

Appendix A

Caven Point Avenue and Pacific Avenue Delineation Data Package

(Laboratory Reports and Data Validation
Reports Referenced in the email are
provided on CD)

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Cc: [Laguzza, Dorothy M.](#); [Lagrotteria, Joe](#); [Jody Overmyer \(overmyer@ppg.com\)](#); [Mark Terril](#); ["Feinberg, Richard \[C\] \(feinberg@ppg.com\)"](#); [Paulsen, Sandy](#); [Spronz, Bill](#)
Subject: CAV-009: Caven Point Avenue & Pacific Avenue Delineation Data Package
Date: Thursday, October 04, 2018 2:24:00 PM
Attachments: [2018-10-04 Caven-Pacific Delineation Data Pkg_DS.pdf](#)

Team –

Please find attached the *Caven Point Avenue and Pacific Avenue Delineation Data Package*. This data package includes the results from the recent soil delineation investigation for hexavalent chromium (Cr⁺⁶) and antimony (Sb) that was conducted in Caven Point Avenue and Pacific Avenue. Laboratory reports and data validation reports are being provided as SendFile links in a separate email from Sandy Paulsen, due to size restrictions.

The soil boring program was conducted in accordance with the *Caven-Pacific Delineation Investigation Work Plan*, dated May 29, 2018, as accepted by NJDEP/Weston on June 15, 2018. Additionally, a test pit was conducted in Pacific Avenue to investigate “green staining” previously noted in the boring log for location 135-B13. The test pit was conducted with Weston Solutions, Inc. oversight and the “green staining” previously recorded at this location was confirmed to be mottled silts/sands.

No visual Chromate Chemical Production Waste (CCPW) material was observed in delineation borings or during test-pitting. Analytical results for Cr⁺⁶ and Sb were less than the applicable criteria. Based on the results from the delineation investigation and test-pitting, delineation of Cr⁺⁶ and Sb impacts are complete for these areas.

PPG is evaluating options for the Cr⁺⁶ which remains in the Caven Point Avenue and Pacific Avenue right-of-ways adjacent to the Al Smith property.

This data package is being submitted for informational purposes only.

