

## **Appendix C**

### **Well Decommissioning Reports**

Remedial Action Report - Site 133 East (AOC 133E-1A and AOC 133E-2A) and Site 135 (AOC 135-1) Soil  
Garfield Avenue Group  
PPG, Jersey City, New Jersey

## **Well Decommissioning Records for Wells Decommissioned During Remediation**

**WELL DECOMMISSIONING REPORT**

**PROPERTY OWNER:** PPG INDUSTRIES, INC. PPG INDUSTRIES, INC.

Company/Organization: PPG Industries, Inc.

Address: One PPG Place Pittsburgh, Pennsylvania 15272

**WELL LOCATION:** PPG Site

Address: 22 HALLADAY STREET

County: Hudson Municipality: Jersey City Lot: 1 Block: 21509

Easting (X): 610780 Northing (Y): 682140  
Coordinate System: NJ State Plane (NAD83) - USFEET

**DATE WELL  
DECOMMISSIONED:** December 13, 2014

**WELL USE:** MONITORING

**Other Use(s):** \_\_\_\_\_

**Local ID:** 133-MW2A

Reason for Decommissioning: No longer in use

Finished Well Depth (ft.): \_\_\_\_\_

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	3	2	PVC	sch 40
Screen	3	13	2	PVC	.020

**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	13	2	0	5	94	8
Sand/Gravel							

**ADDITIONAL INFORMATION**

Obstructions: No

Authorization Official: Brian Buttari

Obstruction Type: \_\_\_\_\_

Authorization Number: A1411053

Alternative Decomm. Method? No

Authorization Date: November 12, 2014

Method Used \_\_\_\_\_

ATTACHMENTS: \_\_\_\_\_

**WELL DECOMMISSIONING REPORT**

**PROPERTY OWNER:** PPG INDUSTRIES, INC. PPG INDUSTRIES, INC.

Company/Organization: PPG Industries, Inc.

Address: One PPG Place Pittsburgh, Pennsylvania 15272

**WELL LOCATION:** PPG Site

Address: 22 HALLADAY STREET

County: Hudson Municipality: Jersey City Lot: 1 Block: 21509

Easting (X): 610786 Northing (Y): 682144  
Coordinate System: NJ State Plane (NAD83) - USFEET

**DATE WELL  
DECOMMISSIONED:** December 3, 2014

**WELL USE:** MONITORING

**Other Use(s):** \_\_\_\_\_ **Local ID:** 133-MW2B

Reason for Decommissioning: No longer in use

Finished Well Depth (ft.): \_\_\_\_\_ 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	10	6	Steel	sch 40
Screen	0	24	2	PVC	.020

**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	34	6	2	5	94	8
Sand/Gravel							

**ADDITIONAL INFORMATION**

Obstructions: No Authorization Official: Brian Buttari

Obstruction Type: \_\_\_\_\_ Authorization Number: A1411048

Alternative Decomm. Method? No Authorization Date: November 12, 2014

Method Used \_\_\_\_\_

ATTACHMENTS: \_\_\_\_\_

Remedial Action Report - Site 133 East (AOC 133E-1A and AOC 133E-2A) and Site 135 (AOC 135-1) Soil  
Garfield Avenue Group  
PPG, Jersey City, New Jersey

## **Alternate Well Decommissioning Memorandum**

## Memorandum

To New Jersey Department of Environmental Protection Bureau of  
Water Allocation & Well Permitting Page 1

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CC Dave Doyle, NJDEP  
Rob Schmitt, Hampshire  
Chris Fiore, JCRA  
Jody Overmyer, PPG  
Mark Terril, PPG  
Rich Feinberg, PPG  
Joseph Lagrotteria, LeClairRyan  
Dorothy Laguzza, LeClairRyan  
Bill Spronz, AECOM  
Shannon Gleason, AECOM

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Subject Request for Alternate Well Decommissioning Reports – Garfield Avenue Group Sites

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From Abby Small  
Aimee Ruitter

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Date July 24, 2019

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On behalf of PPG, AECOM is requesting alternate well decommissioning reports for eight wells located at the Garfield Avenue (GA) Group Sites in Jersey City, New Jersey. This letter provides the well information, the circumstances leading to the loss of or damage to the wells, and a description of the actions taken to locate the wells in accordance with the New Jersey Department of Environmental Protection (NJDEP) Bureau of Water Allocation & Well Permitting (BWAWP) June 2017 *Guidance for Damaged, Destroyed, or Lost Wells*.

### **Background**

Between June 2010 and March 31, 2019, approximately 985,000 tons of hazardous and non-hazardous wastes were excavated from the GA Group Sites. The GA Group Sites consist of Hudson County Chromate (HCC) Sites 114, 132, 133 East, 133 West, 135, 137, and 143, adjacent properties, and adjacent roadways.

Prior to excavation activities, monitoring wells within the proposed excavation footprint were either decommissioned or were to be protected to the extent possible during remedial activities. Wells were decommissioned by a New Jersey licensed driller in accordance with the requirements of *Well Construction and Maintenance; Sealing of Abandoned Wells, N.J.A.C. 7:9D* and appropriate documentation was submitted to the NJDEP BWAWP. To date, more than 180 wells have been properly decommissioned within the GA Group.

During remedial excavation and backfilling activities, eight wells that were to be protected for future use were lost and cannot be decommissioned in accordance with the *Well Construction & Maintenance; Sealing of*

*Abandoned Wells, N.J.A.C. 7:9D. Table 1* (attached) provides the well information for each lost or damaged well. **Figure 1** shows the location of each well. Well construction specifications are included in **Attachment 1**.

The following sections describe the circumstances resulting in the loss or damage of the wells and the attempt to locate the lost wells.

**Monitoring Wells 135-MW3A and 135-MW3B (Permits E201317207 and E201317208) Located on HCC Site 135**

In August and September 2016, remedial excavation and backfilling with dense-graded aggregate (DGA) took place on HCC Site 135 (Block 21501, Lot 2) adjacent to and up to the location of monitoring wells 135-MW3A and 135-MW3B. These wells could not be located during a December 6, 2016 synoptic gauging event.

On March 9, 2017, a field effort was undertaken to locate the wells. A photolog of the field effort is included in **Attachment 2**. The well locations were staked out using global positioning system (GPS) technology. Using an excavator, one to two feet of soil was removed at the surveyed location of well 135-MW3A (Photo 1 in **Attachment 2**). No evidence of the well was encountered. One to two feet of material was then excavated at the surveyed location of well 135-MW3B (Photo 2 in **Attachment 2**) and a damaged metal external casing and polyvinyl chloride (PVC) casing were encountered indicating that the well was damaged beyond repair (Photo 3 in **Attachment 2**). A trench was dug between the observed debris at 135-MW3B and the location of 135-MW3A and no additional signs of 135-MW3A were encountered (Photo 4 in **Attachment 2**). Due to the need for data at the site, new wells (135-P3C-MW102S, permit number E201802598 and 135-MW3BR, permit number E201802596) were installed (at the same approximate locations) to replace the damaged/lost wells.

**Monitoring Wells MW11B, MW1D, MW3B, and MW4C (Permit 26-00076-983, 26-00068-662, 26-00069-775, 26-00077-353) Located on HCC Site 114**

Excavation on HCC Site 114 occurred between June 2013 and December 2013. The well information, terminal excavation elevation at each well location, approximate excavation depth, and ground surface elevation in April/May 2019 at each well location is shown on **Table 2**.

