

Appendix D

Sample Maps and Analytical Results Tables

- **D-1 Site 137 North Sample Maps**
- **D-2 Site 143 Sample Maps**
- **D-3 Site 137 North Analytical Results
Tables**
- **D-4 Site 143 Analytical Results
Tables**

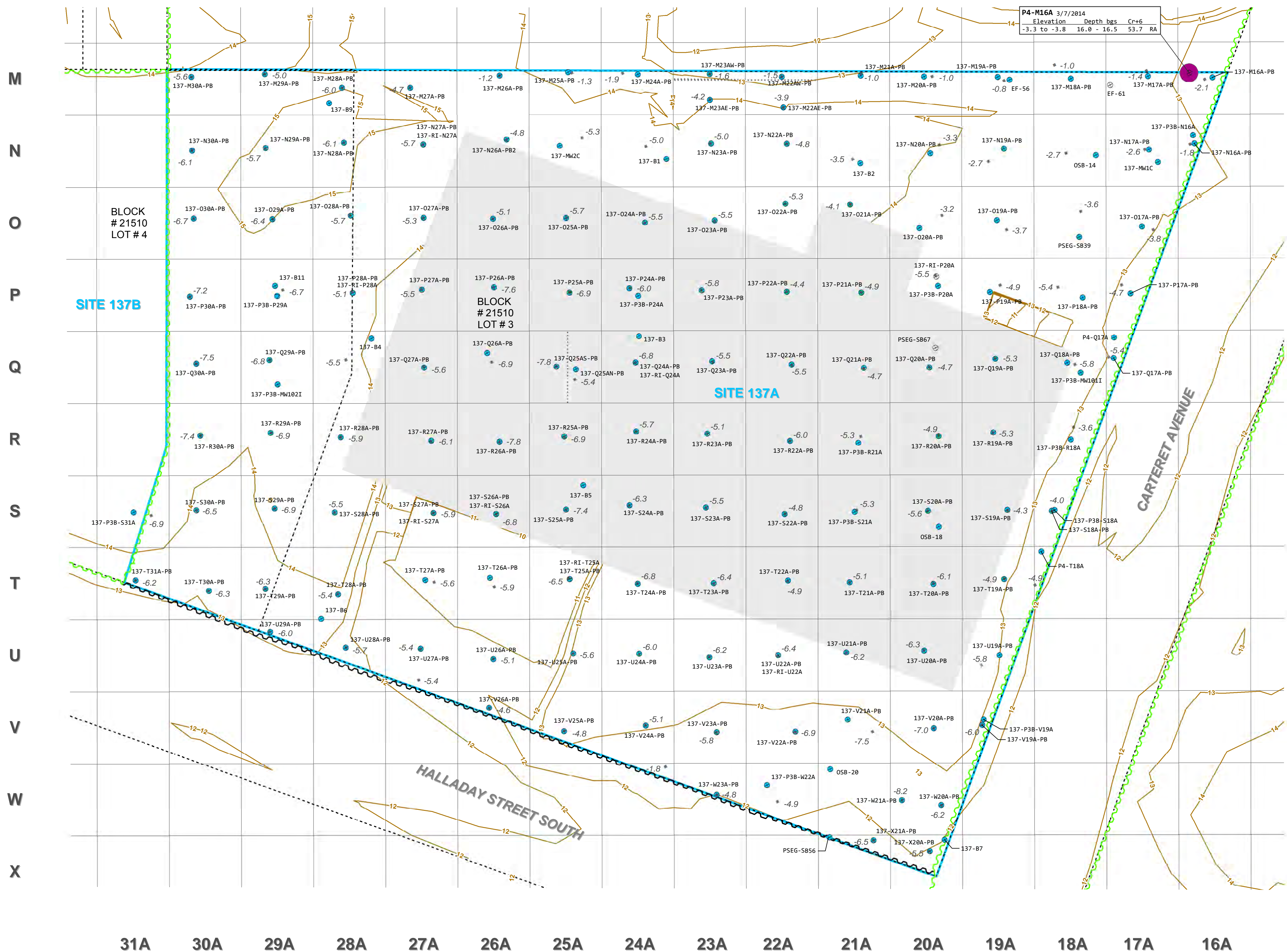
The tables and figures presented in this appendix are as approved by NJDEP by email on April 19, 2018 for Site 137 North and on May 24, 2018 for Site 143.