Thank you,
Aimee

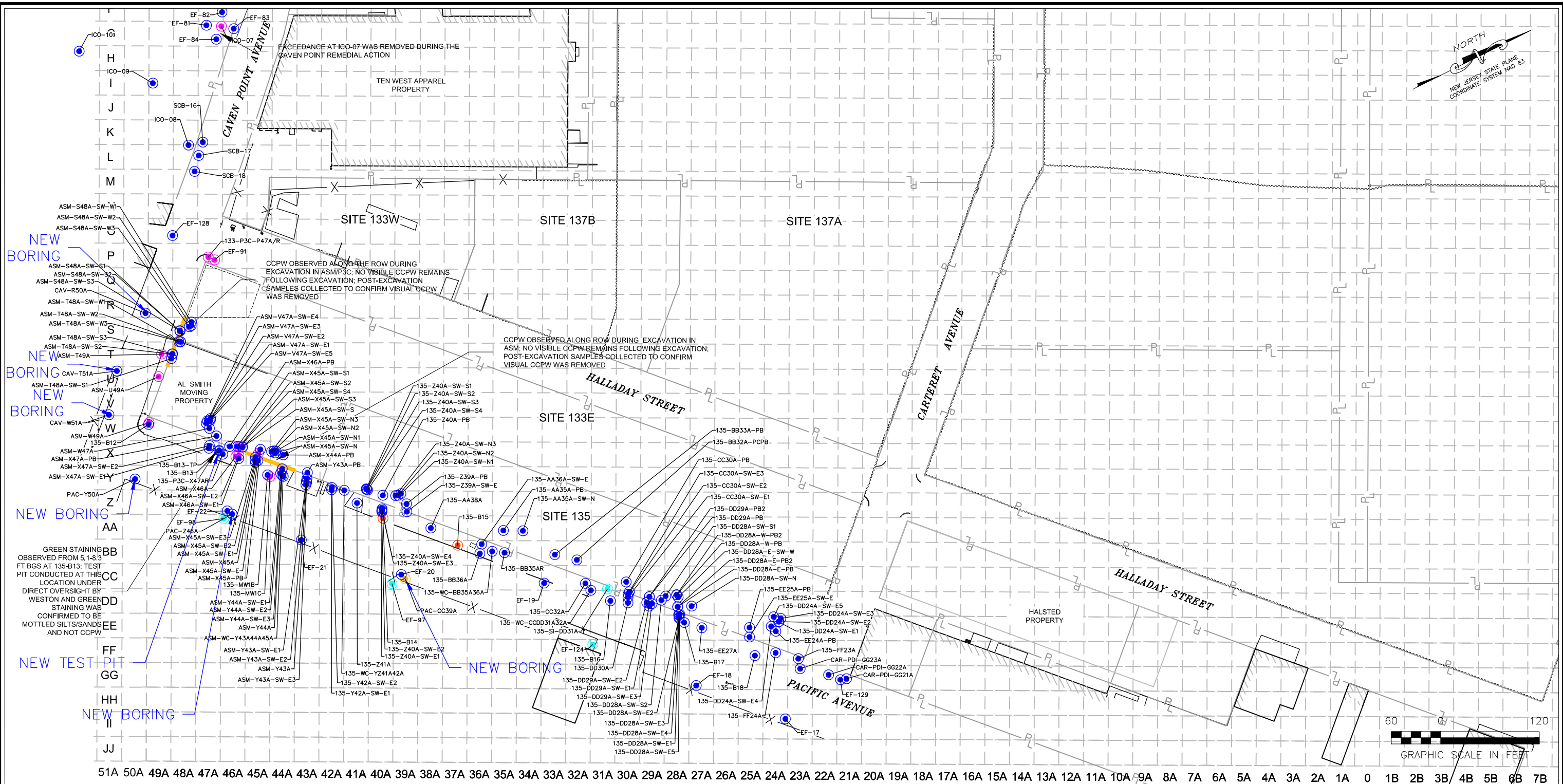
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Figure



<p>LEGEND</p> <ul style="list-style-type: none"> ● AS-BUILT BORING/SAMPLE LOCATION - Cr⁺⁶ < CrSCC ● AS-BUILT BORING/SAMPLE LOCATION - Cr⁺⁶ > CrSCC ● AS-BUILT BORING/SAMPLE LOCATION - Cr⁺⁶ < CrSCC, Sb > RDCSRS, Sb < NRDCSRS ● AS-BUILT BORING/SAMPLE LOCATION - Sb < RDCSRS, Sb < NRDCSRS (Cr⁺⁶ NOT ANALYZED) ● AS-BUILT BORING/SAMPLE LOCATION - ANALYZED FOR CCPW METALS ONLY ⊕ AS-BUILT TEST PIT LOCATION - ABSENCE OF CCPW CONFIRMED 	<ul style="list-style-type: none"> FENCE CURB EXISTING SHEET PILE PROPERTY LINE 	<p>NOTES:</p> <p>1) WITHIN CAVEN POINT AVENUE AND PACIFIC AVENUE, ASSOCIATED ROWs, AND IN AREAS SOUTH AND EAST OF THE ROWs - SAMPLE LOCATIONS ANALYZED FOR Cr⁺⁶ AND CCPW METALS ARE SHOWN.</p> <p>2) WITHIN ASM AND SITE 135 - ONLY POST-EXCAVATION SAMPLES ANALYZED FOR Cr⁺⁶ AND CCPW METALS ALONG THE PROPERTY LINE ARE SHOWN.</p> <p>3) IN GRIDS ALONG THE ASM AND SITE 135 PROPERTY BOUNDARIES WHERE NO SAMPLE LOCATIONS ARE SHOWN, CLEAN PDI DATA WAS USED FOR POST-EXCAVATION CONFIRMATION.</p> <p>4) SOME SAMPLES SHOWN MAY HAVE BEEN EXCAVATED, BUT ARE INCLUDED HEREIN FOR COMPLETENESS.</p>	<p>ASM - AL SMITH MOVING PROPERTY BGS - BELOW GROUND SURFACE CCPW - CHROMATE CHEMICAL PRODUCTION WASTE CCPW METALS INCLUDE CHROMIUM, ANTIMONY, NICKEL, THALLIUM, AND VANADIUM CrSCC - NJDEP INTERIM CHROMIUM SOIL CLEANUP CRITERIA OF 20 MG/KG Cr⁺⁶ - HEXAVALENT CHROMIUM EL - ELEVATION FT - FEET MG/KG - MILLIGRAMS PER KILOGRAM</p>	<p>NAVD88 - NORTH AMERICAN VERTICAL DATUM OF 1988 NJDEP - NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION NRDCSRS - NON-RESIDENTIAL DIRECT CONTACT SOIL REMEDIATION STANDARD - NJDEP P3C - PHASE 3C PDI - PRE-DESIGN INVESTIGATION RDCSRS - RESIDENTIAL DIRECT CONTACT SOIL REMEDIATION STANDARD - NJDEP ROW - RIGHT-OF-WAY Sb - ANTIMONY</p>
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AECOM