**Table 2 – Well Information Compared to Excavation and Restoration Elevations – Monitoring Wells MW11B, MW1D, MW3B, and MW4C**

Well Name	Well Permit #	Top of Well Casing Elevation (ft NAVD88)	Well Depth (ft bgs)	Approximate Elevation of Bottom of Well (ft NAVD88)	Terminal Excavation Elevation (ft NAVD88)	Restoration Surface Elevation 2019 (ft NAVD88)
MW11B	26-00076-983	14.3	36.0	-18.8	-0.2	10.9
MW1D	26-00068-662	15.6	44.0	-28.4	0.1	13.9
MW3B	26-00069-775	13.8	42.0	-28.2	-1.0	14.4
MW4C	26-00077-353	12.7	69.0	-56.3	3.2	13.2

**Notes:**

bgs - below ground surface

ft - feet

NAVD88 - North American Vertical Datum of 1988

Between August 2013 and October 2015, backfilling and re-grading of HCC Site 114 with DGA occurred. Surface restoration of the site was completed in January 2018.

In November 2013, correspondence from the field team indicated that these wells were destroyed or damaged beyond repair during remedial excavation.

On April 19, 2019, an attempt was made to locate the wells; the well locations were staked by a licensed surveyor and the surface elevation was recorded (Photos 5 through 8 in **Attachment 2**). The 2019 ground surface elevation of DGA at each well location is shown in **Table 2**. At two of the well locations, the 2019 ground surface elevation was greater than 1 ft below the installed top of casing elevation confirming the field observations that the wells were destroyed or damaged, and not just buried, during excavation and/or restoration activities.

**Recovery Wells REL6 and REL7 (Permits E201200587 and E201200588) Located on HCC Site 114**

Recovery wells REL6 and REL7 were installed in February 2012 following the completion of excavation in the IRM #1 area of HCC Site 114. Backfilling and re-grading of the IRM #1 area of HCC Site 114 with DGA occurred between July 2010 and June 2014.

During a September 2015 synoptic gauging event, the wells could not be located.

On May 8, 2019, an attempt was made to locate the wells; the well locations were staked by a licensed surveyor and the surface elevation was recorded (Photo 9 and Photo 10 in **Attachment 2**). The 2019 ground surface elevation of DGA at each well location is shown in **Table 3** and ranged between 0.3 and 1.5 feet below the installed top of casing indicating that the wells were destroyed or damaged, and not just buried, during backfilling activities.

**Table 3 – Well Information Compared to Restoration Elevations - Recovery Wells REL6 and REL7**

<b>Well Name</b>	<b>Well Permit #</b>	<b>Top of Well Casing Elevation (ft NAVD88)</b>	<b>Well Depth (ft bgs)</b>	<b>Restoration Surface Elevation 2019 (ft NAVD88)</b>
REL6	E201200587	14.7	16.0	13.2
REL7	E201200588	13.4	14.5	13.1

**Notes:**

bgs - below ground surface  
 ft - feet  
 NAVD88 - North American Vertical Datum of 1988

**Conclusion**

Based on the information included in this memorandum, AECOM, on behalf of PPG, is requesting alternate well decommissioning reports for the eight wells described herein located on the GA Group Sites in Jersey City, New Jersey.

Please contact us if additional information is required.

Aimee Rüter, PE  
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 612-376-2367

**Attachments:**

Table 1	Well Information – Lost or Damaged Wells
Figure 1	Site Plan
Attachment 1	Well Construction Specifications
Attachment 2	Photograph Log

**Table 1**  
**Well Information - Lost or Damaged Wells**  
**Garfield Avenue Group**  
**PPG, Jersey City, New Jersey**

Well Name	NJDEP PI ID	HCC Site	Well Permit #	Northing (ft NAD83)	Easting (ft NAD83)	Well Depth (ft bgs)	Block	Lot
135-MW3A	246332	135	E201317207	682308.2	611125.5	15.0	21509	2
135-MW3B	246332	135	E201317208	682301.5	611114.8	33.0	21509	2
MW11B	G000005480*	114	26-00076-983	683597.5	611383.9	36.0	21501	16
MW1D	G000005480*	114	26-00068-662	683831.3	611427.7	44.0	21501	16
MW3B	G000005480*	114	26-00069-775	683929.2	611160.7	42.0	21501	20
MW4C	G000005480*	114	26-00077-353	683246.7	610824.8	69.0	21501	18
REL6	G000005480*	114	E201200587	611180.4	683559.2	16.0	21501	17
REL7	G000005480*	114	E201200588	611198.6	683599.7	14.5	21501	20

**Notes:**

\*Remedial activities associated with CCPW remediation at Site 114 were previously tracked under PI number G000008791. In June 2018, the NJDEP consolidated remedial activities at Site 114 under PI number G000005840.

Wells are located in Hudson County, Jersey City, New Jersey.

The responsible party associated with the listed wells is PPG, One PPG Place, Pittsburgh, PA, 15219, 412-434-2708.