The Compliance Averaging Memoranda discussed in the Specific Notes of the analytical results tables are presented in Appendix H of this Remedial Action Report, Site 137 North (AOC 137-1A and AOC 137-2A) and Site 143 (AOC 143-1) Soil.

Appendix D-1

Site 137 North Sample Maps

SITE 132



ABBREVIATIONS:
 bgs - below ground surface
 Cr⁺⁶ - hexavalent chromium
 CrSCC - Chromium Soil Cleanup Criteria
 ft - feet
 mg/kg - milligrams per kilogram
 NAVD88 - North American Vertical Datum of 1988
 TEE - terminal excavation elevation

QUALIFIERS:
 RA - The result was rejected due to deficiencies but is considered usable for decision-making purposes.

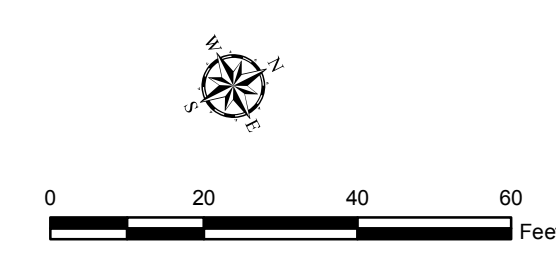
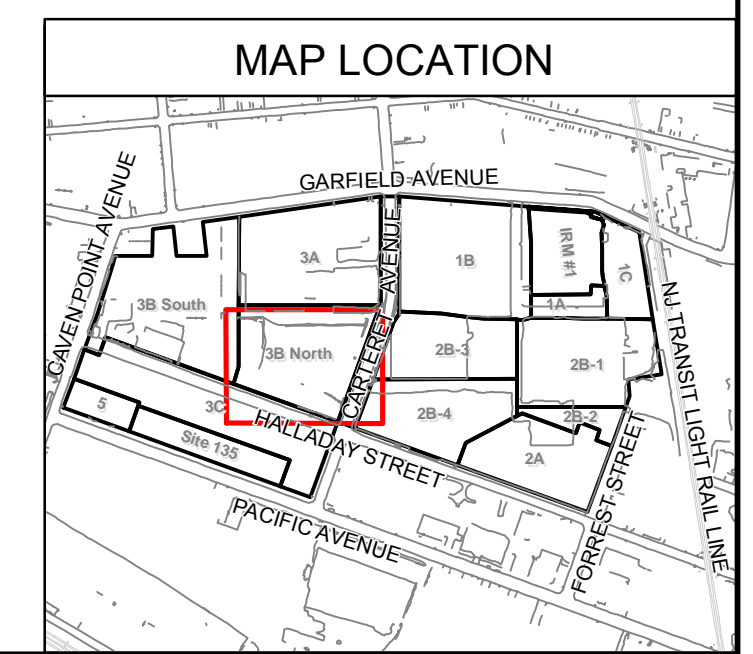
GENERAL NOTES:
 G1. The hexavalent chromium data associated with the sample locations shown on this figure are provided in Table 5-1. Data presented in call out boxes on this figure are outliers (i.e., data points that require further explanation). Specific notes on how the New Jersey Department of Environmental Protection's remedial standards are being met and/or how remedial completion is being achieved/completed for each outlier sample are provided in the Specific Notes in Table 5-1.
 G2. "Elevation" refers to the sample elevation based on the pre-remediation surface elevation for samples collected from the pit bottom, and the surface elevation of the sample location when the sample was collected via boring or test pit.
 G3. Elevation vertical datum is NAVD88, in U.S. survey ft.
 G4. Results are reported in mg/kg.
 G5. 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>).
 G6. Site 137 North is comprised of Site 137A and the northern portion of Site 137B, and generally coincides with Phase 3B North.
 G7. 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. Property lines and pre-construction topographical contours are sourced from the "Boundary & Topographical Survey, PPG Site, Lot 5, Block 21510, Jersey City, Hudson County, New Jersey," prepared by Borbas Surveying and Mapping, LLC, dated May 30, 2014 and the "Boundary & Topographical Survey, PPG Sites 132 and 143, Lots 1 and 2, Block 21510, Jersey City, Hudson County, New Jersey," prepared by Borbas Surveying and Mapping, LLC, dated September 4, 2014.
 S2. Post-excavation elevation survey points were sourced from the "Post Excavation Elevation Plan for ENTACT, LLC; PPG Site 137 Excavation," prepared by Maser Consulting P.A., dated 05/25/2018.
 S3. In Grids N27A, Q24A, P28A, S26A, S27A, T25A, and U22A, two sample locations are located adjacent therefore the sampling location symbols overlap on the figure.
 S4. The pit bottom sample and as-built TEE for Grid W21A were inadvertently collected and measured at the edge of Grid W20A.
 S5. The following grids are partially located within the Site 137 North boundary, however the as-built TEE applies to the entire grid: M16A, M17A, M18A, M19A, M20A, M21A, M24A, M25A, M26A, M27A, M28A, M29A, and M30A.

