OWNER: METROPOLIS TOWERS APT CORP MGMT METROPOLIS TOWERS APT CORP MGMT

Company/Organization: Metropolis Towers Apt Corp Mgmt

Address: 280 Gregory Park Plaza Jersey City, New Jersey 07302

WELL LOCATION: Frmr PPG

Address: 280 Marin Blvd

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619390 Northing (Y): 686805
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: April 15, 2016

DATE WELL COMPLETED: April 15, 2016

WELL USE: MONITORING

Other Use(s): _____

Local ID: MW-7

WELL CONSTRUCTION

Total Depth Drilled (ft.): 16 Finished Well Depth (ft.): 16 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	16	8		
Casing	0	11	2	PVC	sch 40
Screen	11	16	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in.)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	9	8	2	10	188	16
Gravel Pack	9	10	8	2	00 sand		
Gravel Pack	10	16	8	2	01 sand		

Grouting Method: Pressure method (Tremie Pipe)

Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: Yes

Static Water Level: 10 ft. below land surface

Water Level Measure Tool: tape

Well Development Period: .5 hrs.

Method of Development: pump

Pump Type: _____

Pump Capacity: gpm

Total Design Head: ft.

Drilling Fluid: _____

Drill Rig: Geoprobe 7822

Health and Safety Plan Submitted? No

ATTACHMENTS:

GEOLOGIC LOG

0 - 1: black OT - Other asphalt

1 - 10: brown GP - Poorly graded gravels and gravel-sand mixtures, little or no fines

10 - 16: red-brown GW - Well-graded gravels and gravel-sand mixtures, little or no fines bricks, some peat

ADDITIONAL INFORMATION:

Driller of Record: Craig Jablonski,
JOURNEYMAN LICENSE # 0001320

Company: ADVANCED DRILLING INC

MONITORING WELL RECORD

PROPERTY OWNER: METROPOLIS TOWERS APT CORP MGMT METROPOLIS TOWERS APT CORP MGMT

Company/Organization: Metropolis Towers Apt Corp Mgmt

Address: 280 Gregory Park Plaza Jersey City, New Jersey 07302

WELL LOCATION: Frmr PPG

Address: 280 Marin Blvd

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619300 Northing (Y): 686707
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: April 15, 2016

DATE WELL COMPLETED: April 15, 2016

WELL USE: MONITORING

Other Use(s): _____

Local ID: MW-8

WELL CONSTRUCTION

Total Depth Drilled (ft.): 16.5 Finished Well Depth (ft.): 16.5 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	16.5	8		
Casing	0	11.5	2	PVC	sch 40
Screen	11.5	16.5	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in.)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	8	8	2	10	188	16
Gravel Pack	8	9	6	2	00 sand		
Gravel Pack	9	16.5	6	2	01 sand		

Grouting Method: Pressure method (Tremie Pipe)

Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: Yes

Static Water Level: 10 ft. below land surface

Water Level Measure Tool: tape

Well Development Period: .5 hrs.

Method of Development: pump

Pump Type: _____

Pump Capacity: gpm

Total Design Head: ft.

Drilling Fluid: _____

Drill Rig: Geoprobe 7822

Health and Safety Plan Submitted? No

ATTACHMENTS:

GEOLOGIC LOG

0 - 1: black OT - Other asphalt

1 - 10: grey GW - Well-graded gravels and gravel-sand mixtures, little or no fines

10 - 16.5: red-brown SM - Silty sands, sand-silt mixtures bricks, some peat

ADDITIONAL INFORMATION:

Driller of Record: Craig Jablonski,
JOURNEYMAN LICENSE # 0001320

Company: ADVANCED DRILLING INC

MONITORING WELL RECORD

PROPERTY OWNER: ALKI ANTONOPOULIS

Company/Organization: Metropolis Towers Apt. Corp. Mgmt.

Address: 280 Gregory Park Plaza Jersey City, New Jersey 07302

WELL LOCATION: Site 156

Address: 280 Gregory Park Plaza /156- MW8A confirmed by client / 6187

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619299 Northing (Y): 686710
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: November 3, 2017

DATE WELL COMPLETED: November 3, 2017

WELL USE: MONITORING

Other Use(s): _____

Local ID: 156-MW8A

WELL CONSTRUCTION

Total Depth Drilled (ft.): 13 Finished Well Depth (ft.): 13 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	13	8		
Casing	0	8	2	PVC	sch 40
Screen	8	13	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in.)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	6	8	2	10	172	15
Gravel Pack	6	13	8	2	#1 Filpro		

Grouting Method: Pressure method (Tremie Pipe)

Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: Yes

Static Water Level: 9 ft. below land surface

Water Level Measure Tool: m scope

Well Development Period: 3 hrs.

Method of Development: Pump / Surge

Pump Type: _____

Pump Capacity: gpm

Total Design Head: ft.

Drilling Fluid: _____

Drill Rig: CME-75

Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG

0 - 11: Brownish OT - Other Fill

11 - 13: Brownish OL - Organic silts and organic silty clays of low plasticity

ADDITIONAL INFORMATION:

Driller of Record: Nicholas A Fallucca,
MASTER LICENSE # 749523

Company: SGS NORTH AMERICA INC.

MONITORING WELL RECORD

PROPERTY OWNER: ALKI ANTONOPOULIS

Company/Organization: Metropolis Towers Apt. Corp. Mgmt.

Address: 280 Gregory Park Plaza Jersey City, New Jersey 07302

WELL LOCATION: Site 156

Address: 280 Gregory Park Plaza /156- MW8B confirmed by client / 6187

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619298 Northing (Y): 686705
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: November 2, 2017

DATE WELL COMPLETED: November 3, 2017

WELL USE: MONITORING

Other Use(s): _____

Local ID: 156-MW8B

WELL CONSTRUCTION

Total Depth Drilled (ft.): 25 Finished Well Depth (ft.): 25 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	15	12		
Borehole	15	25	7		
Casing	0	20	2	PVC	sch 40
Casing	0	15	8	Steel	sch 40 .322 wall
Screen	20	25	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in.)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	18	7	2	21	388	33
Grout	0	15	12	8	32	575	49
Gravel Pack	18	25	7	2	#1 Filpro		

Grouting Method: Pressure method (Tremie Pipe)

Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: Yes

Static Water Level: 16 ft. below land surface

Water Level Measure Tool: m scope

Well Development Period: 4 hrs.

Method of Development: Pump / Surge

Pump Type: _____

Pump Capacity: gpm

Total Design Head: ft.

Drilling Fluid: _____

Drill Rig: CME-75

Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG

0 - 13: Brownish OT - Other Fill

13 - 15: Brownish OL - Organic silts and organic silty clays of low plasticity

15 - 25: Brownish SC - Clayey sands, sand-clay mixtures

ADDITIONAL INFORMATION:

Driller of Record: Nicholas A Fallucca,
MASTER LICENSE # 749523

Company: SGS NORTH AMERICA INC.

MONITORING WELL RECORD

PROPERTY OWNER: METROPOLIS TOWERS APT. CORP MGMT METROPOLIS TOWERS APT. CORP MGMT

Company/Organization: Metropolis Towers Apt. Corp MGMT

Address: 280 Gregory Park Plaza Jersey City, New Jersey 07302

WELL LOCATION: Metropolis Towers Apt. Corp MGMT

Address: 280 Gregory Park Plaza / MW-8R Address confirmed by client T Hanley

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619314 Northing (Y): 686712
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: October 26, 2016

DATE WELL COMPLETED: October 26, 2016

WELL USE: MONITORING

Other Use(s): _____

Local ID: MW-8R

WELL CONSTRUCTION

Total Depth Drilled (ft.): 16 Finished Well Depth (ft.): 16 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	16	8		
Casing	0	11	2	PVC	sch 40
Screen	11	16	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in.)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	9	8	2	14	259	22
Gravel Pack	9	16	8	2	#1 Filpro		

Grouting Method: Pressure method (Tremie Pipe)

Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: Yes

Static Water Level: 13 ft. below land surface

Water Level Measure Tool: mscope

Well Development Period: 1 hrs.

Method of Development: Pump / Surge

Pump Type: _____

Pump Capacity: gpm

Total Design Head: ft.

Drilling Fluid: _____

Drill Rig: Mobile B-80

Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG

0 - 5: Brown OT - Other Fill

5 - 10: Brown GM - Silty gravels, gravel-sand-silt mixtures

10 - 16: Brown SM - Silty sands, sand-silt mixtures

ADDITIONAL INFORMATION:

Driller of Record: Nicholas A Fallucca,
MASTER LICENSE # 749523

Company: SGS NORTH AMERICA INC.

MONITORING WELL RECORD

PROPERTY OWNER: METROPOLIS TOWERS APT CORP MGMT METROPOLIS TOWERS APT CORP MGMT

Company/Organization: Metropolis Towers Apt Corp Mgmt

Address: 280 Gregory Park Plaza Jersey City, New Jersey 07302

WELL LOCATION: Frmr PPG

Address: 280 Marin Blvd

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619192 Northing (Y): 686977
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: April 21, 2016

DATE WELL COMPLETED: April 21, 2016

WELL USE: MONITORING

Other Use(s): _____

Local ID: MW-9

WELL CONSTRUCTION

Total Depth Drilled (ft.): 15 Finished Well Depth (ft.): 15 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	15	6		
Casing	0	10	2	PVC	sch 40
Screen	10	15	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in.)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	7	6	2	5	94	8
Gravel Pack	7	8	6	2	00 sand		
Gravel Pack	8	15	6	2	01 sand		

Grouting Method: Pressure method (Tremie Pipe)

Drilling Method: Direct Push Probe

ADDITIONAL INFORMATION

Protective Casing: Yes

Static Water Level: 6 ft. below land surface

Water Level Measure Tool: tape

Well Development Period: .5 hrs.

Method of Development: pump

Pump Type: _____

Pump Capacity: gpm

Total Design Head: ft.