bgs - below ground surface

CCPW - Chromate Chemical Production Waste

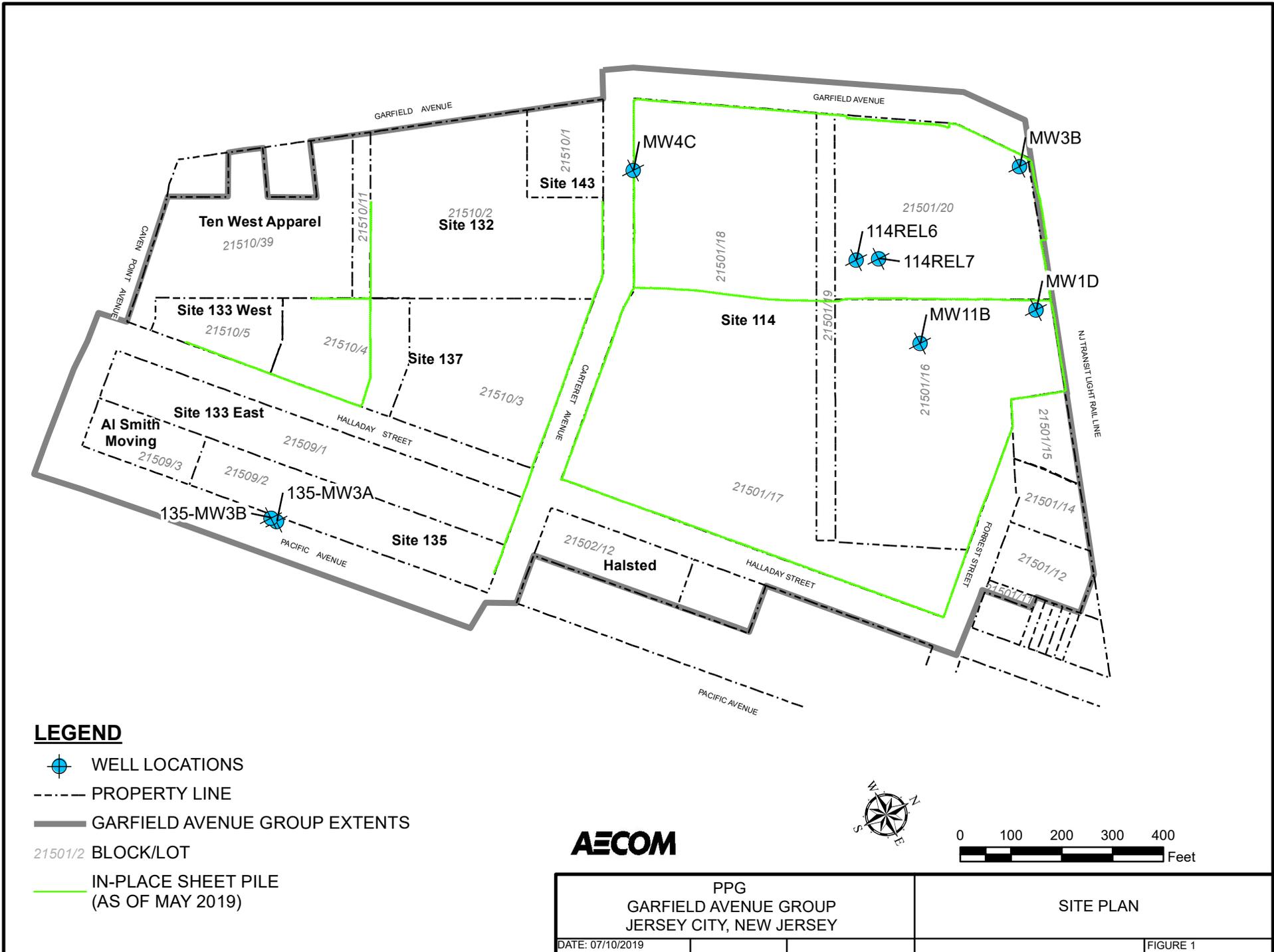
ft - feet

HCC - Hudson County Chromate

NAD83 - North American Datum of 1983

NJDEP - New Jersey Department of Environmental Protection

PI - Program Interest



**LEGEND**

- WELL LOCATIONS
- PROPERTY LINE
- GARFIELD AVENUE GROUP EXTENTS
- 21501/2 BLOCK/LOT
- IN-PLACE SHEET PILE (AS OF MAY 2019)

**AECOM**

PPG  
GARFIELD AVENUE GROUP  
JERSEY CITY, NEW JERSEY



DATE: 07/10/2019

FIGURE 1

## **ATTACHMENT 1**

### **Well Construction Specifications**

Note that a well record was not available for well MW4C. A well construction diagram is included.

**MONITORING WELL RECORD**

**PROPERTY OWNER:** N/A 900 GARFIELD AVE . LLC

Company/Organization: 900 Garfield Ave . LLC

Address: 1735 Market St #A-400 Philadelphia, Pennsylvania 19103

**WELL LOCATION:** Site 114

Address: 900 Garfield Ave.

County: Hudson Municipality: Jersey City Lot: 1 Block: 2026.A

Easting (X): <u>611172</u> Northing (Y): <u>683542</u> Coordinate System: <u>NJ State Plane (NAD83) - USFEET</u>
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**DATE WELL STARTED:** March 1, 2012

**DATE WELL COMPLETED:** March 1, 2012

**WELL USE:** RECOVERY

**Other Use(s):** \_\_\_\_\_

**Local ID:** REL - 6

**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	11		
Casing	0	13	1.5	Steel	sch 40
Screen	13	16	4	steel	.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	2	11	1.5	6	114	10
Gravel Pack	2	13	11	1.5		#0	
Gravel Pack	13	16	11	4		#0	

Grouting Method: Pressure method (Tremie Pipe)

Drilling Method: Hollow Stem Augers

**ADDITIONAL INFORMATION**

Protective Casing: Yes  
 Static Water Level: 3 ft. below land surface  
 Water Level Measure Tool: m scope  
 Well Development Period: 1 hrs.  
 Method of Development: pump  
 Pump Type: \_\_\_\_\_

Pump Capacity: \_ gpm  
 Total Design Head: \_ ft.  
 Drilling Fluid: \_\_\_\_\_  
 Drill Rig: cme 1050  
 Health and Safety Plan Submitted? Yes

**ATTACHMENTS:**

**GEOLOGIC LOG**

0 - 10: grey GM - Silty gravels, gravel-sand-silt mixtures
10 - 13: grey GM - Silty gravels, gravel-sand-silt mixtures
13 - 16: black OL - Organic silts and organic silty clays of low plasticity

**ADDITIONAL INFORMATION:**

Driller of Record: Wesley M Eichfeld, MASTER LICENSE # 592848

Company: SGS NORTH AMERICA INC.

**MONITORING WELL RECORD**

**PROPERTY OWNER:** N/A 900 GARFIELD AVE . LLC

Company/Organization: 900 Garfield Ave . LLC

Address: 1735 Market St #A-400 Philadelphia, Pennsylvania 19103

**WELL LOCATION:** Site 114

Address: 900 Garfield Ave.

County: Hudson Municipality: Jersey City Lot: 1 Block: 2026.A

Easting (X): 611201 Northing (Y): 683599  
 Coordinate System: NJ State Plane (NAD83) - USFEET

**DATE WELL STARTED:** February 10, 2012

**DATE WELL COMPLETED:** February 10, 2012

**WELL USE:** RECOVERY

**Other Use(s):** \_\_\_\_\_

**Local ID:** REL - 7

**WELL CONSTRUCTION**

Total Depth Drilled (ft.): 14.5 Finished Well Depth (ft.): 14.5 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	14.5	11		
Casing	0	11.5	1.5	Steel	sch 40
Screen	11.5	14.5	4	ss	.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	2	11	1.5	6	114	10
Gravel Pack	2	11.5	11	1.5		#0	
Gravel Pack	11.5	14.5	11	4		#0	

Grouting Method: Pressure method (Tremie Pipe)

Drilling Method: Hollow Stem Augers

**ADDITIONAL INFORMATION**

Protective Casing: Yes  
 Static Water Level: 3 ft. below land surface  
 Water Level Measure Tool: m scope  
 Well Development Period: 1 hrs.  
 Method of Development: pump  
 Pump Type: \_\_\_\_\_

Pump Capacity: \_ gpm  
 Total Design Head: \_ ft.  
 Drilling Fluid: \_\_\_\_\_  
 Drill Rig: cme 1050  
 Health and Safety Plan Submitted? Yes

**ATTACHMENTS:**

**GEOLOGIC LOG**

0 - 10: grey GM - Silty gravels, gravel-sand-silt mixtures  
 10 - 12: grey GM - Silty gravels, gravel-sand-silt mixtures  
 12 - 14.5: grey GM - Silty gravels, gravel-sand-silt mixtures

**ADDITIONAL INFORMATION:**

Driller of Record: Jeff Rausa, JOURNEYMAN LICENSE # 0020129

Company: SGS NORTH AMERICA INC.

**MONITORING WELL RECORD**

**PROPERTY OWNER:** N/A NARULA REAL ESTATE ASSOC., LLC

Company/Organization: Narula Real Estate Assoc., LLC

Address: 389 Old Court House Rd New Hyde Park, New York 11040

**WELL LOCATION:** PPG Industries

Address: Pacific Ave

County: Hudson Municipality: Jersey City Lot: 2 Block: 21509

Easting (X): 611143 Northing (Y): 682311  
 Coordinate System: NJ State Plane (NAD83) - USFEET

**DATE WELL STARTED:** November 26, 2013

**DATE WELL COMPLETED:** November 27, 2013

**WELL USE:** MONITORING

**Other Use(s):** \_\_\_\_\_ **Local ID:** 135-MW3A

**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	8		
Casing	0	10	2	PVC	sch 40
Screen	10	15	2	pvc	.10

	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		300	8
Gravel Pack	8	15	8	2	medium sand		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Hollow Stem Augers

**ADDITIONAL INFORMATION**

Protective Casing: No  
 Static Water Level: 8 ft. below land surface  
 Water Level Measure Tool: m scope  
 Well Development Period: 1 hrs.  
 Method of Development: pump  
 Pump Type: \_\_\_\_\_  
 Pump Capacity: \_ gpm  
 Total Design Head: \_ ft.  
 Drilling Fluid: NA  
 Drill Rig: mobil b 80  
 Health and Safety Plan Submitted? Yes

**ATTACHMENTS:**

**GEOLOGIC LOG**

0 - 1: black OT - Other black top  
 1 - 5: gray SM - Silty sands, sand-silt mixtures 2in pvc  
 5 - 10: tan SM - Silty sands, sand-silt mixtures 2in pvc  
 10 - 15: red SM - Silty sands, sand-silt mixtures 2in pvc

**ADDITIONAL INFORMATION:**

Driller of Record: Thomas Lynch,  
MONITORING LICENSE # 435631

Company: SGS NORTH AMERICA INC.