PPG
GARFIELD AVENUE GROUP
 JERSEY CITY, NEW JERSEY

AS-BUILT BORING/SAMPLE LOCATIONS AND CCPW-RELATED IMPACTS DATA PACKAGE
CAVEN POINT AND PACIFIC AVENUES
FIGURE 1

DATE: 10/03/2018
DRWN: SAP

Table

Table 1
Caven-Pacific Delineation Investigation Results
Caven Point Avenue and Pacific Avenue
PPG, Jersey City, New Jersey

									Analyte CAS-RN Units CrSCC RDCSRS NRDCSRS IGWSRS-GAG	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20 N/A N/A N/A	ANTIMONY 7440-36-0 mg/kg N/A 31 450 63		
Location ID	Depth Interval (ft bgs)	Start Elevation (ft NAVD88)	End Elevation (ft NAVD88)	Sample ID	Lab SDG	Lab Sample ID	Date Collected	Sample Type	Result	Qualifier	Result	Qualifier	
CAV-R50A	4.1 - 4.6	5.9	5.4	CAV-R50A-4.1-4.6	JC71060R	JC71060-1R	8/1/2018	N		2.5	J		
CAV-R50A	6.1 - 6.6	3.9	3.4	CAV-R50A-6.1-6.6	JC71170	JC71170-1	8/2/2018	N		2.6	J		
CAV-T51A	2.4 - 2.9	6.6	6.1	CAV-T51A-2.4-2.9	JC71060R	JC71060-2R	8/1/2018	N		2.9	J		
CAV-T51A	3.1 - 3.6	5.9	5.4	CAV-T51A-3.1-3.6	JC71060R	JC71060-3R	8/1/2018	N		1.3	J		
CAV-T51A	4.4 - 4.9	4.6	4.1	CAV-T51A-4.4-4.9	JC71060	JC71060-4	8/1/2018	N		< 0.45	UJ		
CAV-W51A	10.0 - 10.5	-1.0	-1.5	CAV-W51A-10.0-10.5	JC71060R	JC71060-5R	8/1/2018	N		1.0	J		
CAV-W51A	10.0 - 10.5	-1.0	-1.5	CAV-W51A-10.0-10.5X	JC71060R	JC71060-6R	8/1/2018	N		1.2	J		
CAV-W51A	12.0 - 12.5	-3.0	-3.5	CAV-W51A-12.0-12.5	JC71060R	JC71060-7R	8/1/2018	N		1.3	J		
PAC-CC39A	0.7 - 1.2	10.3	9.8	PAC-CC39A-0.7-1.2	JC70997	JC70997-1	7/31/2018	N				0.90	J
PAC-CC39A	0.7 - 1.2	10.3	9.8	PAC-CC39A-0.7-1.2X	JC70997	JC70997-2	7/31/2018	FD				< 0.46	UJ
PAC-CC39A	3.4 - 3.9	7.6	7.1	PAC-CC39A-3.4-3.9	JC70997	JC70997-3	7/31/2018	N				11.2	J
PAC-CC39A	5.4 - 5.9	5.6	5.1	PAC-CC39A-5.4-5.9	JC71060	JC71060-8	8/1/2018	N				< 0.44	U
PAC-Y50A	10.8 - 11.3	-1.2	-1.7	PAC-Y50A-10.8-11.3	JC71170	JC71170-2	8/2/2018	N		2.2	J		
PAC-Y50A	12.8 - 13.3	-3.2	-3.7	PAC-Y50A-12.8-13.3	JC71170	JC71170-3	8/2/2018	N		< 0.79	UJ		
PAC-Z46A	3.4 - 3.9	6.4	5.9	PAC-Z46A-3.4-3.9	JC71170	JC71170-4	8/2/2018	N		1.5	J		
PAC-Z46A	3.8 - 4.3	6.0	5.5	PAC-Z46A-3.8-4.3	JC71170	JC71170-5	8/2/2018	N		1.7	J		