LEGEND

- ⊙ SAMPLING LOCATION (REMAINING SAMPLES)
- ⊙ SAMPLING LOCATION (REMOVED CONFIRMATION SAMPLES)
- REMAINING SAMPLES NOT ANALYZED FOR Cr⁺⁶
- RESULTS IS BELOW THE MOST STRINGENT STANDARD
- RESULTS EXCEED THE MOST STRINGENT STANDARD, BUT ARE IN COMPLIANCE WITH REMEDIATION OBJECTIVES
- ▲ POST-EXCAVATION ELEVATION SURVEY POINT REPRESENTING AS-BUILT TERMINAL EXCAVATION ELEVATION ACROSS GRID, UNLESS OTHERWISE NOTED (FT NAVD88)
- ⋯ APPROXIMATE LOCATION OF GRID SPLIT
- IN PLACE SHEET PILE (AS OF MARCH 2018)
- REMOVED SHEET PILE
- PRE-REMEDIATION ELEVATION CONTOUR (1-FOOT INTERVAL IN FT NAVD88)
- PROPERTY LINE
- FORMER BUILDING SLAB (AVERAGE ELEVATION 13.9 FT NAVD88)
- GRID LAYOUT
- SITE 137 NORTH BOUNDARY

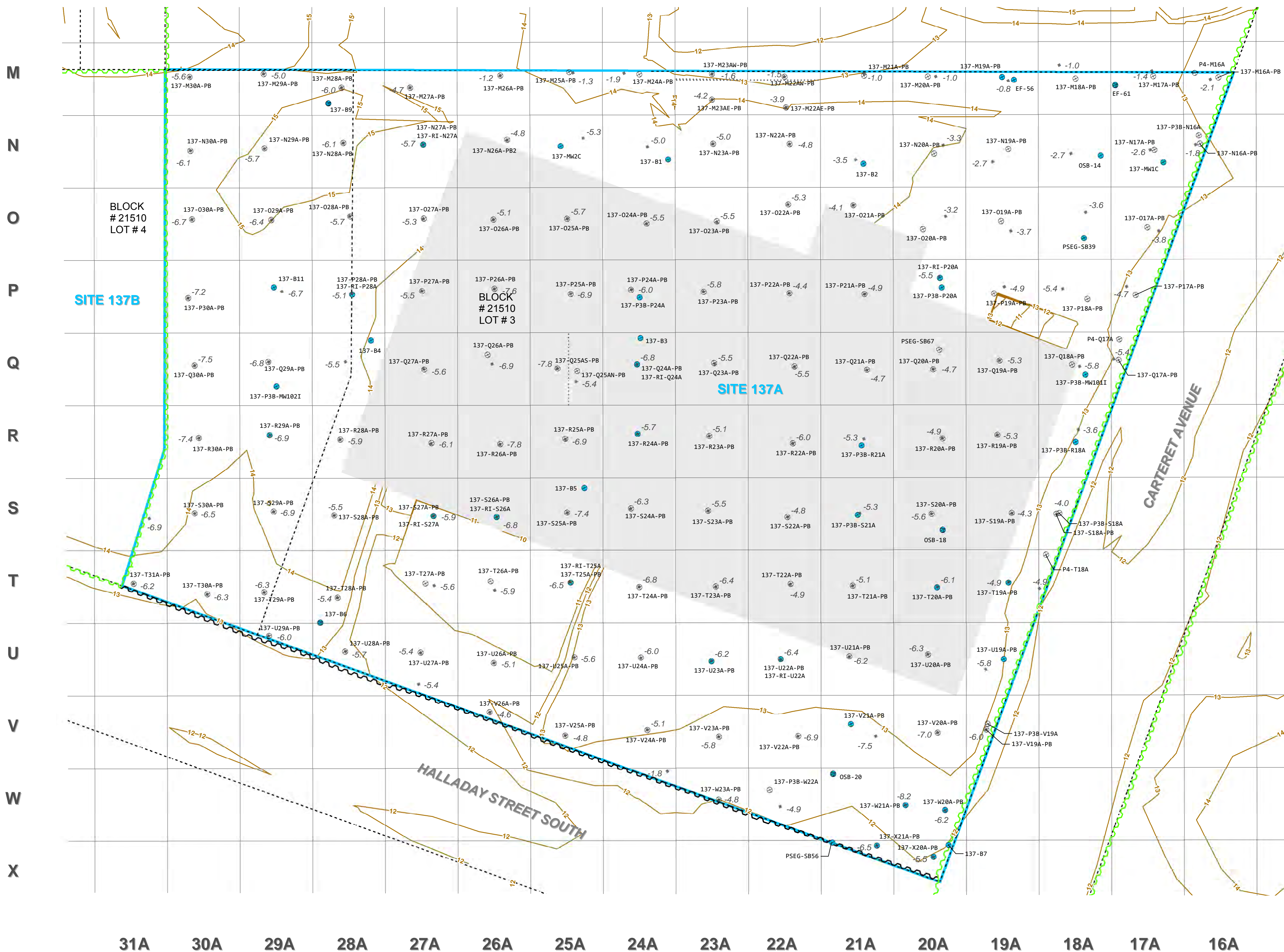
Soil Cleanup Criterion (mg/kg)	
Analyte	CrSCC
CHROMIUM (HEXAVALENT)	20