**MONITORING WELL RECORD**

**PROPERTY OWNER:** N/A NARULA REAL ESTATE ASSOC., LLC

Company/Organization: Narula Real Estate Assoc., LLC

Address: 389 Old Court House Rd New Hyde Park, New York 11040

**WELL LOCATION:** PPG Industries

Address: Pacific Ave

County: Hudson Municipality: Jersey City Lot: 2 Block: 21509

Easting (X): 611128 Northing (Y): 682297  
 Coordinate System: NJ State Plane (NAD83) - USFEET

**DATE WELL STARTED:** December 4, 2013  
**DATE WELL COMPLETED:** December 15, 2013

**WELL USE:** MONITORING

**Other Use(s):** \_\_\_\_\_ **Local ID:** 135-MW3B

**WELL CONSTRUCTION**

Total Depth Drilled (ft.): 33 Finished Well Depth (ft.): 33 Well Surface: Flush Mount

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	33	8		
Borehole	0	20	12		
Casing	0	28	4	PVC	sch40
Casing	0	20	8	Steel	sch80
Screen	28	33	4	pvc	.10

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in.)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	20	12	8		1700	60
Grout	20	25	8	4		480	15
Gravel Pack	25	33	8	4	medium sand		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Mud Rotary

**ADDITIONAL INFORMATION**

Protective Casing: No  
 Static Water Level: 8 ft. below land surface  
 Water Level Measure Tool: m scope  
 Well Development Period: 1 hrs.  
 Method of Development: pump  
 Pump Type:

Pump Capacity: \_ gpm  
 Total Design Head: \_ ft.  
 Drilling Fluid: mud,water  
 Drill Rig: mobil drill b 80  
 Health and Safety Plan Submitted? Yes

**ATTACHMENTS:**

**GEOLOGIC LOG**

0 - 1: black OT - Other black top  
 1 - 10: red brown SM - Silty sands, sand-silt mixtures 8in steel 4in pvc  
 10 - 20: brown black PT - Peat, muck, and other highly organic soils 8in steel 4in pvc  
 20 - 33: red SM - Silty sands, sand-silt mixtures 4in pvc

**ADDITIONAL INFORMATION:**

Driller of Record: Thomas Lynch, MONITORING LICENSE # 435631

Company: SGS NORTH AMERICA INC.

**MONITORING WELL RECORD**

OWNER IDENTIFICATION PSEG SERVICES CORP

Address 80 PARK PLAZA

City Newark State New Jersey

Zip Code 07102

WELL LOCATION - If not the same as owner please give address

Owner's Well No. MW-1D

County Hudson Municipality Jersey City

Lot No. 2,4,5 Block No. 2026.1

Address HALLIDAY & FORREST STS FORMER HALLIDAY ST GAS WOR

WELL USE Monitoring

DATE WELL STARTED 8-7-03

DATE WELL COMPLETED 8-11-03

**WELL CONSTRUCTION**

Total Depth Drilled 50 ft.

Finished Well Depth 44 ft.

Borehole Diameter:

Top 12 in.

Bottom 6 in.

Well was finished:  above grade

flush mounted

If finished above grade, casing height (stick up) above land surface \_\_\_\_\_ ft.

protective casing installed?

Yes  No

Static Water Level after drilling 3 ft.

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	34	2	PVC	40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	0	17	6	Steel	144 Wall
Open Hole or Screen (No. Used <u>10</u> )	34	44	2	PVC	40
Blank Casings (No. Used <u>)</u>	-				
Tail Piece	32	50	#15	Sand	Filler
Gravel Pack	30	32	#100	Sand	Seal
Grout	0	30		Neat Cement Bentonite	500 lbs 120 lbs

Well was developed for 1/2 hours

at 1 gpm

Method of development Pump

Pump Capacity \_\_\_\_\_ gpm

Pump Type \_\_\_\_\_

Drilling Fluid \_\_\_\_\_

Type of Rig Tailor

Health and Safety Plan Submitted?  Yes  No

Level of Protection used on site (circle one) None (D) C B A

Grouting Method Neat

Drilling Method HSA/Mud

**GEOLOGIC LOG**

Note each depth where water was encountered in consolidated formations

2" depth  
2"-17" - Very Wet  
silt, shale, sand  
17"-28" - Moist silt, sand  
shale, clay  
28"-32" - Moist F-Sand, silt  
& clay  
32"-50" - Moist F-Sand,  
silt & clay

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING INC

Well Driller (Print) Scott ALBERTSON H

Driller's Signature Scott Albertson

Station No. F1322 Date 10/6/03

**MONITORING WELL RECORD**

WNER IDENTIFICATION PPG INDUSTRIES INC.

Address 4325 ROSANNA DR.

City ALLISON PARK State Pennsylvania Zip Code 15101

WELL LOCATION - If not the same as owner please give address

Owner's Well No. PPG-3A

County Hudson Municipality Jersey City Lot No. 1 Block No. 2026.1

Address GARFIELD & CARTERET AVES.

WELL USE Monitoring

DATE WELL STARTED 11-19-03

DATE WELL COMPLETED 11-20-03

**WELL CONSTRUCTION**

Total Depth Drilled 57 ft.

Finished Well Depth 42 ft.

Borehole Diameter:

Top 12 in.

Bottom 6 in.

Well was finished:  above grade

flush mounted

If finished above grade, casing height (stick up) above land surface \_\_\_\_\_ ft.

Steel protective casing installed?

Yes  No

Static Water Level after drilling 49 ft

Water Level was Measured Using TIME

Well was developed for 1 hours

at 1 gpm

Method of development Pump

Pump Capacity \_\_\_\_\_ gpm

Pump Type \_\_\_\_\_

Drilling Fluid \_\_\_\_\_ Type of Rig tailin;

Health and Safety Plan Submitted?  Yes  No

Level of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ADVANCED DRILLING INC

Well Driller (Print) RICHARD EMPSON

Driller's Signature Richard Empson

Registration No. J1312 Date 1/18/04

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	32	2	PVC	40
Middle Casing (for triple cased wells only)	-				
Outer Casing (largest diameter)	0	10	6	steel	144 Well
Open Hole or Screen (No. Used <u>10</u> )	32	42	2	PVC	40
Blank Casings (No. Used _____)	-				
	30	57	#1	Sand	Filter
Gravel Pack	28	30	#	00 sand	seal
Grout	0	28		Neat Cement	600 lbs
		10		Densite	100 lbs