Notes:

Definitions -
bgs - below ground surface
CAS-RN - Chemical Abstract Service Registry Number.
CrSCC - NJDEP Interim Chromium Soil Cleanup Criteria
ft - feet or foot
IGWSRS-GAG - NJDEP Impact to Groundwater Soil Remediation Standard-Garfield Avenue Group
mg/kg - milligrams per kilogram
N/A - not applicable
NAVD88 - North American Vertical Datum of 1988
NJDEP - New Jersey Department of Environmental Protection
NRDCSRS - NJDEP Non-Residential Direct Contact Soil Remediation Standard
RDCSRS - NJDEP Residential Direct Contact Soil Remediation Standard
SDG - Sample Delivery Group
"X" at the end of the Sample ID indicates field duplicate sample.

Sample Type -
FD indicates duplicate sample
N indicates normal original sample

Qualifiers -
J - Indicates the result was an estimated value; the associated numerical value was an approximate concentration of the analyte in the sample.
U - Indicates that the analyte was not detected at the reported method detection limit.
UJ - Indicates the analyte was not detected above the reporting limit and the reporting limit was approximate.

Boring and Test Pit Logs

TEST PIT FIELD LOG

Logged by: Laura Kinsey (AECOM)

PROJECT 135-B13-TP
 DESCRIPTION _____
 LOCATION _____

TEST PIT No. 1
 FILE No. _____
 DATE 9/14/2018

ENGINEER P. JENNINGS
ENTRIT

EXCAVATION EQUIPMENT
 CONTRACTOR ENTRIT
 OPERATOR JOE GURNS
 MAKE CAT MODEL 336E
 CAPACITY _____ REACH _____

GROUND ELEV. 892.80 11.2
 TIME STARTED 0920
 TIME COMPLETED 0940

WEATHER 76/107°F CLOUDY

DEPTH	SOIL DESCRIPTION	EXCAV. EFFORT	BOULDER COUNT QTY. CLASS	REMARK No.
0'	FILL DBA FILL FINE SAND WITH ^{AND} SILT REDDISH BROWN WET NO ODOR NO VISIBLE CLPW FILL FINE SAND WITH ^{AND} SILT - MOTTLED, COLOR VARIED FROM RED/BROWN TO GREEN/GRAY. WET, NO ODOR NO VISIBLE CLPW	E		
1'		E		
2'		E		
3'		E		
4'		E		
5'		E		
6'		E		
7'		E		
8'		E		
9'				
10'				
11'				
12'				
13'				
14'				

REMARKS: WESTON PRESENT TO OBSERVE THE ABSENCE OF CLPW.

TEST PIT PLAN



VOLUME = _____ CU.YD.