Drilling Fluid: _____

Drill Rig: Geoprobe 7822

Health and Safety Plan Submitted? No

ATTACHMENTS:

GEOLOGIC LOG

0 - 10: brown-grey GM - Silty gravels, gravel-sand-silt mixtures

10 - 15: black-grey SM - Silty sands, sand-silt mixtures some peat

ADDITIONAL INFORMATION:

Driller of Record: Craig Jablonski,
JOURNEYMAN LICENSE # 0001320

Company: ADVANCED DRILLING INC

MONITORING WELL RECORD

PROPERTY OWNER: METROPOLIS TOWERS APT. CORP MGMT

Company/Organization: Metropolis Towers

Address: 270 Gregory Park Plaza Jersey City, New Jersey 07302

WELL LOCATION: Metropolis Towers

Address: 270 Gregory Park Plaza

County: Hudson Municipality: Jersey City Lot: 2 Block: 13101

Easting (X): 619563 Northing (Y): 686784
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: April 8, 2016

DATE WELL COMPLETED: April 8, 2016

WELL USE: MONITORING

Other Use(s): _____

Local ID: MW-10

WELL CONSTRUCTION

Total Depth Drilled (ft.): 7 Finished Well Depth (ft.): 7 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	7	6		
Casing	0	2	1.5	PVC	sch 40
Screen	2	7	1.5	pvc	10 slot

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in.)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	1	6	1.5	2.5	47	2.5
Gravel Pack	1	7	6	1.5	#1 well gravel		

Grouting Method: Pressure method (Tremie Pipe)

Drilling Method: Direct Push Probe

ADDITIONAL INFORMATION

Protective Casing: Yes

Static Water Level: 4 ft. below land surface

Water Level Measure Tool: tape

Well Development Period: 1 hrs.

Method of Development: pump and surge

Pump Type: _____

Pump Capacity: gpm

Total Design Head: ft.

Drilling Fluid: _____

Drill Rig: geoprobe 420

Health and Safety Plan Submitted? No

ATTACHMENTS:

GEOLOGIC LOG

0 - 2: brown GM - Silty gravels, gravel-sand-silt mixtures

2 - 5: black SM - Silty sands, sand-silt mixtures

5 - 7: black SC - Clayey sands, sand-clay mixtures

ADDITIONAL INFORMATION:

Driller of Record: Stephen Folcher,
MONITORING LICENSE # 435811

Company: ENVIROPROBE SERVICE INC

Well Permits

Note: Well Permits were not located for the wells installed in 1992 (MW-1, MW-2, MW-3, MW-4, and MW-5). Well permit information from New Jersey Department of Environmental Protection's DataMiner is provided for these wells.

Download PDF	Permit Number	Well Name	Well Use	Document	Date (Permitted/ Drilled/ Sealed)	Physical Address	County	Municipality	Block	Lot	Location Method	Easting (X)	Northing (Y)	Depth	Capacity (gal/min)
	2600031329	MW-1	Monitoring	Permit	10/22/1992		Hudson	Jersey City	170	4	Prop Loc - Hard Copy	618496	689682	20	
	2600031323	MW-2	Monitoring	Permit	10/22/1992		Hudson	Jersey City	170	1	Prop Loc - Hard Copy	618496	689682	20	
	2600031325	MW-3	Monitoring	Permit	10/22/1992		Hudson	Jersey City	170	1	Prop Loc - Hard Copy	618496	689682	20	
	2600031324	MW-4	Monitoring	Permit	10/22/1992		Hudson	Jersey City	170	1	Prop Loc - Hard Copy	618496	689682	20	
	2600031839	MW5	Monitoring	Permit	12/10/1992	280 HENDERSON STREET	Hudson	Jersey City	170	1	Prop Loc - Hard Copy	618496	689682	20	

WELL PERMIT

New Well

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: BRIAN WAGNER, MASTER LICENSE # 0016989

Permit Issued to: ADVANCED DRILLING INC

Company Address: 235 VAY SYCKELS RD HAMPTON, NJ 08827

PROPERTY OWNER

Name: METROPOLIS TOWERS APT MGMT METROPOLIS TOWERS APT MGMT

Organization: Metropolis Towers Apt Mgmt

Address: 280 Gregory Park Plaza

City: Jersey City State: New Jersey Zip Code: 07302

PROPOSED WELL LOCATION

Facility Name: Fmr PPG

Address: 280 Marin Blvd Address ok, please process as is

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619420 Northing (Y): 687003

Local ID: MW-1R

Coordinate System: NJ State Plane (NAD83) - USFEET

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: _____

Depth (ft.): 15

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

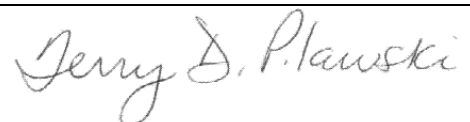
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 21, 2016

Expiration Date: April 21, 2017

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT
New Well

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
A well record must be submitted by the well driller to the Bureau of Water Systems and Well Permitting. Unless prior written approval is obtained from the Bureau of Water Systems and Well Permitting the well record shall be submitted electronically through the New Jersey Department of Environmental Protection's Regulatory Services Portal Submit Well Record: within ninety (90) days after the well is completed.[N.J.A.C. 7:9D-1]
All well drilling/pump installation activities shall comply with N.J.A.C. 7:9D-1 et seq. [N.J.A.C. 7:9D-1]
For this permit to remain valid, the well approved in this permit shall be constructed within one year of the effective date of the permit. [N.J.A.C. 7:9D-1]
If the pump capacity applied for is less than 70 gpm, no subsequent increase to 70 gpm or more shall be made without prior approval of the Bureau of Water Systems and Well Permitting. [N.J.A.C. 7:9D-1]
If the use of the well is to be changed a well permit for the proposed use of the well shall be submitted for review and approval. [N.J.A.C. 7:9D-1]
If you or a future property owner intend to redesignate this well as a Category 1 well (domestic, non-public, community water supply or public non-community water supply wells), the well must be constructed as a Category 1 well per the Well Construction and Abandonment Regulations at N.J.A.C. 7:0D-1.1 et seq. In addition, if the current or future property owner intends to have this well redesignated as a community water supply well, the well must be constructed by a Master well driller, which would include having a Master well driller on-site at all times during construction of the well, as specified in the Well Construction and Abandonment Regulations. Otherwise, the New Jersey Department of Environmental Protection will not allow the well to be redesignated, and a new well would have to be installed. [N.J.A.C. 7:9D-1.7((a))1i]
In accepting this permit the Property Owner and Driller agree to abide by the following terms and conditions [N.J.A.C. 7:9D-1]
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This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

WELL PERMIT

New Well

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: BRIAN WAGNER, MASTER LICENSE # 0016989

Permit Issued to: ADVANCED DRILLING INC

Company Address: 235 VAY SYCKELS RD HAMPTON, NJ 08827

PROPERTY OWNER

Name: METROPOLIS TOWERS APT MGMT METROPOLIS TOWERS APT MGMT

Organization: Metropolis Towers Apt Mgmt

Address: 280 Gregory Park Plaza

City: Jersey City State: New Jersey Zip Code: 07302

PROPOSED WELL LOCATION

Facility Name: Fmr PPG

Address: 280 Marin Blvd Address ok please process as is

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619286 Northing (Y): 686935
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-5R

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: _____

Depth (ft.): 15

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

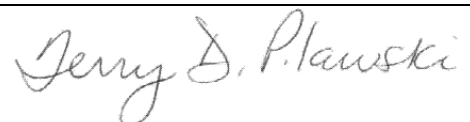
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 21, 2016

Expiration Date: April 21, 2017

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT
New Well

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
A copy of this permit shall be kept at the worksite / on the property and shall be exhibited upon request. [N.J.A.C. 7:9D-1]
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This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
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WELL PERMIT

New Well

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Certifying Driller: BRIAN WAGNER, MASTER LICENSE # 0016989

Permit Issued to: ADVANCED DRILLING INC

Company Address: 235 VAY SYCKELS RD HAMPTON, NJ 08827

PROPERTY OWNER

Name: METROPOLIS TOWERS APT CORP MGMT METROPOLIS TOWERS APT CORP MGMT

Organization: Metropolis Towers Apt Corp Mgmt

Address: 280 Gregory Park Plaza

City: Jersey City State: New Jersey Zip Code: 07302

PROPOSED WELL LOCATION

Facility Name: Fmr PPG

Address: 280 Marin Blvd

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619114 Northing (Y): 686731

Local ID: MW-6

Coordinate System: NJ State Plane (NAD83) - USFEET

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: _____

Depth (ft.): 15

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

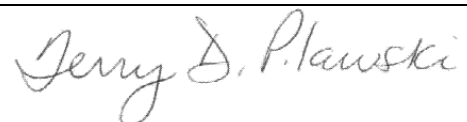
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 13, 2016

Expiration Date: April 13, 2017

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT
New Well

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

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Certifying Driller: BRIAN WAGNER, MASTER LICENSE # 0016989

Permit Issued to: ADVANCED DRILLING INC

Company Address: 235 VAY SYCKELS RD HAMPTON, NJ 08827

PROPERTY OWNER

Name: METROPOLIS TOWERS APT CORP MGMT METROPOLIS TOWERS APT CORP MGMT

Organization: Metropolis Towers Apt Corp Mgmt

Address: 280 Gregory Park Plaza

City: Jersey City State: New Jersey Zip Code: 07302

PROPOSED WELL LOCATION

Facility Name: Fmr PPG

Address: 280 Marin Blvd

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619403 Northing (Y): 686810
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-7

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: _____

Depth (ft.): 15

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

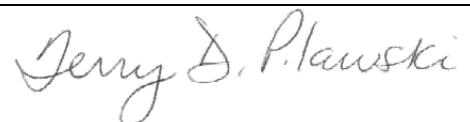
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 13, 2016

Expiration Date: April 13, 2017

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT
New Well

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
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Certifying Driller: BRIAN WAGNER, MASTER LICENSE # 0016989

Permit Issued to: ADVANCED DRILLING INC

Company Address: 235 VAY SYCKELS RD HAMPTON, NJ 08827

PROPERTY OWNER

Name: METROPOLIS TOWERS APT CORP MGMT METROPOLIS TOWERS APT CORP MGMT

Organization: Metropolis Towers Apt Corp Mgmt

Address: 280 Gregory Park Plaza

City: Jersey City State: New Jersey Zip Code: 07302

PROPOSED WELL LOCATION

Facility Name: Fmr PPG

Address: 280 Marin Blvd

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619314 Northing (Y): 686712
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-8

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: _____

Depth (ft.): 15

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

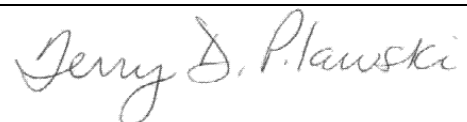
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 13, 2016

Expiration Date: April 13, 2017

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT
New Well

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

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New Well

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Certifying Driller: THOMAS L HANLEY, JOURNEYMAN LICENSE # 0001181

Permit Issued to: SGS NORTH AMERICA INC.