Grouting Method trimmer

Drilling Method HSA/Mud Rotary

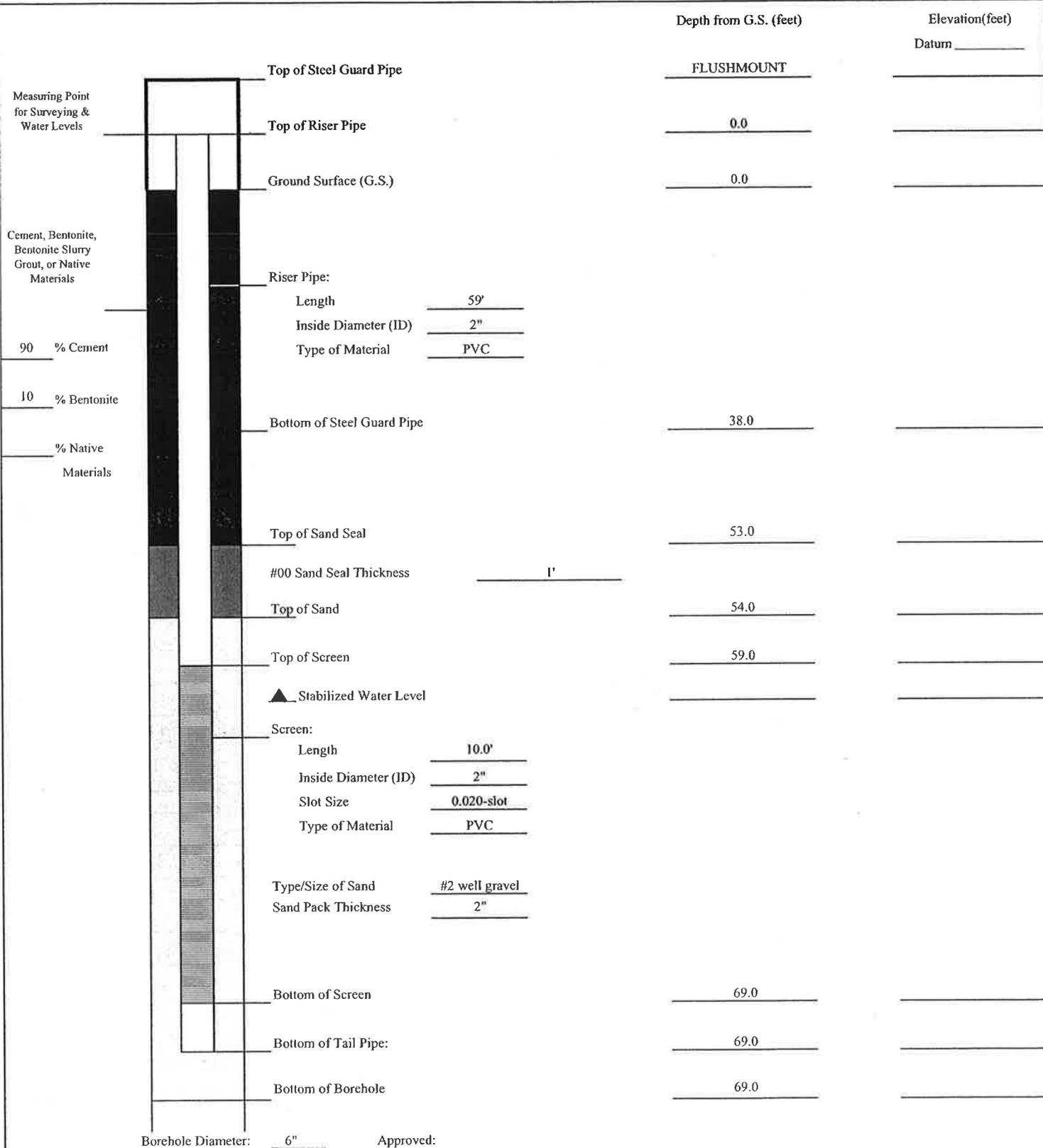
**GEOLOGIC LOG**

Note each depth where water was encountered in consolidated formations

8" Asphalt + gravel  
 8' - 8' - Dry & wet sand, silt  
 gravel, wood chips, fill  
 8' - 22' - Moist wet silt/clay  
 22' - 30' - wet silt & F-sand  
 30' - 31' - wet sand - gravel  
 31' - 57' - wet silt - sand, gravel

Client: PPG Industries, Inc.		<b>WELL ID: MW-4C</b>
Project Number: 05510-100		
Site Location: Garfield Avenue Site 114		Date Installed: 11/22/2005
Well Location:	Coords:	Inspector: Dave Sherman
Method: Hollow Stem Auger/Mud Rotary		Contractor: Ameridrill, Inc.

**MONITORING WELL CONSTRUCTION DETAIL**



Describe Measuring Point:

Borehole Diameter: 6"