LEGEND: BOULDER COUNT

SIZE RANGE CLASSIFICATION	LETTER DESIGNATION
6"-18"	A
18"-36"	B
36" and Larger	C

PROPORTIONS USED

TRACE (TR.)	0-10%
LITTLE (L.)	10-20%
SOME (SO)	20-35%
AND	35-50%

ABBREVIATIONS

F-FINE
 M-MEDIUM
 C-COARSE
 F/M-FINE TO MEDIUM
 F/C-FINE TO COARSE
 V-VERY
 GR.-GRAY
 BN.-BROWN
 YEL.-YELLOW

EXCAVATION EFFORT

E-EASY
 M-MODERATE
 D-DIFFICULT
 GROUNDWATER

ELAPSED TIME TO READING (HRS.) G.W.
 No Groundwater






Project Name: PPG Garfield Ave	Drilling Company: SGS	
Project Number: 60279173	Drilling Method: Soft Dig and Direct Push	Coordinates (NJSPNAD83) x: 610705.69
Date Started Drilling: 8/1/2018	Rig Type: Geoprobe	Coordinates (NJSPNAD83) y: 682084.58
Date Finished Drilling: 8/2/2018	Core Size: 2-inch MacroCore	Boring Total Depth: 10 ft
Logged By: Brendan Murphy	Project Manager: Bill Spronz	Depth to Water: 8.5
Physical Location: Cayen Point Avenue		Surface Elevation: 10 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Surface Cover and Thickness:	Sample ID
1 2 3 4	5	0.0		ASPHALT		Asphalt	
				FILL		Ballast Stone	
			dry	FILL		fine SAND, little coarse gravel, trace silt, (10YR 6/1) gray, loose, dry, no odor, no staining	
				FILL		fine to medium SAND, little silt, trace ash, trace gravel, (10YR 3/3) dark brown	
5				FILL		fine to medium SAND and gravel, (10YR 5/3) brown	CAV-R50A-4.1-4.6
6		0.4	slightly moist	FILL		fine to coarse SAND, little fine to coarse gravel trace debris (glass, (7.5YR 4/1) dark gray, loose medium dense, slightly moist no odor no staining	
7	5		slightly moist	FILL		crushd concrete, (5Y 7/2) light gray, slightly moist no odor no staining	
8			moist	FILL		fine to coarse SAND, some fine to coarse gravel trace brick, concrete, (2.5YR 3/1) dark reddish gray, dense to medium dense, moist to wet no odor no staining	CAV-R50A-6.1-6.6
9							
10							

Notes:
 bgs - below surface grade COPR - chromite ore processing residue UNDno - non-organic undisturbed native deposits MGP - manufactured gas plant
 MM - meadow mat GGM - green grey mud UNOrg - organic undisturbed native deposits CCPW - chromate chemical production waste

Comments:

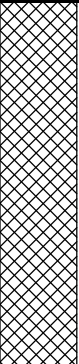
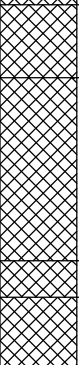



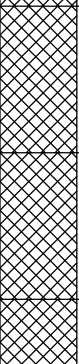


Project Name: PPG Garfield Ave	Drilling Company: SGS	
Project Number: 60279173	Drilling Method: Soft Dig	Coordinates (NJSPNAD83) x: 610753.11
Date Started Drilling: 8/1/2018	Rig Type: None	Coordinates (NJSPNAD83) y: 682022.02
Date Finished Drilling: 8/1/2018	Core Size:	Boring Total Depth: 5 ft
Logged By: Eric Acs	Project Manager: Bill Spronz	Depth to Water: Not Encountered
Physical Location: Cayen Point Avenue		Surface Elevation: 9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Surface Cover and Thickness:	Sample ID
		0.0		ASPHALT		ASPHALT	
1	5			FILL		fine to medium SAND, TRACE GRAVEL, (7.5YR 3/2) dark brown	
2				FILL		fine to medium SAND, trace gravel, (5Y 2.5/1) black	
3				FILL		COBBLES, (5Y 2.5/1) black	CAV-T51A-2.4-2.9
4				FILL		fine to medium SAND, some gravel, trace silts, (5Y 2.5/1) black	CAV-T51A-3.1-3.6
5							CAV-T51A-4.4-4.9