Company Address: PO BOX 423 WEST CREEK, NJ 08092

PROPERTY OWNER

Name: METROPOLIS TOWERS APT. CORP MGMT METROPOLIS TOWERS APT. CORP MGMT

Organization: Metropolis Towers Apt. Corp MGMT

Address: 280 Gregory Park Plaza

City: Jersey City State: New Jersey Zip Code: 07302

PROPOSED WELL LOCATION

Facility Name: Metropolis Towers Apt. Corp MGMT

Address: 280 Gregory Park Plaza / MW-8R Address confirmed by client T Hanley

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619314 Northing (Y): 686712
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-8R

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: _____

Depth (ft.): 35

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N


Drilling Method: Hollow Stem Augers

Attachments: _____

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: October 14, 2016
Expiration Date: October 14, 2017

Approved by the authority of:
Bob Martin
Commissioner


Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT
New Well

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

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This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

WELL PERMIT

New Well

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: BRIAN WAGNER, MASTER LICENSE # 0016989

Permit Issued to: ADVANCED DRILLING INC

Company Address: 235 VAY SYCKELS RD HAMPTON, NJ 08827

PROPERTY OWNER

Name: METROPOLIS TOWERS APT CORP MGMT METROPOLIS TOWERS APT CORP MGMT

Organization: Metropolis Towers Apt Corp Mgmt

Address: 280 Gregory Park Plaza

City: Jersey City State: New Jersey Zip Code: 07302

PROPOSED WELL LOCATION

Facility Name: Fmr PPG

Address: 280 Marin Blvd

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619193 Northing (Y): 686978

Local ID: MW-9

Coordinate System: NJ State Plane (NAD83) - USFEET

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: _____

Depth (ft.): 15

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

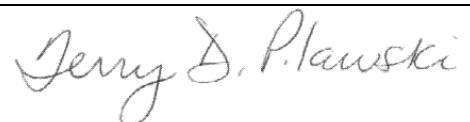
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: April 13, 2016

Expiration Date: April 13, 2017

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT
New Well

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

GENERAL CONDITIONS/REQUIREMENTS
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This permit does not waive the obtaining of Federal or other State or local Government consent when necessary. This permit is not valid and no work shall be undertaken until such time as all other required approvals and permits have been obtained. [N.J.A.C. 7:9D-1]
This permit is NONTRANSFERABLE [N.J.A.C. 7:9D]
This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

WELL PERMIT

New Well

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: JASON J KUNI, MONITORING LICENSE # 450560

Permit Issued to: ENVIROPROBE SERVICE INC

Company Address: 908 LENOLA RD MOORESTOWN, NJ 08057

PROPERTY OWNER

Name: METROPOLIS TOWERS APT. CORP MGMT

Organization: Metropolis Towers

Address: 270 Gregory Park Plaza

City: Jersey City State: New Jersey Zip Code: 07302

PROPOSED WELL LOCATION

Facility Name: Metropolis Towers

Address: 270 Gregory Park Plaza

County: Hudson Municipality: Jersey City Lot: 2 Block: 13101

Easting (X): 619563 Northing (Y): 686784
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-10

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program

Depth (ft.): 7

Requiring Wells/Borings:

Pump Capacity (gpm): 0

Case ID Number:

Drilling Method: Hollow Stem Augers

Deviation Requested: Y


Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Well must be built in accordance with submitted deviation [N.J.A.C. 7.9D-2.8]

Approval Date: April 7, 2016
Expiration Date: April 7, 2017

Approved by the authority of:
Bob Martin
Commissioner


Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT
New Well

DEVIATION INFORMATION	
Purpose:	For Monitoring
Unusual Conditions:	Low overhead clearance
Reason for Deviation:	Due to access constraints standard drilling equipment, can't be used. The well will be installed using hand augers, which may result in a smaller diameter borehole.
Proposed Well Construction	2"x5' pre-pack screen.2"x2' schedule 40 PVC riser.6" flush mount well protector.

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Certifying Driller: NICHOLAS A FALLUCCA, MASTER LICENSE # 749523

Permit Issued to: SGS NORTH AMERICA INC.

Company Address: PO BOX 423 WEST CREEK, NJ 08092

PROPERTY OWNER

Name: ALKI ANTONOPOULIS

Organization: Metropolis Towers Apt. Corp. Mgmt.

Address: 280 Gregory Park Plaza

City: Jersey City State: New Jersey Zip Code: 07302

PROPOSED WELL LOCATION

Facility Name: Site 156

Address: 280 Gregory Park Plaza /156- MW8A confirmed by client / 6187

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

Easting (X): 619295 Northing (Y): 686709

Local ID: 156-MW8A

Coordinate System: NJ State Plane (NAD83) - USFEET

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: Owner Investigation

Depth (ft.): 20

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

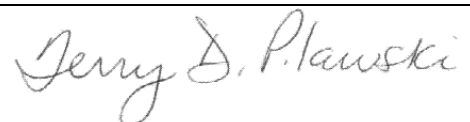
SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: October 26, 2017

Expiration Date: October 26, 2018

Approved by the authority of:

Bob Martin
Commissioner



Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

WELL PERMIT
New Well

DEVIATION INFORMATION	
Purpose:	
Unusual Conditions:	
Reason for Deviation:	
Proposed Well Construction	

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PROPERTY OWNER

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Organization: Metropolis Towers Apt. Corp. Mgmt.

Address: 280 Gregory Park Plaza

City: Jersey City State: New Jersey Zip Code: 07302

PROPOSED WELL LOCATION

Facility Name: Site 156

Address: 280 Gregory Park Plaza /156- MW8B confirmed by client / 6187

County: Hudson Municipality: Jersey City Lot: 1 Block: 13101

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PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s): _____

Diameter (in.): 2

Regulatory Program

Requiring Wells/Borings: Owner Investigation

Depth (ft.): 20

Case ID Number: _____

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments: _____

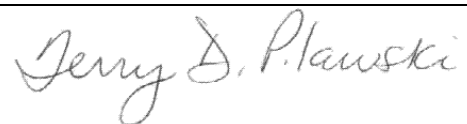
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WELL PERMIT
New Well

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Purpose:	
Unusual Conditions:	
Reason for Deviation:	
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This well shall not be used for the supply of potable / drinking water. [N.J.A.C. 7:9D-1]

Groundwater Sampling Logs

Well ID: MW-1R

Low Flow Ground Water Sample Collection Record

Client: PPG Industries Date: 05/10/2016 Time: Start 1400 am/pm
 Project No: 60493065 Finish _____ am/pm
 Site Location: Metro Towers (280 Marin Blvd, Jersey City, NJ)
 Weather Conds: 65°F, partly sunny Collector(s): S. Ravi, C. De Ambrogio

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 14.64 ft c. Length of Water Column 8.77 (a-b) Casing Diameter/Material 2" PVC
 b. Water Table Depth 5.87 d. Calculated System Volume (see back) 5.4 L

2. WELL PURGE DATA

a. Purge Method: Geotech peri pump

b. Acceptance Criteria defined (see workplan)

- Temperature 3% -D.O. 10%
 - pH ± 0.1 unit - ORP ± 10 mV
 - Sp. Cond. 3% - Drawdown $< 0.3'$

c. Field Testing Equipment used:

Make

Model

Serial Number

YSI

650 MDS

02F0328AE

Lamotte

2020 ule

3988

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (μ S/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1400	0	17.55	6.87	3.124	5.42	-101.9	34.0	200	5.87	muddy
1405	1	16.20	6.72	3.509	1.32	-79.8	30.2	200	5.97	clear
1410	2	16.16	6.73	3.588	0.84	-79.5	21.1	200	6.98	clear
1415	3	16.18	6.73	3.601	0.78	-73.5	18.3	200	6.00	clear
1420	4	16.11	6.74	3.629	0.74	-57.5	15.8	200	6.00	clear
1425	5	16.10	6.74	3.653	0.71	-54.7	12.9	200	6.01	clear
1430	6	16.08	6.74	3.660	0.65	-54.1	10.9	200	6.02	clear

d. Acceptance criteria pass/fail

Has required volume been removed

Yes

No

N/A

☒

☐

☒

Has required turbidity been reached

☒

☐

☐

Have parameters stabilized

☒

☐

☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION:

Method: dedicated tubing

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
		<u>1</u>	<u>None</u>	<u>Hex Cr</u>	<u>1435</u>
		<u>1</u>	<u>HNO₃</u>	<u>METALS</u>	<u>1435</u>

Comments _____

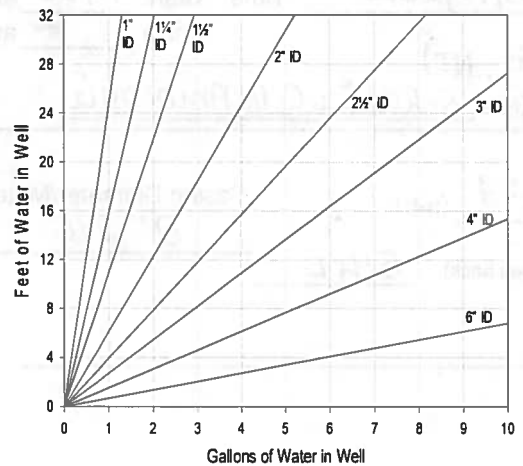
Signature

Sheel Ravi

Date

05/10/2016

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

[illegible]

Well ID: MW-3

Low Flow Ground Water Sample Collection Record

Client: PPG INDUSTRIES Date: 05/11/2016 Time: Start 0810 (am/pm) Finish 0850 (am/pm)
 Project No: 60493065
 Site Location: 280 MARIN BLVD, JERSEY CITY
 Weather Conds: 60°F, SUNNY Collector(s): S. Rani, C. DeAmbrogio

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 12.88 ft c. Length of Water Column 7.39 ft (a-b) Casing Diameter/Material 2" PVC
 b. Water Table Depth 5.49 ft d. Calculated System Volume (see back) 4.6 L

2. WELL PURGE DATA

a. Purge Method: geotech peri pump

b. Acceptance Criteria defined (see workplan)

- Temperature 3% -D.O. 10%
 - pH +0.1 unit - ORP ± 10mV
 - Sp. Cond. 3% - Drawdown < 0.3'

c. Field Testing Equipment used:

Make

Model

Serial Number

YSI

650 MDS

02F0328 AE

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2020 We

3988

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0815	0	13.07	6.80	5.619	3.77	-91.3	10.22	200	5.49	clear.
0820	1	13.03	6.54	5.634	1.21	-77.8	7.71	200	5.51	clear.
0825	2	13.03	6.56	5.625	0.98	-68.7	6.65	200	5.50	clear
0830	3	13.04	6.58	5.624	1.02	-67.6	6.44	200	5.50	clear
0835	4	13.20	6.60	5.615	1.17	-70.9	6.60	200	5.50	clear
0840	5	13.33	6.60	5.614	1.15	-66.9	5.92	200	5.50	clear
0845	6	13.38	6.60	5.615	1.14	-65.5	3.62	200	5.49	clear.

d. Acceptance criteria pass/fail

Yes No N/A

Has required volume been removed ☒ ☐ ☐

Has required turbidity been reached ☒ ☐ ☐

Have parameters stabilized ☒ ☐ ☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION:

Method:

dedicated tubing

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
156-MW3-20160511		1	NONE	HerCr	0850
156-MW3-20160511		1	HNO ₃	METALS	0850

Comments

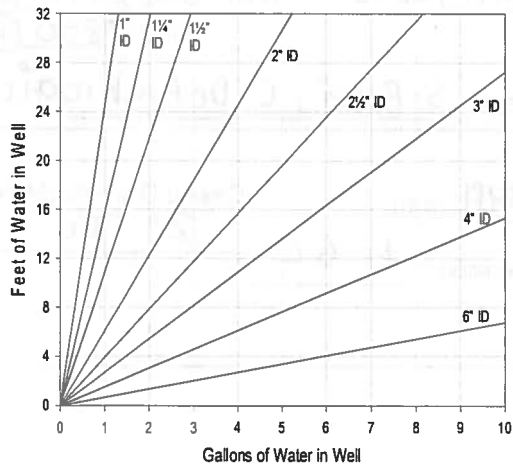
tubing pump set @ 10ft.