Approved: \_\_\_\_\_  
Signature

Date 10/18/2005



**ATTACHMENT 2**

**Photograph Log**

# PHOTOGRAPH LOG

**Client Name:** PPG

**Site Location:** Garfield Avenue Group, Jersey City, New Jersey

**Photo No.**  
1

**Date:**  
3/9/2017

**Description:**

View of excavation at Location 135-MW3A

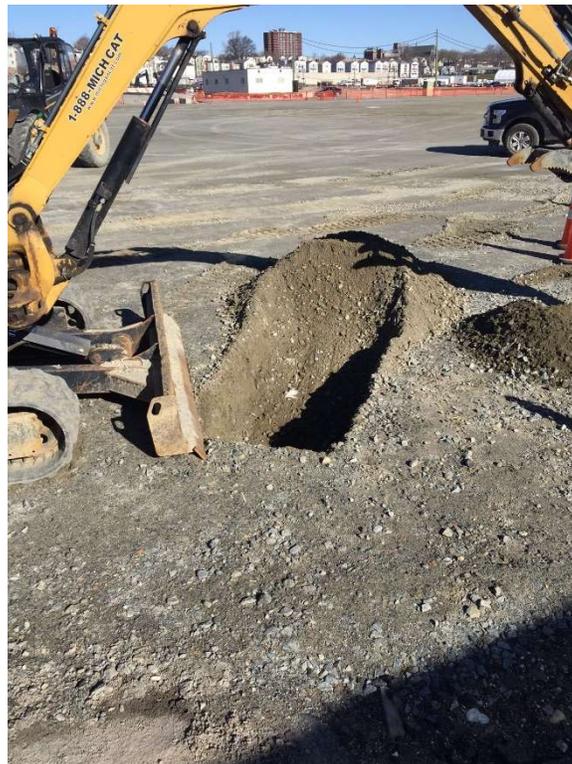


**Photo No.**  
2

**Date:**  
3/9/2017

**Description:**

View of excavation at Location 135-MW3B



# PHOTOGRAPH LOG

**Client Name:** PPG

**Site Location:** Garfield Avenue Group, Jersey City,  
New Jersey

**Photo No.**  
3

**Date:**  
3/9/2017

**Description:**

View of damaged well casing at Location 135-MW3B



**Photo No.**  
4

**Date:**  
3/9/2017

**Description:**

Trench dug between location of 135-MW3B and 135-MW3A



# PHOTOGRAPH LOG

**Client Name:** PPG

**Site Location:** Garfield Avenue Group, Jersey City,  
New Jersey

**Photo No.**  
5

**Date:**  
4/19/2019

**Description:**

Surface conditions at  
location MW11B

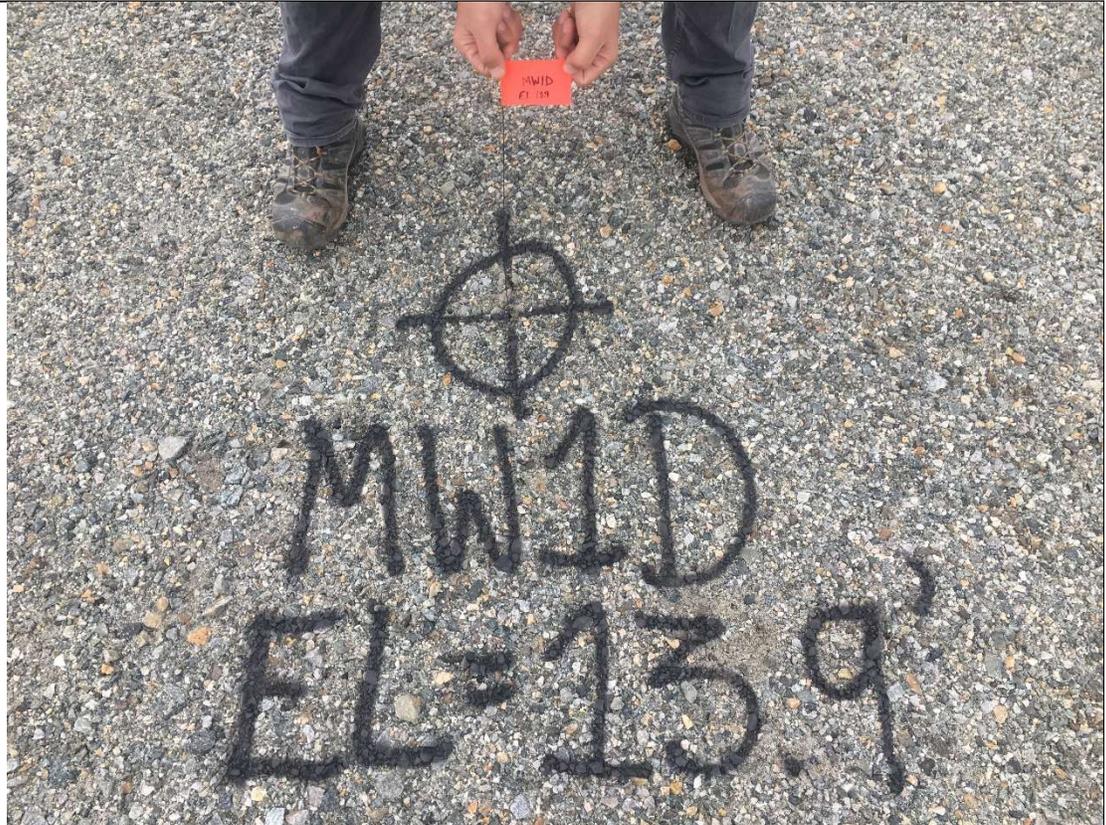


**Photo No.**  
6

**Date:**  
4/19/2019

**Description:**

Surface conditions at  
location MW1D



# PHOTOGRAPH LOG

**Client Name:** PPG

**Site Location:** Garfield Avenue Group, Jersey City,  
New Jersey

**Photo No.**  
7

**Date:**  
4/19/2019

**Description:**

Surface conditions at  
location MW3B



**Photo No.**  
8

**Date:**  
4/19/2019

**Description:**

Surface conditions at  
location MW4C



# PHOTOGRAPH LOG

**Client Name:** PPG

**Site Location:** Garfield Avenue Group, Jersey City,  
New Jersey

**Photo No.**  
9

**Date:**  
5/8/2019

**Description:**

Surface conditions at  
location REL6



**Photo No.**  
10

**Date:**  
5/8/2019

**Description:**

Surface conditions at  
location REL7



Remedial Action Report - Site 133 East (AOC 133E-1A and AOC 133E-2A) and Site 135 (AOC 135-1) Soil  
Garfield Avenue Group  
PPG, Jersey City, New Jersey

## **NJDEP Approval of Alternate Well Decommissioning Memorandum**



PHILIP D. MURPHY  
Governor

SHEILA Y. OLIVER  
Lt. Governor

STATE OF NEW JERSEY  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF WATER SUPPLY & GEOSCIENCE  
NEW JERSEY GEOLOGICAL AND WATER SURVEY ELEMENT  
BUREAU OF WATER ALLOCATION & WELL PERMITTING  
401 E. STATE ST - P.O. BOX 420  
MAIL CODE 401-04Q  
TRENTON, NEW JERSEY 08625-0420  
TEL. # 609-984-6831  
FAX # 609-633-1231  
EMAIL: [wellpermitting@dep.nj.gov](mailto:wellpermitting@dep.nj.gov)

CATHERINE R. McCABE  
Commissioner

Aimee Ruiter  
AECOM  
250 Apollo Dr.  
Chelmsford, MA 01824

October 25, 2019

**Re: Destroyed Well**  
**Facility Name: Garfield Avenue Group Site**  
**Facility Address: 900 Garfield Avenue**  
**Municipality: Jersey City, County: Hudson**  
**Blocks: 21509; 21501, Lots: 2; 16, 18, 20**  
**PI Number: 246332 and G000005480**  
**Well Permit Numbers: E201317207, E201317208, E201200587, E201200588, 2600076983, 2600068662, 2600069775, 2600077353 (EIGHT PERMITS TOTAL)**

Dear Ms. Ruiter,

On July 24, 2019, The Bureau of Water Allocation and Well Permitting (Bureau) received your request to have the referenced wells listed as destroyed and to have alternative well decommissioning reports filed in lieu of properly decommissioning the wells. Based on the information that AECOM provided, the Well Permitting Section concurs that the wells have been destroyed and can no longer be properly decommissioned in accordance with the Well Construction and Maintenance; Sealing of Abandoned Wells Rule, N.J.A.C. 7:9D Subchapter 3. No further action is required for the referenced wells.

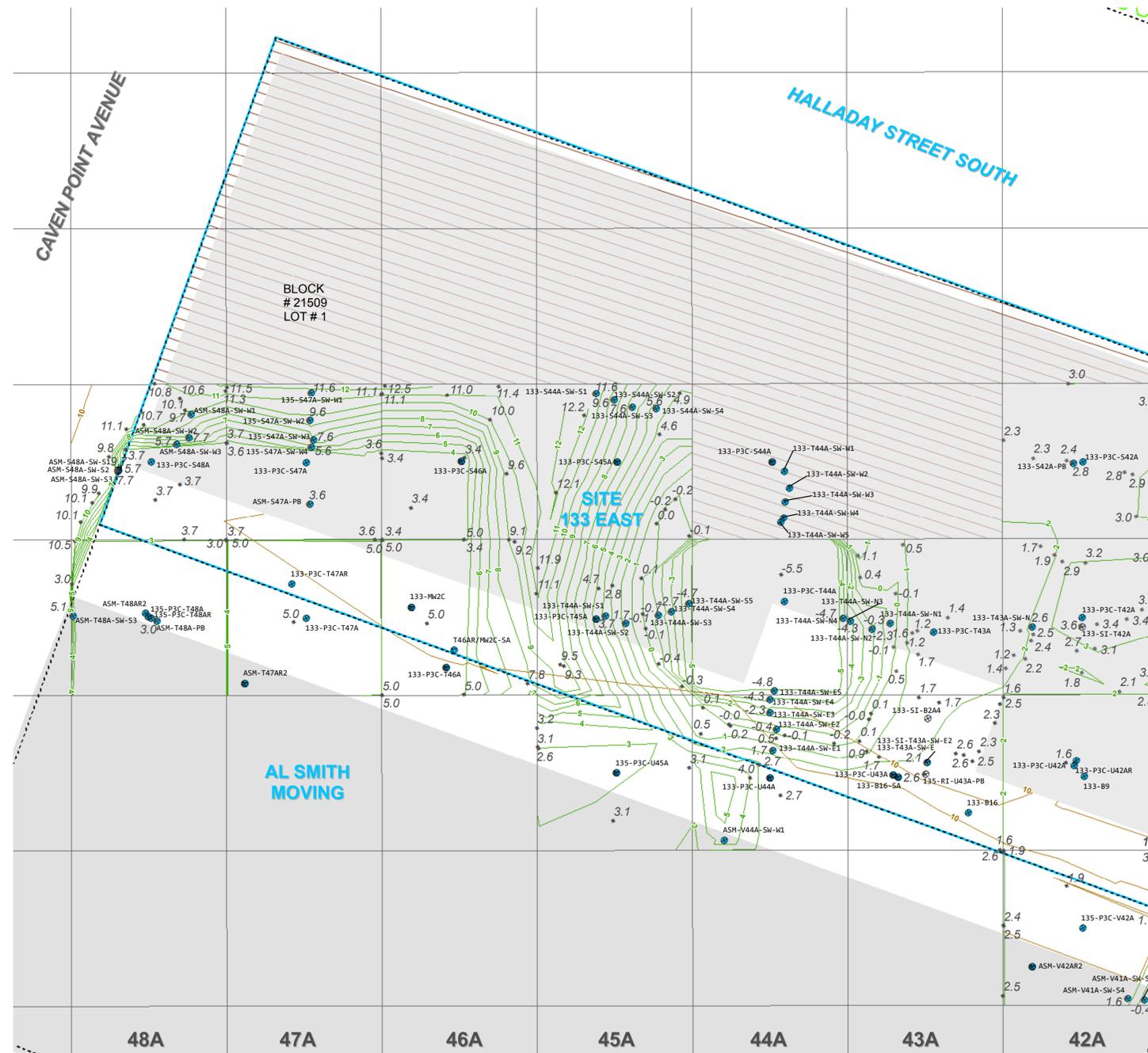
If you have any questions, please contact Mark Ortega by phone at (609) 984-6831 or via the Well Permitting Section email address, [wellpermitting@dep.nj.gov](mailto:wellpermitting@dep.nj.gov).