Notes:
 bgs - below surface grade COPR - chromite ore processing residue UNDno - non-organic undisturbed native deposits MGP - manufactured gas plant
 MM - meadow mat GGM - green grey mud UNDorg - organic undisturbed native deposits CCPW - chromate chemical production waste

Comments:

Project Name: PPG Garfield Ave	Drilling Company: SGS	
Project Number: 60279173	Drilling Method: Soft Dig and Direct Push	Coordinates (NJSPNAD83) x: 610796.56
Date Started Drilling: 8/1/2018	Rig Type: Geoprobe	Coordinates (NJSPNAD83) y: 681989.52
Date Finished Drilling: 8/1/2018	Core Size: 2-inch MacroCore	Boring Total Depth: 15 ft
Logged By: Eric Acs	Project Manager: Bill Spronz	Depth to Water: 8.5
Physical Location: Cayen Point Avenue		Surface Elevation: 9 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Surface Cover and Thickness:	Sample ID
1-5	5	0.0		FILL		pre clear	
5-9	5	11.3		FILL		fine to medium SAND, some fine to coarse gravel, brown black, loose, moist, no odor, no staining, trace broken asphalt	
				FILL		fine to medium SAND, trace amounts of coarse sand and fine gravel, saturated, loose to medium dense, brown black, no odor, no staining,	
				FILL		medium to coarse SAND, some fine gravel, black, petroleum odor, slight sheen, loose	
				FILL		fine to medium SANDS, trace silt and fine gravel, reddish brown, medium dense, no odor, no staining	
10-12	5	10.2		FILL		fine to coarse SAND, some coarse gravel, loose, dry, black, chunk of loose concrete in the middle, no odor, no staining	CAV-W51A-10.0-10.5
				FILL		fine to medium SANDS, trace coarse gravel, medium dense, brown, no odor, no staining	CAV-W51A-12.0-12.5
				FILL		fine to medium SAND, trace silts and fine gravel, reddish brown, no odor, no staining	
15							

Notes:
 bgs - below surface grade COPR - chromite ore processing residue UNDno - non-organic undisturbed native deposits MGP - manufactured gas plant
 MM - meadow mat GGM - green grey mud UNOrg - organic undisturbed native deposits CCPW - chromate chemical production waste

Comments:


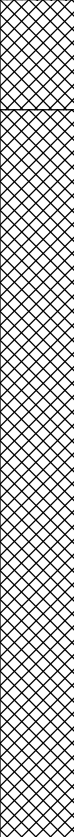
Project Name: PPG Garfield Ave	Drilling Company: SGS	
Project Number: 60279173	Drilling Method: Soft Dig and Direct Push	Coordinates (NJSPNAD83) x: 611135.8
Date Started Drilling: 7/31/2018	Rig Type: Geoprobe	Coordinates (NJSPNAD83) y: 682223.1
Date Finished Drilling: 8/1/2018	Core Size: 2-inch MacroCore	Boring Total Depth: 10 ft
Logged By: Eric Acs	Project Manager: Bill Spronz	Depth to Water: 9.0
Physical Location: Pacific Avenue		Surface Elevation: 11 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Surface Cover and Thickness:	Sample ID	
1	5	0.0		ASPHALT		ASPHALT	PAC-CC39A-0.7-1.2	
				FILL		fine to medium SAND, little rock fragments trace gravel, (7.5YR 6/3) light brown		
2	5	0.0		FILL		Cobbles and gravel encountered above 3.0 ft. fine to medium SAND, little rock fragments, trace gravel, (7.5YR 6/3) light brown	PAC-CC39A-3.4-3.9	
3								
4								
5	5	0.0	moist	FILL		fine to medium SAND, little coarse sand, fine gravel trace coarse gravel, (2.5YR 2.5/3) dark reddish brown, loose to medium dense, moist no odor no staining	PAC-CC39A-5.4-5.9	
6			moist	FILL		fine to coarse SAND, little fine gravel trace crushed brick, crushed concrete, coarse gravel, (5YR 3/3) dark reddish brown, medium dense, moist no odor no staining		
7								
8								
9			moist	FILL		fine to medium SAND, trace fine gravel trace coarse sand, (5YR 6/4) light reddish brown, medium dense, moist to wet no odor no staining		
10								