Signature

S. Rani

Date

05/11/2016



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

[illegible]

Well Sampling form.xlsx.xls field

Well ID: MW-5 R

Low Flow Ground Water Sample Collection Record

Client: PPG Industries Date: 5/10/2016 Time: Start 1200 ^{pm}
 Project No: 60493065 Finish 1255 ^{am/pm}
 Site Location: 280 Marin Blvd, Jersey City, NJ (Muro Towers)
 Weather Conds: 65°F, Partly Sunny Collector(s): S. Ravi, C. DeAmbrogio

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 14.81 c. Length of Water Column 11.45 (a-b) Casing Diameter/Material 2" PVC
 b. Water Table Depth 3.36 d. Calculated System Volume (see back) 7.07L

2. WELL PURGE DATA

a. Purge Method: geotech peripump

b. Acceptance Criteria defined (see workplan)

- Temperature 3% -D.O. 10%
 - pH +0.1 unit - ORP ± 10mV
 - Sp. Cond. 3% - Drawdown < 0.3'

c. Field Testing Equipment used:

Make

Model

Serial Number

YSI
Larotte650 MDS
2020 We02F0328AE
3988

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1205	0	18.89	7.48	0.886	1.64	0.9	7.19	200	3.49	clear
1210	1	18.97	7.52	0.872	0.80	-27.1	5.68	200	3.81	clear
1215	2	18.97	7.49	0.871	0.54	-41.2	4.79	200	3.81	clear
1220	3	19.00	7.50	0.871	0.46	-47.8	4.44	200	3.81	clear
1225	4	19.01	7.56	0.867	0.43	-27.1	1.49	200	3.84	clear
1230	5	18.97	7.58	0.850	0.40	-51.4	3.74	200	3.84	clear
1235	6	19.08	7.57	0.849	0.45	-59.3	3.78	200	3.85	clear

d. Acceptance criteria pass/fail

Yes No

Has required volume been removed

☐ ☐

Has required turbidity been reached

☐ ☐

Have parameters stabilized

☐ ☐

If no or N/A - Explain below.

x

(continued on back)

3. SAMPLE COLLECTION:

Method: direct from dedicated tubing

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
156-MW5-20160510		1	None	Hex Cr	1250
156-MW5-20160510		1	HNO ₃	METALS	1250

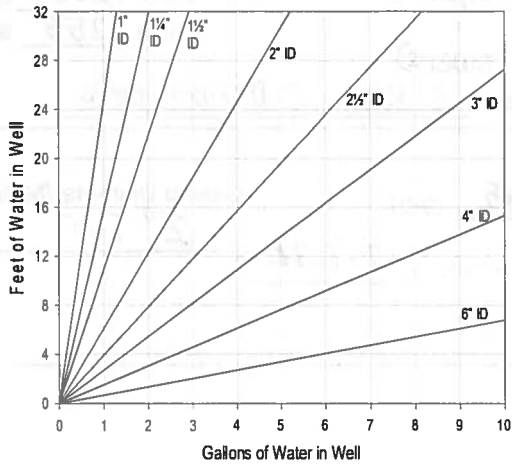
Comments

Signature

Shuehlan

Date

05/10/2016



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

[illegible]

Well ID: MW-6

Low Flow Ground Water Sample Collection Record

Client: PPG Site 156 Date: 5/10/16 Time: Start 1250 am/pm
 Project No: 60493065 Finish _____ am/pm
 Site Location: Jersey City NJ
 Weather Conds: Sunny Cool 60's Collector(s): Christine DeAmbrogio

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 13.35 c. Length of Water Column 8.46 (a-b) Casing Diameter/Material 2" pvc
 b. Water Table Depth 4.89 d. Calculated System Volume (see back) 5.23 L

2. WELL PURGE DATA

a. Purge Method: geo tech perc-pump

b. Acceptance Criteria defined (see workplan)

- Temperature 3% -D.O. 10%
 - pH +0.1 unit - ORP ± 10mV
 - Sp. Cond. 3% - Drawdown < 0.3'

c. Field Testing Equipment used:

Make

Model

Serial Number

YSI

600XL

Meter

02F0328AE

Probe

06F2353AA

CD 2

LaMotte

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916-1811

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
<u>1220</u>	<u>0</u>							<u>200</u>		
<u>1250</u>	<u>0</u>	<u>16.48</u>	<u>10.18</u>	<u>3.661</u>	<u>1.28</u>	<u>-40.6</u>	<u>11.87</u>	<u>200</u>	<u>5.10</u>	<u>No/slight</u>
<u>1255</u>	<u>1</u>	<u>15.92</u>	<u>8.49</u>	<u>4.874</u>	<u>0.82</u>	<u>-30.35</u>	<u>7.03</u>	<u>200</u>	<u>5.30</u>	<u>No/slight</u>
<u>1300</u>	<u>2</u>	<u>15.94</u>	<u>7.28</u>	<u>5.299</u>	<u>1.35</u>	<u>-187.4</u>	<u>5.55</u>	<u>200</u>	<u>5.35</u>	<u>No/slight</u>
<u>1305</u>	<u>3</u>	<u>15.93</u>	<u>6.92</u>	<u>5.616</u>	<u>1.46</u>	<u>-152.4</u>	<u>3.07</u>	<u>200</u>	<u>5.33</u>	<u>" "</u>
<u>1310</u>	<u>4</u>	<u>16.02</u>	<u>6.86</u>	<u>5.643</u>	<u>1.50</u>	<u>-141.2</u>	<u>2.83</u>	<u>200</u>	<u>5.32</u>	<u>" "</u>
<u>1315</u>	<u>5</u>	<u>15.90</u>	<u>6.83</u>	<u>5.730</u>	<u>1.55</u>	<u>-114.9</u>	<u>3.39</u>	<u>200</u>	<u>5.33</u>	<u>" "</u>

CD 2
Sulfur
Sulfur
Sulfur
odor

d. Acceptance criteria pass/fail

Yes No N/A

Has required volume been removed

☐ ☐ ☒

Has required turbidity been reached

☒ ☐ ☐

Have parameters stabilized

☒ ☐ ☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION:

Method: direct from dedicated tubing

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
<u>156-MW6-20160510 plastic</u>		<u>1</u>	<u>None</u>	<u>C⁺tb</u>	<u>1327</u>
<u>156-MW6-20160510 plastic</u>		<u>1</u>	<u>HNO3</u>	<u>CCPW Metals</u>	<u>1327</u>
<u>156-MW6D-20160510 plastic</u>		<u>1</u>	<u>None</u>	<u>C⁺tb</u>	<u>1330</u>
<u>156-MW6D-20160510 plastic</u>		<u>1</u>	<u>HNO3</u>	<u>CCPW Metals</u>	<u>1330</u>

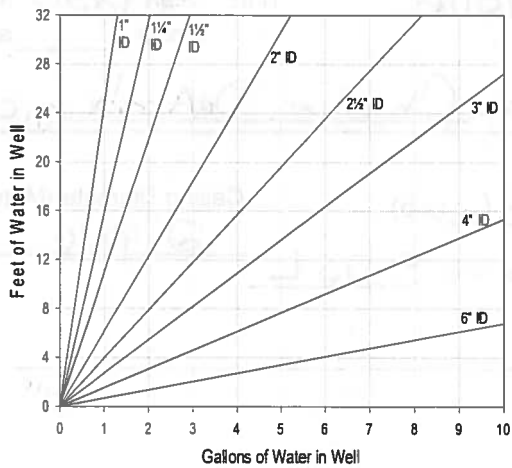
Comments

Signature

CD ~

Date

5/10/16



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

[illegible]

200ml/min

Well ID: MW-07

Low Flow Ground Water Sample Collection Record 1010

Client: PPG Industries Date: 05/10/2016 Time: Start 08:30 am/pm
 Project No: 60493065 Finish 1050 am/pm
 Site Location: 280 Marin Blvd, Jersey City NJ (Metro Towers)
 Weather Conds: Partly sunny, 65°F Collector(s): C-DeAmbrogio, S-Ravi

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 14.94 ft c. Length of Water Column 9.13 ft (a-b) Casing Diameter/Material 2" PVC
 b. Water Table Depth 5.81 ft d. Calculated System Volume (see back) 5.64 L

2. WELL PURGE DATA

a. Purge Method: low flow, peri pump

b. Acceptance Criteria defined (see workplan)

- Temperature 3% -D.O. 10%
 - pH +0.1 unit - ORP ± 10mV
 - Sp. Cond. 3% - Drawdown < 0.3'

c. Field Testing Equipment used:

Make
YSI

Model
650 MDS

Serial Number

02F0328 AA

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Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. mS/cm	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1015	0	15.91	7.61	0.929	0.77	72.6	14.5	200	5.95	clear
1020	1	16.06	7.65	0.929	0.68	54.1	11.1	200	5.96	clear
1025	2	16.11	7.69	0.929	0.55	58.7	6.98	200	5.98	clear
1030	3	16.13	7.72	0.928	0.52	58.5	4.84	200	5.98	clear
1035	4	15.98	7.72	0.931	0.49	53.6	3.59	200	5.98	clear
1040	5	15.95	7.74	0.931	0.50	49.1	2.41	200	5.99	clear
1045	6	16.16	7.78	0.931	0.42	42.3	2.48	200	5.99	clear

d. Acceptance criteria pass/fail

Has required volume been removed

Yes No N/A

☒ ☐ ☐

Has required turbidity been reached

☒ ☐ ☐

Have parameters stabilized

☒ ☐ ☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Dedicated Tubing

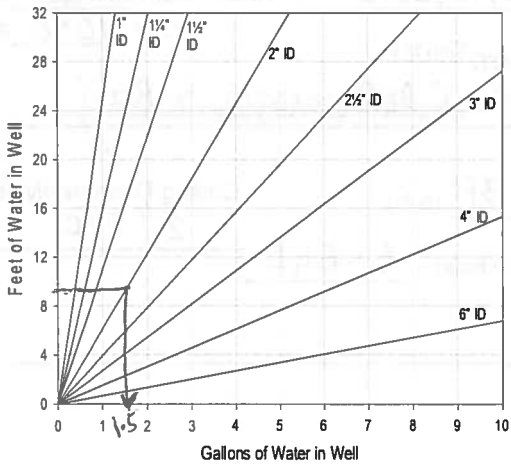
Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
156-MWF-20160510		1	NONE	HexCr	1052
156-MWT-20160510		1	HNO ₃	METALS	1055

Comments sample collection start time - 1052

Signature Shukla

Date 5/10/2016

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

[illegible]

Well ID: MW-8

Low Flow Ground Water Sample Collection Record

Client: PPG Site 114 Date: 5/11/16 Time: Start 0820 am/pm
 Project No: 60493065 Finish 0910 am/pm
 Site Location: Jersey City, NJ
 Weather Conds: Sunny Cool 60°S Collector(s): Christine DeAmbrogio

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 16.32 c. Length of Water Column 11.96 (a-b) Casing Diameter/Material 2" pvc
 b. Water Table Depth 4.36 d. Calculated System Volume (see back) 7.39 L

2. WELL PURGE DATA

a. Purge Method: geotech-perc pump

b. Acceptance Criteria defined (see workplan)

- Temperature 3% -D.O. 10%
 - pH +0.1 unit - ORP ± 10mV
 - Sp. Cond. 3% - Drawdown < 0.3'

c. Field Testing Equipment used:

Make

Model

Serial Number

YSI 600XL Probe 06F2353AA
LaMotte Meter 101410143
2020We 916-1811

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0820	0	15.95	6.91	2.799	2.39	-5.6	7.36	200	5.15	Clear/No odor
0825	1	16.06	7.04	2.668	1.98	-54.7	3.87	200	5.36	Clear/No
0830	2	16.06	7.10	2.525	2.09	-59.8	3.79	200	5.37	Clear/No
0835	3	16.07	7.10	2.441	2.09	-60.0	2.90	200	5.40	Clear/No
0840	4	16.11	7.13	2.157	2.20	-66.1	2.60	200	5.41	Clear/No
0845	5	16.10	7.14	2.039	2.08	-63.9	4.10	200	5.42	Clear/No
0850	6	16.09	7.17	1.861	1.90	-68.8	6.80	200	5.43	Clear/No

d. Acceptance criteria pass/fail Yes No N/A

Has required volume been removed ☐ ☐ ☒
 Has required turbidity been reached ☒ ☐ ☐
 Have parameters stabilized ☒ ☐ ☐

If no or N/A - Explain below.

No required volume for low flow

3. SAMPLE COLLECTION: Method: direct from dedicated tubing

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
<u>156-MW8-20160511</u>	<u>"</u>	<u>1</u>	<u>None</u>	<u>Cr^{tb}</u>	<u>0910</u>
<u>"</u>	<u>"</u>	<u>1</u>	<u>HNO₃</u>	<u>CCPW Metals</u>	<u>0910</u>

Comments

Signature

C. DeAmbrogio

Date

5/11/16

[illegible]

Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

[illegible]

Well ID: MW-9

Low Flow Ground Water Sample Collection Record

Client: PPG INDUSTRIES Date: 05/11/2016 Time: Start 1015 (am/pm) Finish 1050 (am/pm)
 Project No: 60493065
 Site Location: 280 MARINBLVD, JERSEY CITY (METRO TOWERS)
 Weather Conds: 60°F, SUNNY Collector(s): S. RAVI, C. DEAMBROGIO

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 15.29ft c. Length of Water Column 9.66ft (a-b) Casing Diameter/Material 2"
 b. Water Table Depth 5.63ft d. Calculated System Volume (see back) 5.96L

2. WELL PURGE DATA

a. Purge Method: GEOTECH PERIPUMP

b. Acceptance Criteria defined (see workplan)

- Temperature 3% -D.O. 10%
 - pH + 0.1 unit - ORP ± 10mV
 - Sp. Cond. 3% - Drawdown < 0.3'

c. Field Testing Equipment used:

Make

Model

Serial Number

YSI

650 MDS

02F0328AE

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Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0815	0	15.72	6.77	1.234	2.42	-73.0	5.51	200	5.05	clear
1020	1	15.62	6.74	1.096	0.91	-75.9	2.77	200	5.34	clear
1025	2	15.61	6.73	1.062	0.65	-73.6	0.58	200	5.30	clear
1030	3	15.62	6.68	1.113	0.55	-65.0	0.02	200	5.35	clear
1035	4	15.63	6.67	1.126	0.54	-65.7	-0.12	200	5.36	clear
1040	5	15.68	6.64	1.173	0.45	-63.3	-0.54	200	5.36	clear
1045	6	15.69	6.64	1.185	0.44	-59.2	-0.61	200	5.36	clear

d. Acceptance criteria pass/fail

Yes No N/A

Has required volume been removed

☒

☐

☐

Has required turbidity been reached

☒

☐

☐

Have parameters stabilized

☒

☐

☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION:

Method: COLLECTED FROM DEDICATED TUBING

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
56-MW9-20160511	<u>2</u>	<u>1</u>	<u>NONE</u>	<u>Hex Cr</u>	<u>1050</u>
156-MW9-20160511	<u>2</u>	<u>1</u>	<u>HNO₃</u>	<u>METALS</u>	<u>1050</u>

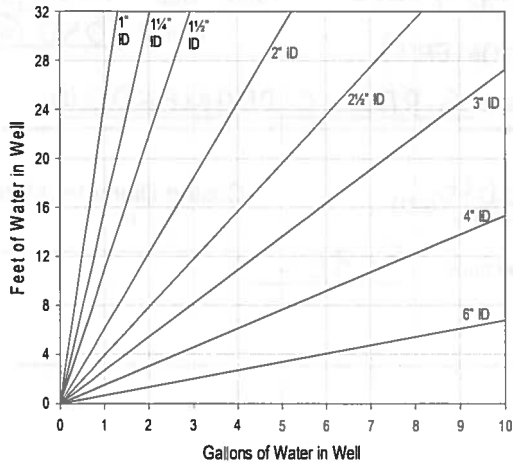
Comments

Signature

S. Ravi

Date

05/11/2016



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

[illegible]

Well ID: MW-10

Low Flow Ground Water Sample Collection Record

Client: PPG Site 156 Date: 5/11/16 Time: Start 1035 am/pm
 Project No: 60493065 Finish 1112 am/pm
 Site Location: Jersey City, NJ
 Weather Conds: Clear 60's Collector(s): Christine DeAmbrosio

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 6.40 c. Length of Water Column 3.58 (a-b) Casing Diameter/Material
 b. Water Table Depth 2.82 d. Calculated System Volume (see back) 1.244L 1.5" pvc

2. WELL PURGE DATA

a. Purge Method: geotech per. pump

b. Acceptance Criteria defined (see workplan)

- Temperature 3% - D.O. 10%
 - pH + 0.1 unit - ORP ± 10mV
 - Sp. Cond. 3% - Drawdown < 0.3'

c. Field Testing Equipment used:

Make

Model

Serial Number

YSI

600XL

Probe

06F2353AA

Meter

10H101443

LaMotte

2020we

916-1811

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1035	0	25.84	6.82	1.018	2.00	27.4	86.3	200	4.1	cloudy/no odor
1040	1	25.4	7.27	1.191	1.84	30.0	75.5	200	4.2	cloudy/no odor
1045	2	25.23	7.32	1.238	1.85	16.3	41.9	200	4.2	cloudy/no odor
1050	3	25.90	7.34	1.259	1.80	15.4	26.1	200	4.1	clear/no odor
1055	ON Phone w/ PM missed readings									
1100	6	25.97	7.38	1.268	1.59	20.0	11.3	200	4.1	clear/no
1105	7	25.96	7.39	1.275	1.77	10.7	2.3	200	4.2	clear/no

d. Acceptance criteria pass/fail

Has required volume been removed ☐ Yes ☐ No ☒ N/A
 Has required turbidity been reached ☒ Yes ☐ No ☐ N/A
 Have parameters stabilized ☒ Yes ☐ No ☐ N/A

If no or N/A - Explain below.

No required volume for low flow

(continued on back)

3. SAMPLE COLLECTION:

Method: direct from dedicated tubing

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
156-MW10-20160511		1	None	Cr ⁶⁺	1112
		1	HNO ₃	CCPW Metals	1112

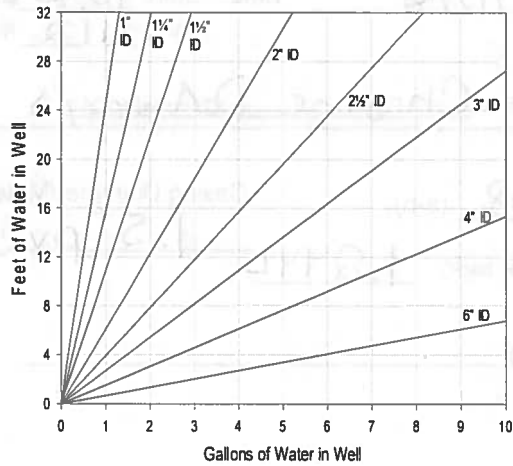
Comments

Signature

C. D

Date

5/11/16



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

[illegible]

Well ID: mw-11R

Low Flow Ground Water Sample Collection Record

Client: PPG Date: 6/16/14 Time: Start 1300 am/pm
 Project No: _____ Finish _____ am/pm
 Site Location: SITE 156 - JERSEY CITY
 Weather Conds: 70's Humid Collector(s): C FOSTER

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length _____ c. Length of Water Column _____ (a-b) Casing Diameter/Material PVC
 b. Water Table Depth 6.05 d. Calculated System Volume (see back) _____

2. WELL PURGE DATA

a. Purge Method: LOW FLOW

b. Acceptance Criteria defined (see workplan)