Regards,

Joe Mattle  
Chief, Well Permitting Section  
Bureau of Water Allocation and Well Permitting

August 2018  
BWAWP

P  
Q  
R  
S  
T  
U  
V



**ABBREVIATIONS:**  
 CCPW - Chromate Chemical Production Waste  
 Cr<sup>6+</sup> - hexavalent chromium  
 Cr - chromium  
 CrSCC - Chromium Soil Cleanup Criteria  
 ft - feet  
 mg/kg - milligrams per kilogram  
 NAVD88 - North American Vertical Datum of 1988

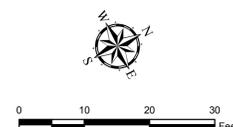
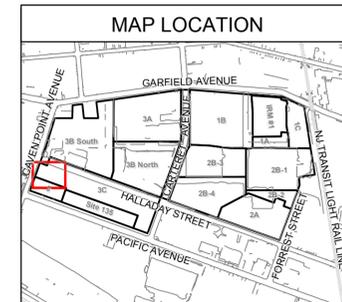
**GENERAL NOTES:**  
 G1. The hexavalent chromium data associated with the sample locations shown on this figure are provided in Table 5-1. None of the detected Cr<sup>6+</sup> results exceeded the standard.  
 G2. Elevation vertical datum is NAVD88, in U.S. survey ft.  
 G3. Source of block/lot information is Jersey City Parcel Data from New Jersey Geographic Information Network (NJGIN), last updated 10/6/2015 (available at: <http://data.jerseycitynj.gov/dataset/jersey-city-parcel-polygon>).  
 G4. Additional sample locations are shown on Figures 5-1B, 5-1C, and 5-1D.  
 G5. This figure presents data for locations within the Site boundary that have samples remaining in place. In addition, locations from outside the Site boundary and/or removed samples may be shown to demonstrate compliance with the remediation objectives. The Specific Notes on Table 5-1 include discussion of these situations, if necessary.

**SPECIFIC NOTES:**  
 S1. Pre-construction topographical contours are sourced from the "Catch Basin-Receptor Evaluation Survey, PPG Site 114, City of Jersey City, Hudson County, New Jersey" prepared by Borbas Surveying and Mapping, LLC, dated April 19, 2011. Property lines are sourced from the "Boundary and Line Delineation Map, PPG Site, Lot 1 & 2, Block 21509, Jersey City, Hudson County, New Jersey" prepared by Borbas Surveying and Mapping, LLC, dated July 21, 2014.  
 S2. Post-excavation elevation survey points were taken from the "Post Excavation Elevation Plan for ENTACT, LLC; PPG SITE 133/135 HSS 133E 135 ASM EXCAVATION," produced by Maser Consulting P.A., dated 05/09/18.  
 S3. Conceptual post-excavation elevation contours were generated using professional judgement based on post-excavation elevation survey points and knowledge of excavation practices utilized during remedial excavation (i.e., excavation conducted on a 30 ft by 30 ft basis).  
 S4. The extent of excavation shown here represents the as-built terminal excavation elevation for remediation of Cr<sup>6+</sup>, CCPW, non-Cr constituents, and concrete foundation removal.  
 S5. In Grids S48A and U43A, two sample locations are located adjacent; therefore, the sampling location symbols overlap on the figure.

**LEGEND**

- ⊗ SAMPLING LOCATION (REMAINING SAMPLES)
- ⊙ SAMPLING LOCATION (REMOVED CONFIRMATION SAMPLES)
- REMAINING SAMPLES NOT ANALYZED FOR Cr<sup>6+</sup>
- RESULT IS BELOW THE MOST STRINGENT STANDARD
- 3.8 POST-EXCAVATION ELEVATION SURVEY POINT REPRESENTING AS-BUILT TERMINAL EXCAVATION ELEVATION (FT NAVD88)
- CONCEPTUAL POST-EXCAVATION ELEVATION CONTOUR (1-FOOT INTERVAL IN FT NAVD88)
- PRE-REMEDIATION ELEVATION CONTOUR (1-FOOT INTERVAL IN FT NAVD88)
- PROPERTY LINE
- FORMER BUILDING SLAB (AVERAGE ELEVATION 12.8 FT NAVD88)
- GRID LAYOUT
- GRIDS NOT FULLY REMEDIATED, AND TO BE INCLUDED IN A SEPARATE SUBMITTAL
- SITE BOUNDARY