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SAMPLE MAP FOR Cr⁺⁶ COMPARED
 TO CHROMIUM SOIL CLEANUP CRITERION
 FIGURE 5-1

SITE 132



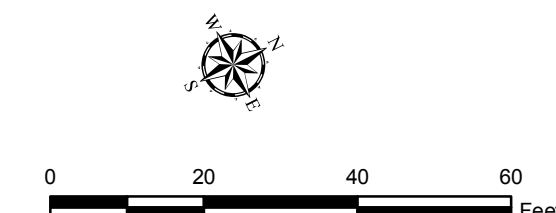
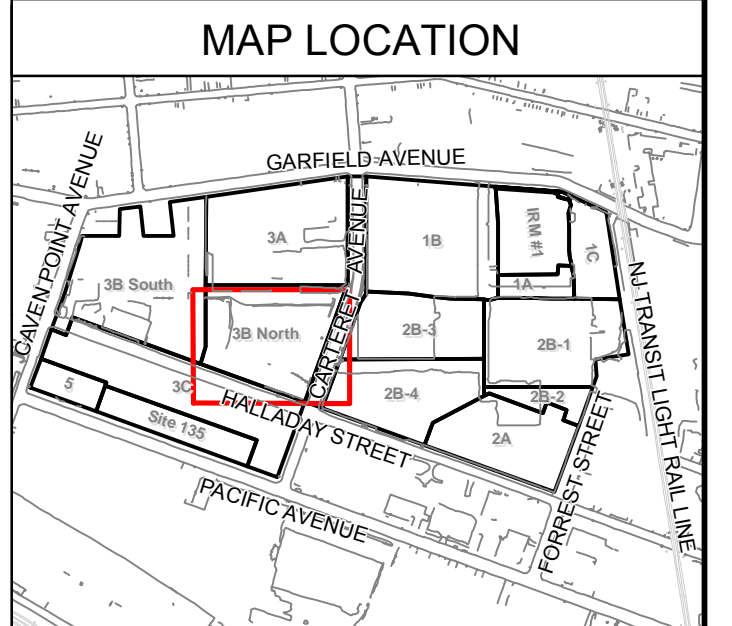
- ABBREVIATIONS:**
 CCPW - Chromate Chemical Production Waste
 Cr - total chromium
 Cr³⁺ - trivalent chromium
 El. - elevation
 ft - feet
 mg/kg - milligrams per kilogram
 N/A - not applicable
 NAVD88 - North American Vertical Datum of 1988
 NJDEP - New Jersey Department of Environmental Protection
 NRDCSRS - New Jersey Department of Environmental Protection Non-Residential Direct Contact Soil Remediation Standard
 RDCSRS - New Jersey Department of Environmental Protection Residential Direct Contact Soil Remediation Standard
 RDCSRS-GAG - Residential Direct Contact Soil Remediation Standard - Garfield Avenue Group (alternative remediation standard approved by the New Jersey Department of Environmental Protection on December 28, 2016)
 SCC - Soil Cleanup Criteria
 SRS - Soil Remediation Standards
 TEE - terminal excavation elevation