- Temperature 3% -D.O. 10%
 - pH ± 0.1 unit - ORP ± 10 mV
 - Sp. Cond. 3% - Drawdown $< 0.3'$

c. Field Testing Equipment used:

Make
DIPPER T
GEOPUMP
2100 Q
YSE

Model
HERON
GEOTECH
HACH
600XLI

Serial Number
1565770
1312C02906
01D0956AA

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1305		18.28	6.12	4205	1.29	-85.3	5.65	250	6.10	Clear no odor
1310		17.68	6.06	3099	2.75	-44.9	5.48	250	6.05	" "
1315		17.59	6.00	3074	2.32	-40.9	4.66	250	6.05	" "
1320		17.45	6.00	2988	2.99	-32.6	4.52	250	6.05	" "
1325		17.47	6.00	2984	1.99	-32.1	4.64	250	6.05	" "
1330		17.45	6.00	2978	1.96	-32.0	4.58	250	6.05	" "

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has required turbidity been reached	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have parameters stabilized	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(continued on back)

3. SAMPLE COLLECTION: Method: LOW FLOW

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
<u>156-mw1R-20160616</u>	<u>500mL PLASTIC</u>	<u>3</u>	<u>NONE</u>	<u>XCPA</u>	<u>1335</u>
<u>156-mw1R-20160616</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>EH/PH</u>	<u>1335</u>
<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>HNO3 METALS</u>	<u>1335</u>
<u>DUPLICATE 156-mw1R-20160616</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>"</u>	<u>1345</u>

Comments: MS/MSD also collected

Signature _____

Date 6/16/14

Well ID: MW-3

Low Flow Ground Water Sample Collection Record

Client: PPG Date: 06/17/16 Time: Start 0935 am/pm
 Project No: 60493065 Finish 1035 am/pm
 Site Location: METRO TOWERS, JERSEY CITY
 Weather Conds: 75° F SUNNY Collector(s): SHREE RAVI

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 12.9 c. Length of Water Column 7.27 (a-b) Casing Diameter/Material 2"
 b. Water Table Depth 5.63 d. Calculated System Volume (see back) 9.42

2. WELL PURGE DATA

a. Purge Method: low flow w/ Peri-pump.

b. Acceptance Criteria defined (see workplan)

- Temperature 3% -D.O. 10%
 - pH + 0.1 unit - ORP ± 10mV
 - Sp. Cond. 3% - Drawdown < 0.3'

c. Field Testing Equipment used:

Make

Model

Serial Number

YSI

600 XL

HACH

2100Q

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0935	0	16.21	7.10	6.875	20.54	64.7	11.2	200	5.63	clear/no odor
0945	1	15.87	6.22	6.839	14.77	68.8	10.1	200	7.05	
0955	2	16.68	6.20	6.842	21.53	96.9	5.36		6.97	
1005	3	16.56	6.14	6.902	7.69	101.3	3.72		6.95	
1015	4	16.90	6.16	6.863	14.19	105.9	6.27		7.04	
1025	5	17.18	6.19	6.817	18.81	107.1	5.90		7.05	
1035	6	17.29	6.20	6.813	20.77	109.2	6.10		7.07	

d. Acceptance criteria pass/fail

Yes No N/A

Has required volume been removed ☒ ☐ ☐

Has required turbidity been reached ☒ ☐ ☐

Have parameters stabilized ☐ ☒ ☐

If no or N/A - Explain below.

DO did not stabilize after 7 readings.

(continued on back)

3. SAMPLE COLLECTION:

Method: Dedicated Tubing

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
156-MW3-20160617		1	HNO ₃	METALS	1035
		1	-	X-Cr	1035
		1	-	Eh/pH	1035

Comments

Signature

Shree Ravi

Date

06/17/16

Well ID: MW4

Low Flow Ground Water Sample Collection Record

Client: PPS Date: 7/14/16 Time: Start 1455 am/pm
 Project No: Finish 1540 am/pm
 Site Location: Metro Towers
 Weather Conds: high 80s, humid, partly cloudy Collector(s): A. Carlson

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length ~~1430~~ c. Length of Water Column 7.95 (a-b) Casing Diameter/Material
 b. Water Table Depth 6.35 d. Calculated System Volume (see back) 2" PVC

2. WELL PURGE DATA

a. Purge Method: low flow per pump

b. Acceptance Criteria defined (see workplan)

- Temperature 3% - D.O. 10%
 - pH ± 1.0 unit - ORP ± 10 mV
 - Sp. Cond. 3% - Drawdown $< 0.3'$

c. Field Testing Equipment used: Make Model Serial Number

Y816920

15327

Lumate 2030WE

013245

Time (24hr)	Volume Remove (Liters)	Temp. (°C)	pH	Spec. Cond. (μ S/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1455		12.7	6.6	2.090	1.67	-98.5	84.7	~190	6.35	clear/hor
1500		13.73	6.4	1.930	1.08	-90.9	82.5		7.21	"
1505		19.11	6.62	1.880	0.97	-79.5	81.2		7.36	"
1510		19.17	6.62	1.891	0.76	-82.9	71.8		7.48	"
1515		19.61	6.62	1.905	0.59	-87.6	54.5		7.59	"
1520	-1 gal	19.47	6.63	1.889	0.43	-91.5	43.1		7.68	"
1525		19.73	6.63	1.875	0.44	-92.7	37.5		7.69	"

d. Acceptance criteria pass/fail

Yes No N/A

Has required volume been removed

☒ ☐ ☐

Has required turbidity been reached

☐ ☒ ☐

Have parameters stabilized

☒ ☐ ☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: per pump

(MS/MWD) Sample ID Container Type No. of Containers Preservation Analysis Req. Time
 156-MW4-20160714 500ml 2 H₂O₂ Cr/PH/0.8P 1535
 156-FB-20160714 500ml 2 HNO₃ metals 1540

Comments

Signature

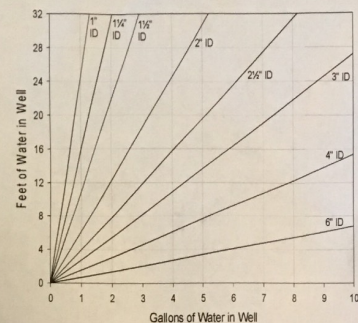
A. Carlson

Date

7/14/16

MW4

Purge Volume Calculation



ID (in)	Gallon	Linear Ft. of Pipe
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

[illegible]

TIME	TEMP	PH	SC	DO	ORP	TURB	FLOW	DRAW DOWN
1220	18.29	6.13	4202	1.30	-85.8	4.95	250	5.10
1225	18.28	6.13	4204	1.29	-85.6	4.87	250	5.10

— DONE

TIME	TEMP	PH	SC	DO	ORP	TURB	FLOW	DRAW DOWN
1220	18.29	6.13	4202	1.30	-85.8	4.95	250	5.10
1225	18.28	6.13	4204	1.29	-85.6	4.87	250	5.10
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3000								

SAMPLE COLLECTION

DATE: 10/10/2018 TIME: 12:20

Signature: [Handwritten Signature]

Low Flow Ground Water Sample Collection Record

Client: PPG Date: 06/16/16 Time: Start 1250 am/pm am
 Project No: 60493065 Finish 1345 am/pm am
 Site Location: METRO TOWERS, JERSEY CITY
 Weather Conds: 60'S, OVERCAST Collector(s): SHREE RAVI

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 14.81 ft c. Length of Water Column 11.11 (a-b) Casing Diameter/Material 2"
 b. Water Table Depth 3.70 d. Calculated System Volume (see back) 12.5 L

2. WELL PURGE DATA

a. Purge Method: low flow with peri-pump

b. Acceptance Criteria defined (see workplan)

- Temperature 3% -D.O. 10%
 - pH + 0.1 unit - ORP ± 10mV
 - Sp. Cond. 3% - Drawdown < 0.3'

c. Field Testing Equipment used:

Make

Model

Serial Number

YSI

600 XL

HACH

2100 Q

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1250	0	21.25	7.19	0.811	19.88	153.5	6.29	200	3.90	clear/no odor
1300	1	20.80	7.19	0.802	24.94	148.0	17.5	200	3.96	"
1310	2	20.85	7.23	0.799	23.19	151.7	15.0	200	3.98	"
1320	3	20.78	7.27	0.794	18.62	143.2	13.4	200	4.00	"
1330	4	20.77	7.31	0.791	17.21	130.8	13.5	200	4.01	"
1340	5	20.78	7.33	0.790	15.24	127.4	10.6	200	4.01	"

d. Acceptance criteria pass/fail

Yes No N/A

Has required volume been removed ☒ ☐ ☐

Has required turbidity been reached ☒ ☐ ☐

Have parameters stabilized ☒ ☐ ☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION:

Method: dedicated tubing

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
156-MWSR-20160616		1	HNO ₃	METALS	1340
156-MWSR-20160616		1	NONE	Cr+6	1340
156-MWSR-20160616		1	NONE	Fe/pH	1340

Comments

Signature

Shree Ravi

Date

06/16/16

Well ID: MW-6**Low Flow Ground Water Sample Collection Record**

Client: PPG SITE 156 Date: 6/16/16 Time: Start 1130 am/pm
 Project No: JERSEY CITY 5 Finish _____ am/pm
 Site Location: _____
 Weather Conds: 70's HUMID Collector(s): CFOSTER

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length _____ c. Length of Water Column _____ (a-b) Casing Diameter/Material PVC
 b. Water Table Depth _____ d. Calculated System Volume (see back) _____

2. WELL PURGE DATAa. Purge Method: LOW FLOW

b. Acceptance Criteria defined (see workplan)

- Temperature 3% -D.O. 10%
 - pH ± 0.1 unit - ORP ± 10 mV
 - Sp. Cond. 3% - Drawdown $< 0.3'$

c. Field Testing Equipment used:

Make
DIPPERT
GEOTECH
2100Q
YSI

Model
HERON
PEDRUMP
HALH
600 XLM

Serial Number
1565T
13126029906
01D0956AA

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1145		18.99	6.45	4713	2.14	-94.1	24.0	250	5.09	clear/no odor
1150		18.73	6.95	5004	1.54	-77.7	24.8	250	5.10	" "
1155		18.82	6.07	4381	1.57	-88.9	22.3	250	5.10	" "
1200		18.60	6.13	4243	1.44	-90.0	21.7	250	5.10	" "
1205		18.61	6.14	4245	1.42	-89.4	7.16	250	5.10	" "
1210		18.07	6.14	4246	1.40	-88.3	6.51	250	5.10	" "
1215		18.23	6.14	4179	1.32	-86.7	4.39	250	5.10	" "

d. Acceptance criteria pass/fail
 Has required volume been removed ☒ Yes ☐ No ☐ N/A
 Has required turbidity been reached ☒ Yes ☐ No ☐ N/A
 Have parameters stabilized ☒ Yes ☐ No ☐ N/A
 If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION:Method: LOW FLOW