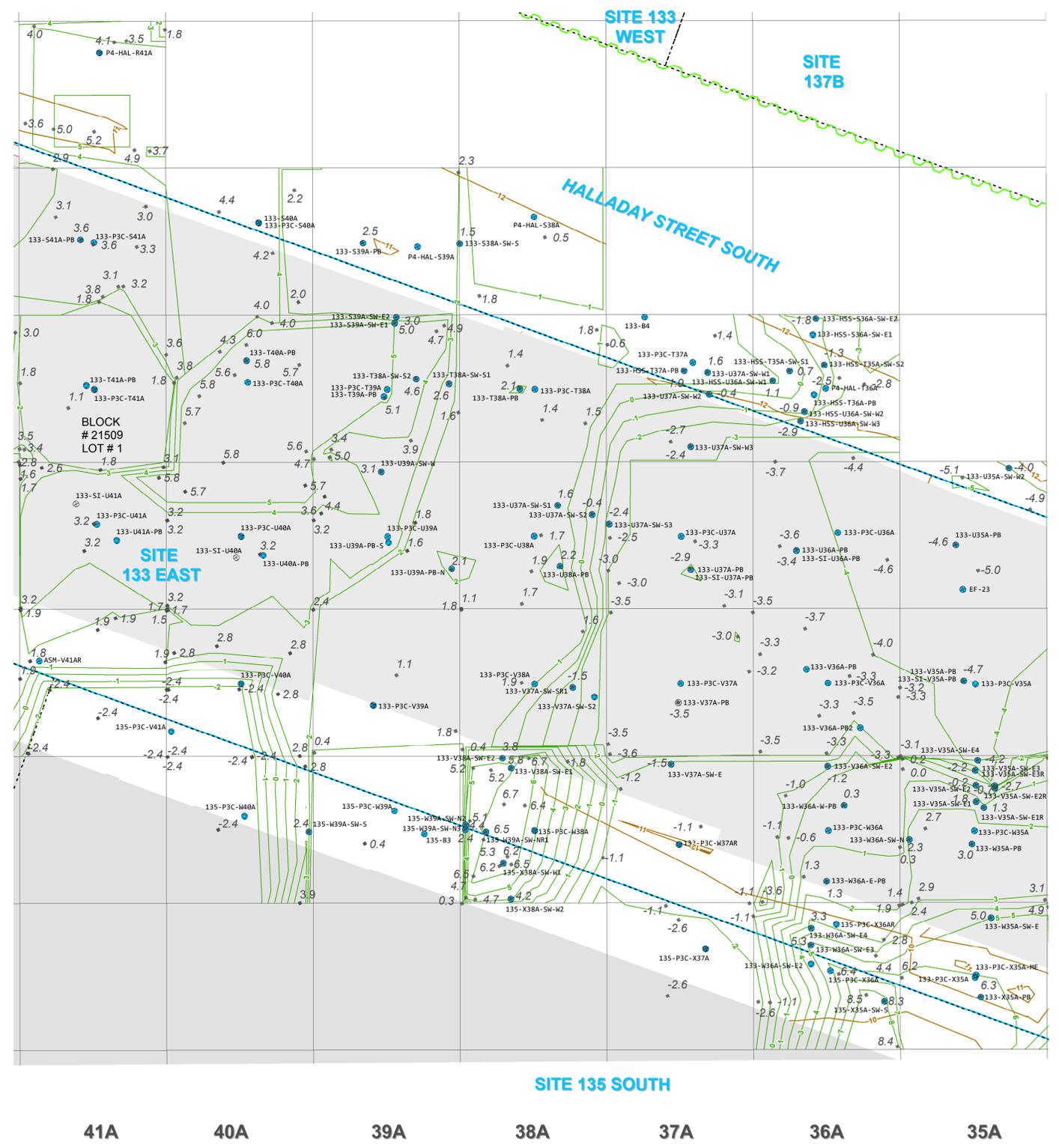
Soil Cleanup Criterion (mg/kg)	
Analyte	CrSCC
CHROMIUM (HEXAVALENT)	20



PPG  
 SITE 133 EAST  
 GARFIELD AVENUE GROUP  
 JERSEY CITY, NEW JERSEY  
 DATE: 11/30/2018

SITE 133 EAST (COLUMN 42A TO 48A)  
 SAMPLE MAP FOR Cr<sup>6+</sup> COMPARED  
 TO CHROMIUM SOIL CLEANUP CRITERION  
 FIGURE 5-1A

R  
S  
T  
U  
V  
W  
X



**ABBREVIATIONS:**  
 CCPW - Chromate Chemical Production Waste  
 Cr<sup>6</sup> - hexavalent chromium  
 Cr - chromium  
 CrSCC - Chromium Soil Cleanup Criteria  
 ft - feet  
 mg/kg - milligrams per kilogram  
 NAVD88 - North American Vertical Datum of 1988

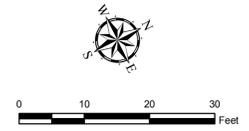
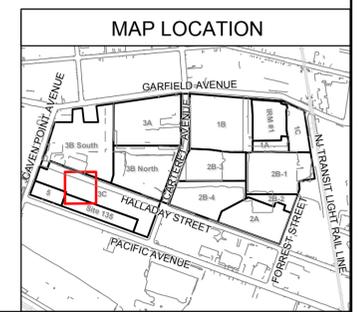
**GENERAL NOTES:**  
 G1. The hexavalent chromium data associated with the sample locations shown on this figure are provided in Table 5-1. None of the detected Cr<sup>6</sup> results exceeded the standard.  
 G2. Elevation vertical datum is NAVD88, in U.S. survey ft.  
 G3. Source of block/lot information is Jersey City Parcel Data from New Jersey Geographic Information Network (NJGIN), last updated 10/6/2015 (available at: <http://data.jerseycitynj.gov/dataset/jersey-city-parcel-polygon>).  
 G4. Additional sample locations are shown on Figures 5-1A, 5-1C, and 5-1D.  
 G5. This figure presents data for locations within the Site boundary that have samples remaining in place. In addition, locations from outside the Site boundary and/or removed samples may be shown to demonstrate compliance with the remediation objectives. The Specific Notes on Table 5-1 include discussion of these situations, if necessary.

**SPECIFIC NOTES:**  
 S1. Pre-construction topographical contours are sourced from the "Catch Basin Receptor Evaluation Survey, PPG Site 114, City of Jersey City, Hudson County, New Jersey" prepared by Borbas Surveying and Mapping, LLC, dated April 19, 2011. Property lines are sourced from the "Boundary and Line Delineation Map, PPG Site, Lot 1 & 2, Block 21509, Jersey City, Hudson County, New Jersey" prepared by Borbas Surveying and Mapping, LLC, dated July 21, 2014.  
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 S3. Conceptual post-excavation elevation contours were generated using professional judgement based on post-excavation elevation survey points and knowledge of excavation practices utilized during remedial excavation (i.e., excavation conducted on a 30 ft by 30 ft basis).  
 S4. The extent of excavation shown here represents the as-built terminal excavation elevation for remediation of Cr<sup>6</sup>, CCPW, non-Cr constituents, and concrete foundation removal.  
 S5. In Grids S40A, U36A, U37A, V35A, W35A, W38A, and X35A, two sample locations are located adjacent; therefore, the sampling location symbols overlap on the figure.

**LEGEND**

● SAMPLING LOCATION (REMAINING SAMPLES)	● -3.8 POST-EXCAVATION ELEVATION SURVEY POINT REPRESENTING AS-BUILT TERMINAL EXCAVATION ELEVATION (FT NAVD88)	FORMER BUILDING SLAB (AVERAGE ELEVATION 12.8 FT NAVD88)
○ SAMPLING LOCATION (REMOVED CONFIRMATION SAMPLES)	○ CONCEPTUAL POST-EXCAVATION ELEVATION CONTOUR (1-FOOT INTERVAL IN FT NAVD88)	GRID LAYOUT
○ REMAINING SAMPLES NOT ANALYZED FOR Cr <sup>6</sup>	○ IN PLACE SHEET PILE (AS OF OCTOBER 2017)	SITE BOUNDARY
● RESULT IS BELOW THE MOST STRINGENT STANDARD	○ PRE-REMEDIATION ELEVATION CONTOUR (1-FOOT INTERVAL IN FT NAVD88)	
	--- PROPERTY LINE	

Soil Cleanup Criterion (mg/kg)	
Analyte	CrSCC
CHROMIUM (HEXAVALENT)	20



PPG  
 SITE 133 EAST  
 GARFIELD AVENUE GROUP  
 JERSEY CITY, NEW JERSEY

DATE: 08/17/2018

SITE 133 EAST (COLUMN 35A TO 41A)  
 SAMPLE MAP FOR Cr<sup>6</sup> COMPARED  
 TO CHROMIUM SOIL CLEANUP CRITERION

FIGURE 5-1B