- GENERAL NOTES:**
- The CCPW data associated with the sample locations shown on this figure are provided in Table 5-2. None of the detected CCPW metals results exceeded the standards.
 - "Elevation" refers to the sample elevation based on the pre-remediation surface elevation for samples collected from the pit bottom, and the surface elevation of the sample location when the sample was collected via boring or test pit.
 - Elevation vertical datum is NAVD88, in U.S. survey ft.
 - 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>).
 - This figure presents data for locations within the Site boundary that have samples remaining in place. In addition, removed samples may be shown to demonstrate compliance with the remediation objectives. The Specific Notes on Table 5-2 include discussion of these situations, if necessary.
 - There is currently no NJDEP SRS and no NJDEP SCC for total Cr. Therefore, total Cr results are compared to the interim NJDEP Residential SCC for Cr³⁺ of 120,000 mg/kg as the cleanup criteria for soil at the Garfield Avenue Group Sites. There is no non-residential SCC for Cr³⁺.
 - Site 137 North is comprised of Site 137A and the northern portion of Site 137B, and generally coincides with Phase 3B North.

- SPECIFIC NOTES:**
- Property lines and pre-construction topographical contours are sourced from the "Boundary & Topographical Survey, PPG Site, Lot 5, Block 21510, Jersey City, Hudson County, New Jersey" prepared by Borbas Surveying and Mapping, LLC, dated May 30, 2014 and the "Boundary & Topographical Survey, PPG Sites 132 and 143, Lots 1 and 2, Block 21510, Jersey City, Hudson County, New Jersey" prepared by Borbas Surveying and Mapping, LLC, dated September 4, 2014.
 - Post-excavation elevation survey points were sourced from the "Post Excavation Elevation Plan for ENTACT, LLC; PPG Site 137 Excavation," prepared by Maser Consulting P.A., dated 05/25/2018.
 - In Grids N27A, Q24A, P28A, S26A, S27A, T25A, and U22A, two sample locations are located adjacent therefore the sampling location symbols overlap on the figure.
 - The pit bottom sample and as-built TEE for Grid W21A were inadvertently collected and measured at the edge of Grid W20A.
 - The following grids are partially located within the Site 137 North boundary, however the as-built TEE applies to the entire grid: M16A, M17A, M18A, M19A, M20A, M21A, M24A, M25A, M26A, M27A, M28A, M29A, and M30A.

- LEGEND**
- SAMPLING LOCATION (REMAINING SAMPLES)
 - SAMPLING LOCATION (REMOVED CONFIRMATION SAMPLES)
 - REMAINING SAMPLES NOT ANALYZED FOR CCPW
 - RESULT IS BELOW THE MOST STRINGENT STANDARD
 - POST-EXCAVATION ELEVATION SURVEY POINT REPRESENTING AS-BUILT TERMINAL EXCAVATION ELEVATION ACROSS GRID, UNLESS OTHERWISE NOTED (FT NAVD88)
 - APPROXIMATE LOCATION OF GRID SPLIT
 - IN PLACE SHEET PILE (AS OF MARCH 2018)
 - REMOVED SHEET PILE
 - PRE-REMEDIATION ELEVATION CONTOUR (1-FOOT INTERVAL IN FT NAVD88)
 - PROPERTY LINE
 - FORMER BUILDING SLAB (AVERAGE ELEVATION 13.9 FT NAVD88)
 - GRID LAYOUT
 - SITE 137 NORTH BOUNDARY

Analyte	RDCSRS	RDCSRS-GAG	NRDCSRS
ANTIMONY	31	N/A	450
CHROMIUM	120000	N/A	N/A
NICKEL	1600	N/A	23000
THALLIUM	N/A	N/A	N/A
VANADIUM	N/A	390	1100