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
156-MW-6-20160616	500mL Plastic	1	None	XCRA	1235
"	"	"	"	EHPIH	1235
156-MW-6-20160616	"	"	HNO3	METALS	1235

Comments _____

Signature _____

Date 6/16/16

Well ID: MW-7

Low Flow Ground Water Sample Collection Record

Client: PPG Date: 06/17/16 Time: Start 1110 (am/pm)
 Project No: 60493065 Finish 1210 am/pm
 Site Location: METRO TOWERS
 Weather Conds: 84°F, SUNNY Collector(s): SHREE RAVI

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 14.94 c. Length of Water Column 9.16 (a-b) Casing Diameter/Material
 b. Water Table Depth 5.78 d. Calculated System Volume (see back) 5.65L 2"

2. WELL PURGE DATA

a. Purge Method: low flow w/ peri pump

b. Acceptance Criteria defined (see workplan)

- Temperature 3% -D.O. 10%
 - pH ± 0.1 unit - ORP ± 10 mV
 - Sp. Cond. 3% - Drawdown $< 0.3'$

c. Field Testing Equipment used:

Make

Model

Serial Number

YSI

600XL

HACH

21029

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1115	0	19.29	8.00	1.004	6.96	194.1	6.57	200	6.00	clear/no odor
1125	1	18.69	7.50	0.927	2.65	338.1	3.78		6.01	"
1135	2	18.54	7.45	0.926	1.43	382.2	3.46		6.01	"
1145	3	18.43	7.42	0.934	1.15	410.3	4.12		6.01	"
1155	4	18.53	7.42	0.954	1.34	401.9	3.00		6.02	"
1205	5	18.53	7.41	0.967	1.71	394.0	4.54	✓	6.01	"
1210	5.5	18.50	7.41	0.968	1.66	383.5	4.71	✓	6.01	"

d. Acceptance criteria pass/fail

Yes No N/A

Has required volume been removed ☒ ☐ ☐

Has required turbidity been reached ☒ ☐ ☐

Have parameters stabilized ☒ ☐ ☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION:

Method: Dedicated tubing

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
156-MWT-20160617		1	HNO ₃	METALS	1210
156-MWT-20160617		1	-	X-CR	1210
156-MWT-20160617		1	-	Ek, pH	1210

Comments

Signature

Shree Ravi

Date

06/17/2016.

Well ID: MW-8

Low Flow Ground Water Sample Collection Record

Client: PRG Date: 6/17/2016 Time: Start 0915 am/pm
 Project No: _____ Finish _____ am/pm
 Site Location: JERSEY CITY - METRO TOWERS
 Weather Conds: 80's, humid, sunny Collector(s): C FOSTER

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length _____ c. Length of Water Column _____ (a-b) Casing Diameter/Material 2" PVC
 b. Water Table Depth 4.35 d. Calculated System Volume (see back) _____

2. WELL PURGE DATA

a. Purge Method: LOW FLOW

b. Acceptance Criteria defined (see workplan)

- Temperature 3% -D.O. 10%
 - pH + 0.1 unit - ORP ± 10mV
 - Sp. Cond. 3% - Drawdown < 0.3'

c. Field Testing Equipment used:

Make
DIPPER T
PUMP
2100 Q
YSI

Model
HERO
GEOTECH
HACH
600XLM

Serial Number
1565T
470
1312C029706
01D0956A A

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0925		18.92	7.01	3424	3.39	-66.7	7.77	250	5.11	clear/no odor
0930		18.77	6.99	3226	3.37	-66.6	9.01	250	5.09	" "
0935		18.82	6.92	3152	3.47	-51.9	9.59	250	5.10	" "
0940		19.01	6.87	2894	3.55	-35.4	5.69	250	5.10	" "
0945		18.50	6.78	2578	3.71	-32.4	4.73	250	5.10	" "
0950		18.49	6.78	2546	3.73	-32.1	5.01	250	5.10	" "
0955		18.42	6.79	2534	3.75	-30.2	4.84	250	5.10	" "

d. Acceptance criteria pass/fail

Has required volume been removed

Yes ☒ No ☐ N/A

Has required turbidity been reached

☒ ☐ ☐

Have parameters stabilized

☒ ☐ ☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: LOW FLOW

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
156-MW8-20160617	SDM	1	HDPE	None	1005
156-MW8-20160617		1		None	1005
156-MW8-20160617		1		HNO3 Metals	1005

Comments _____

Signature _____

Date 6/17/16

Well ID: MW-9

Low Flow Ground Water Sample Collection Record

Client: PPG Date: 06/16/2016 Time: Start 1120 am/pm
 Project No: 60493065 Finish 1230 am/pm
 Site Location: METRO TOWERS - JERSEY CITY
 Weather Conds: 60's, OVERCAST Collector(s): S. RAVI

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 15.29 c. Length of Water Column 9.99ft (a-b) Casing Diameter/Material 2"
 b. Water Table Depth 5.30 d. Calculated System Volume (see back) 6.2 L

2. WELL PURGE DATA

a. Purge Method: low flow using peri-pump

b. Acceptance Criteria defined (see workplan)

- Temperature 3% -D.O. 10%
 - pH +0.1 unit - ORP ± 10mV
 - Sp. Cond. 3% - Drawdown < 0.3'

c. Field Testing Equipment used:

Make

Model

Serial Number

YSI600 XLHACH2100 B13120C029976

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1125	0	17.09	6.55	1.216	17.35	64.4	6.45	200	5.65	clear/no odor
1135	1	16.82	6.09	1.187	15.63	59.9	5.33	200	5.69	"
1145	2	16.77	6.20	1.122	15.03	60.2	5.96	200	5.71	"
1155	3	16.77	6.24	1.198	19.90	62.1	3.62	200	5.74	"
1205	4	16.77	6.22	1.192	37.27	64.4	3.54	200	5.76	"
1215	5	16.74	6.23	1.192	40.39	65.5	4.49	200	5.75	"
1225	6							200		"

d. Acceptance criteria pass/fail

Yes No N/A

Has required volume been removed

☒☐☐

Has required turbidity been reached

☒☐☐

Have parameters stabilized

☒☐☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION:

Method: dedicated tubing

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
156-MW9-20160616		1	HNO ₃	CCPW METALS	1220
156-MW9-20160616		1	NONE	XCR	1220
156-MW9-20160616		1	NONE	EH, PH	1220

Comments

Signature

Shree Ravi

Date

06/16/2016

Well ID: MW-10**Low Flow Ground Water Sample Collection Record**

Client: PPG SITE 156 Date: 6/17/2016 Time: Start 1030 am/pm
 Project No: _____ Finish _____ am/pm
 Site Location: JERSEY CITY NJ
 Weather Conds: 80's humid sunny Collector(s): C Foster / S Ravi

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 6.60 c. Length of Water Column _____ (a-b) Casing Diameter/Material
1" PVC
 b. Water Table Depth 3.01 d. Calculated System Volume (see back) _____

2. WELL PURGE DATAa. Purge Method: LOW FLOW

b. Acceptance Criteria defined (see workplan)

- Temperature 3% -D.O. 10%
 - pH + 0.1 unit - ORP ± 10mV
 - Sp. Cond. 3% - Drawdown < 0.3'

c. Field Testing Equipment used:

c. Field Testing Equipment used:				Make DIPPERT GEOPUMP 2100 Q 60 VSI		Model HERON GEO TECH HACIT 600XLM		Serial Number 15657 470 13121029906 01D0956AA		
Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1040		25.72	7.35	2133	9.66	68.6	2.65	250	4.85	clear no odor
1055		25.98	7.42	1849	5.86	88.5	2.95	250	4.75	" "
1110		26.05	7.44	1861	5.83	111.4	9.26	250	4.45	" "
1125		26.06	7.48	1842	5.53	112.9	4.13	250	4.41	" "
1140		26.04	7.48	1834	5.36	115.3	4.05	250	4.41	" "

d. Acceptance criteria pass/fail
 Has required volume been removed
 Has required turbidity been reached
 Have parameters stabilized
 If no or N/A - Explain below.

Yes No N/A
☒ ☐ ☐
☒ ☐ ☐
☒ ☐ ☐

(continued on back)

3. SAMPLE COLLECTION: Method: LOW FLOW

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
156-MW10-20160617	500ml HDPE	1	None	VCPA	1145
156-MW10-20160617	"	1	None	PH/Eh	1145
156-MW10-20160617	"	1	HNO3	Metals	1145

Comments _____

Signature _____

Date 6/17/16

Low Flow Ground Water Sample Collection Record

Client: PPG Date: 11-21-17 Time: Start 1105 am/pm am
 Project No: 60493065-19 Finish 1209 am/pm pm
 Site Location: PPG Site 156 Metro
 Weather Conds: Clear sky, high 49°F Collector: S. Paige

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 4.59 ^{13.51} c. Length of Water Column 8.92 (a-b) Casing Diameter/Material 2 inch/PVC
 b. Water Table Depth 4.59 d. Calculated System Volume (see back) NA

2. WELL PURGE DATA

a. Purge Method: LOW FLOW - Bladder Pump

b. Acceptance Criteria defined (see workplan)

- Temperature 3% - D.O. 10%
 - pH ± 1.0 unit - ORP ± 10 mV
 - Sp. Cond. 3% - Drawdown $< 0.3'$

c. Field Testing Equipment used:

Make YSI 650 Model 600XL MP Sonde Serial Number mutr-05F2276AB probe - 6502
LaMotte 2020WE 1836-0412

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color	Odor
1105		16.88	6.98	3.061	2.31	232.1	43.9	300	4.74	clear	none
1110		17.43	7.19	3.084	1.49	228.9	25.5	200	4.73	clear	none
1115		17.62	7.25	3.055	1.24	227.1	17.3	200	4.72	clear	none
1120		17.87	7.34	3.000	0.96	223.5	10.23	200	4.74	clear	none
1125		18.07	7.36	2.928	0.97	221.0	7.24	200	4.74	clear	none
1130		18.12	7.36	2.891	0.89	218.8	6.45	200	4.74	clear	none
1135		18.14	7.36	2.879	0.88	216.2	6.28	200	4.74	clear	none

d. Acceptance criteria pass/fail

Has required volume been removed ☐ Yes ☐ No ☒ N/A

Has required turbidity been reached ☒ Yes ☐ No ☐ N/A

Have parameters stabilized ☒ Yes ☐ No ☐ N/A

If no or N/A - Explain below.