Notes:
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Comments:


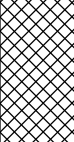



Project Name: PPG Garfield Ave	Drilling Company: SGS	
Project Number: 60279173	Drilling Method: Soft Dig and Direct Push	Coordinates (NJSPNAD83) x: 610880.66
Date Started Drilling: 8/2/2018	Rig Type: Geoprobe	Coordinates (NJSPNAD83) y: 681983.16
Date Finished Drilling: 8/2/2018	Core Size: 2-inch MacroCore	Boring Total Depth: 15 ft
Logged By: Eric Acs, Brendan Murphy	Project Manager: Bill Spronz	Depth to Water: 9.0
Physical Location: Pacific Avenue		Surface Elevation: 9.6 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Surface Cover and Thickness:	Sample ID	
0 - 1	5	0.0		ASPHALT FILL		Asphalt		
1 - 2						fine to medium SAND, trace cobbles, trace gravel, trace silt, trace ash, (10YR 3/3) dark brown		
2 - 3					FILL		fine to medium SAND, little ash, trace cobble, trace gravel, trace silt, (10YR 5/3) brown.	
3 - 4					FILL		Jackhammer refusal due to heavy slag. Boring relocated approximately 20 ft north and preclear advanced to 5.0 ft bgs.	
4 - 5	5	26.0	moist	FILL		fine to coarse SAND, trace ash, trace crushed brick,, (2.5Y 4/1) dark gray, medium dense, moist no odor no staining		
5 - 6								
6 - 7								
7 - 8								
8 - 9								
9 - 10								
10 - 11	5	6					PAC-Y50A-10.8-11.3	
11 - 12								
12 - 13								PAC-Y50A-12.8-13.3
13 - 14								
14 - 15								

Notes:
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 MM - meadow mat GGM - green grey mud UNDorg - organic undisturbed native deposits CCPW - chromate chemical production waste

Comments:

Project Name: PPG Garfield Ave	Drilling Company: SGS	
Project Number: 60279173	Drilling Method: Soft Dig	Coordinates (NJSPNAD83) x: 610971.45
Date Started Drilling: 8/2/2018	Rig Type: None	Coordinates (NJSPNAD83) y: 682069.78
Date Finished Drilling: 8/2/2018	Core Size:	Boring Total Depth: 5 ft
Logged By: Eric Acs	Project Manager: Bill Spronz	Depth to Water: Not Encountered
Physical Location: Pacific Avenue		Surface Elevation: 9.8 ft NAVD88

Depth Range (ft bgs)	Recovery (ft/ft)	PID (ppm)	Moisture Content	USCS	Graphic Log	Surface Cover and Thickness:	Sample ID	
0.0				ASPHALT		ASPHALT		
1	5	0.0		FILL		ASPHALT fine to medium SAND, trace silts, trace gravel, (7.5YR 3/2) dark brown		
2								
3				FILL		fine to medium SAND, trace silts, trace gravel, trace ash, (7.5YR 3/2) dark brown		
4				FILL		fine to medium SAND, little ash, trace silts, trace gravel, trace slag, (7.5YR 3/2) dark brown	PAC-Z46A-3.4-3.9	
5				FILL		fine to medium SAND, trace silts, trace gravel, (7.5YR 3/2) dark brown	PAC-Z46A-3.8-4.3	

Notes:
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Comments:

Lab Reports
(Provided Separately)

Data Validation Reports
(Provided Separately)