No minimum purge volume required for low-flow sampling.

(continued on back)

3. SAMPLE COLLECTION:

Method: Dedicated Tubing

Sample ID Container Type No. of Containers Preservation Analysis Req. Time
156-MW8A-20171121 6 none/HNO₃ cr⁶/EH/PH/CCPNmetals 1150
156-MW8A-20171121X 3 " " " " " " 1151

Comments pump set at 10.5 ft bgs; screen interval 8-13 ft bgs
CCPN metals - Sb, Cr, Ni, Ti, V

Signature SPaige

Date 11-21-17

OST
mple →

<u>Time</u>	<u>Volume removed</u>	<u>Temp</u>	<u>pH</u>	<u>SuperCond</u>	<u>DO</u>	<u>ORP</u>	<u>Turbidity</u>	<u>Flow</u>	<u>Drawdown</u>
1140		18.08	7.36	2.806	0.79	214.0	6.18	200	4.74
1145		18.12	7.36	2.855	0.83	211.7	6.00	200	4.74
1150		18.23	7.35	2.843	0.79	208.8	5.41	200	4.74
1209		18.69	7.35	2.848	0.83	200.8	3.41	200	4.74

Low Flow Ground Water Sample Collection Record

Client: PPG Date: 11-21-17 Time: Start 1223 am/pm
 Project No: 60493065-19 Finish 1320 am/pm
 Site Location: PPG Site 156 Metro
 Weather Conds: Clear sky, high 49°F Collector: S. Paige

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 25.46 c. Length of Water Column 23.44 (a-b) Casing Diameter/Material 2 inch PVC
 b. Water Table Depth 2.02 d. Calculated System Volume (see back) NA

2. WELL PURGE DATA

a. Purge Method: Low Flow - Bladder Pump

b. Acceptance Criteria defined (see workplan)

- Temperature 3% -D.O. 10%
 - pH ± 1.0 unit - ORP ± 10 mV
 - Sp. Cond. 3% - Drawdown $< 0.3'$

c. Field Testing Equipment used:

Make Model Serial Number
YSI 650 600 XL MPsonde Meter-05 F2276AB Probe-6562
LaMotte 2020we 1836-0412

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (mS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color	Odor
1230		18.16	8.09	12.64	1.93	-108.9	9.96	200	0.95	clear	none
1235		18.17	8.18	15.03	0.60	-140.7	8.17	200	4.21	clear	none
1240		18.36	8.35	14.11	0.30	-180.9	7.46	200	5.18	clear	none
1245		18.69	8.38	13.65	0.01	-185.1	8.47	150	5.52	clear	none
1250		18.66	8.39	13.50	0.02	-198.7	6.21	150	5.87	clear	none
1255		18.79	8.39	13.40	0.04	-207.4	6.18	150	6.00	clear	none
1300		18.98	8.39	13.30	0.06	-199.2	5.97	150	6.17	clear	none

d. Acceptance criteria pass/fail

Has required volume been removed ☐ Yes ☐ No ☒ N/A
 Has required turbidity been reached ☒ ☐ ☐
 Have parameters stabilized ☒ ☐ ☐

If no or N/A - Explain below.

No minimum purge volume required for low-flow sampling.

(continued on back)

3. SAMPLE COLLECTION: Method: Dedicated Tubing

Sample ID Container Type No. of Containers Preservation Analysis Req. Time
156-MW8B-20171121 3 none/HNO₃ Cr⁶/EH/pH 1300
CCPW metals

Comments pump set at 22.5ft bgs; screen 20-25ft

CCPW metals - Sb, Cr, Ni, Ti, V

Signature S. Paige

Date 11-21-17

Post sample Reading:

Temp- 20.25
 pH- 8.37
 Spec Cond- 12.12
 DO- 0.28
 ORP- -154.8
 Turbidity- 3.28
 Flow- 150
 Drawdown- 7.23
 clear/no odor

Well ID: 156-MW8A
 Client: PPG
 Project Number: PPG - Site 156, Jersey City, NJ
 Site Location: 60493065-19
 Field Personnel: Stefanie Paige

Date: 12-21-17
11/21/2017
 Start Time (24 HR): 930
 Finish Time (24 HR): 1040
 Weather Conditions: Clear sky, 32°F

Well & Water Level Data (Measured from Top of Casing)

Well Length (feet): 2-inches
 Depth to Water (feet): 4.52
 Depth to Bottom (feet): 13.51
 Length of Water Column (feet): 8.99
 Screened Interval (feet bTOC): 8.0-13.0 ft bTOC

Casing Diameter (inches): 2-inches
 Material: PVC
 Calculated System Volume (gallons): _____
 Pump Depth Intake (feet below TOC): 10.5 ft bgs

Field Testing Equipment

Equipment	Make	Model	Serial Number
Multimeter	YSI	Sonde: 6920, Display: 650	Sonde: <u>15K101833</u> Display: _____
Turbidimeter	Lamotte <u>Hach</u>	2020WE <u>2100Q</u>	<u>160100047147</u>
Pump	QED	MP Bladder Pump	Pine #: _____

Water Quality Indicator Parameters Stability Criteria (NJDEP FSPM 2005)

Water Level Drawdown	< 0.3 ft	Dissolved Oxygen	± 10%
pH	± 0.1 unit	ORP	± 10 millivolts
Specific Conductance	± 3%	Turbidity	± 10% for values greater than 1 NTU
Temperature	± 3%		

Purge Method: low flow (bladder pump)

Water Quality Indicator Parameters Measurements

Time 24 Hr	Drawdown feet	Flow Rate mL/min	Purge Vol. Gallons	Temp. °C	Spec. Cond. µS/cm ²	pH s.u.	ORP mV	DO mg/L	Turbidity NTU	Color/ Odor
950	4.63	200	0.25	14.44	3.154	7.30	66.1	1.83	20.6	Clear/none
955	4.63	200	0.50	14.81	3.094	7.32	56.1	0.87	16.3	" "
1000	4.65	200	0.75	14.87	3.009	7.32	51.6	0.58	8.07	" "
1005	4.66	200	1.00	15.03	2.939	7.32	49.5	0.44	6.89	" "
1010	4.67	200	1.25	14.96	2.918	7.31	47.8	0.39	6.51	" "
1015	4.67	200	1.50	14.89	2.900	7.31	47.8	0.34	6.50	" "
1020	4.68	200	1.75	14.93	2.899	7.31	46.6	0.33	6.33	" "
1025	4.68	200	2.00	14.96	2.897	7.31	46.5	0.33	6.30	" "
1037	4.70	200		14.10	2.869	7.34	42.7	0.50	3.07	" "

(additional readings on page 2)

Sample Collection

Sample ID	# Containers	Method:	Preservative	Analysis Requested	Time (24 hr)
156-MW8A-20171121 1221	2 500 ml poly	direct from tubing	none	Cr6/EH/PH	1025
156-MW8A-20171121 1221	2 500 ml poly		HNO3	CCPW Metals (Sb, Cr, Ni, Ti, V)	1025
156-MW8A-20171121X 1221X	1 500 ml poly		none	Cr6/EH/PH	1026
156-MW8A-20171121X 1221X	1 500 ml poly		HNO3	CCPW Metals (Sb, Cr, Ni, Ti, V)	1026

Signature: Stefanie Paige

Date: 12-21-17
11/21/2017

Well ID: 156-MW8B
 Client: PPG
 Project Number: 60493065-19
 Site Location: PPG - Site 156, Jersey City, NJ
 Field Personnel: Stefanie Paige

Date: 12-21-17
11/21/2017
 Start Time (24 HR): 1120
 Finish Time (24 HR): 1215
 Weather Conditions: Clear skies, 32°F

Well & Water Level Data (Measured from Top of Casing)

Well Length (feet): 2-inches
 Depth to Water (feet): 1.12
 Depth to Bottom (feet): 25.46
 Length of Water Column (feet): 24.34
 Screened Interval (feet bTOC) 20.0-25.0 ft bTOC

Casing Diameter (inches): 2-inches
 Material: PVC
 Calculated System Volume (gallons): _____
 Pump Depth Intake (feet below TOC) 22.5 ft bgs

Field Testing Equipment

Equipment	Make	Model	Serial Number
Multimeter	YSI	Sonde: 6920, Display: 650	Sonde: <u>15K10183</u> Display: _____
Turbidimeter	Lamotte <u>Hach</u>	2020WE <u>2100Q</u>	<u>116010C047147</u>
Pump	QED	MP Bladder Pump	Pine #: _____

Water Quality Indicator Parameters Stability Criteria (NJDEP FSPM 2005)

Water Level Drawdown	< 0.3 ft	Dissolved Oxygen	± 10%
pH	± 0.1 unit	ORP	± 10 millivolts
Specific Conductance	± 3%	Turbidity	± 10% for values greater than 1 NTU
Temperature	± 3%		

Purge Method: low flow (bladder pump)

Water Quality Indicator Parameters Measurements

Time 24 Hr	Drawdown feet	Flow Rate mL/min	Purge Vol. Gallons	Temp. °C	Spec. Cond. µS/cm ²	pH s.u.	ORP mV	DO mg/L	Turbidity NTU	Color/ Odor
1135	8.50	250	0.5	15.67	17.09	8.23	-194.3	0.64	10.8	Clear/none
1140	8.68	250	1.0	16.51	17.31	8.17	-206.1	0.20	6.01	" "
1145	8.74	250	1.5	16.39	16.39	8.14	-218.3	0.18	7.22	" "
1150	8.80	250	2.0	16.18	11.64	8.26	-220.9	0.16	5.84	" "
1155	8.91	250	2.5	15.51	10.14	8.25	-183.1	0.14	5.90	" "
1200	9.03	200	2.75	15.45	10.08	8.22	-161.6	0.13	5.72	" "
1205	9.13	200	3.0	15.63	10.05	8.17	-156.4	0.12	5.56	" "
1210	9.20	200	3.25	16.05	10.24	8.11	-151.1	0.12	5.14	" "
1215	9.30	200	3.50	15.98	10.12	8.10	-149.4	0.11	5.01	" "
1222	9.48	200	4.0	16.29	11.22	7.86	-150.8	0.15	4.37	" "

(additional readings on page 2)

Sample Collection

Sample ID	# Containers	Method:	Preservative	Analysis Requested	Time (24 hr)
156-MW8B-20171121	1 500 ml poly	direct from tubing	none	Cr6/EH/PH	1215
156-MW8B-20171121 1221	1 500 ml poly		HNO3	CCPW Metals (Sb, Cr, Ni, Ti, V)	1215

Signature: SPaige

Date: 12-21-17
11/21/2017