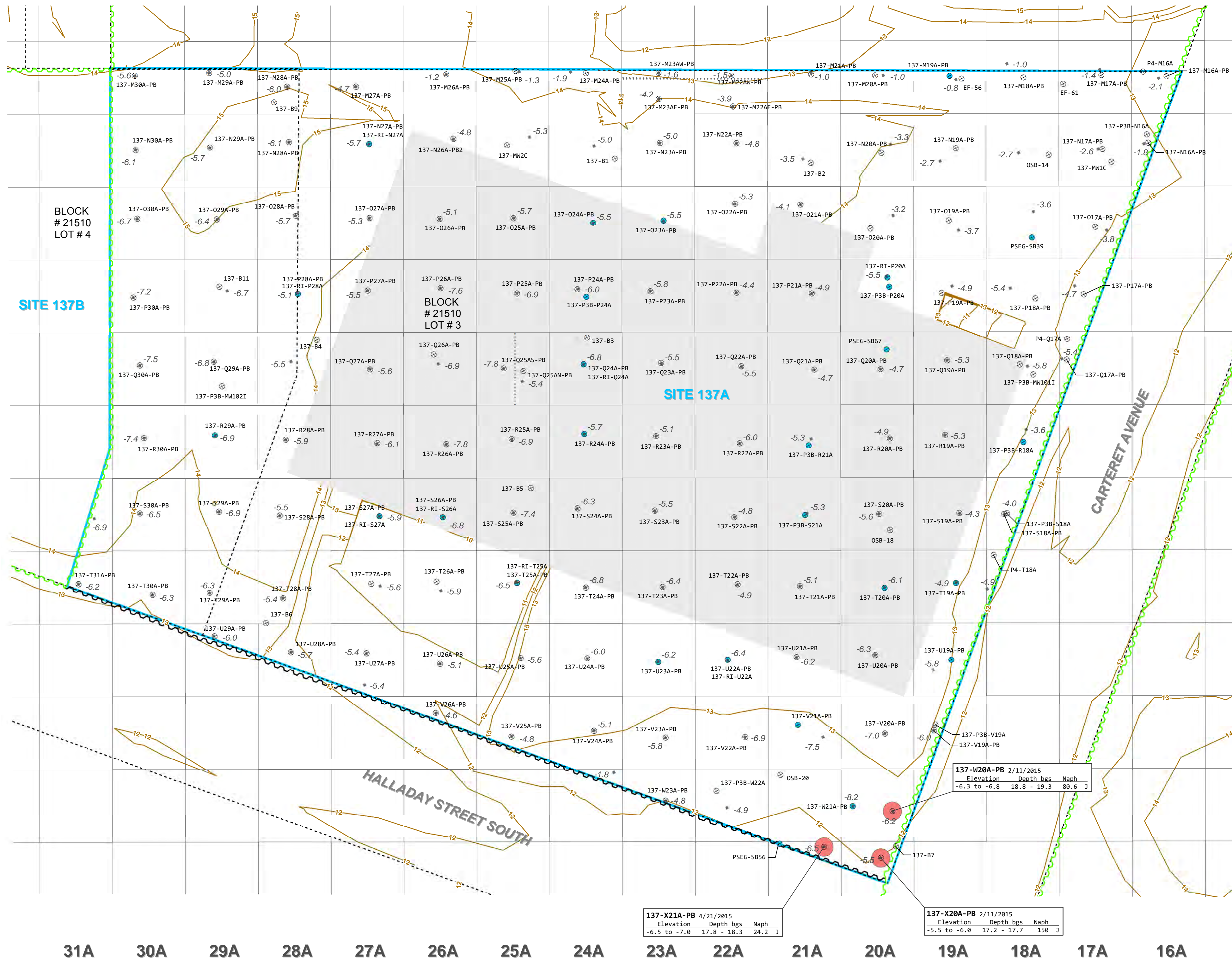


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SAMPLE MAP FOR CCPW METALS
 COMPARED TO SOIL REMEDIATION STANDARDS
 FIGURE 5-2

M
N
O
P
Q
R
S
T
U
V
W
X

SITE 132



ABBREVIATIONS:
 bgs - below ground surface
 ft - feet
 mg/kg - milligrams per kilogram
 Naph - naphthalene
 NAVD88 - North American Vertical Datum of 1988
 NRDCSRS - New Jersey Department of Environmental Protection Non-Residential Direct Contact Soil Remediation Standard
 PAHs - polycyclic aromatic hydrocarbons
 RDCSRS - New Jersey Department of Environmental Protection Residential Direct Contact Soil Remediation Standard

QUALIFIERS:
 J - The result was an estimated value; the associated numerical value was an approximate concentration of the analyte in the sample.

GENERAL NOTES:
 G1. The PAH data associated with the sample locations shown on this figure are provided in Table 5-3. Data presented in call out boxes on this figure are outliers (i.e., data points that require further explanation). Specific notes for each outlier sample are provided in the Specific Notes in Table 5-3.
 G2. "Elevation" refers to the sample elevation based on the pre-remediation surface elevation for samples collected from the pit bottom, and the surface elevation of the sample location when the sample was collected via boring or test pit.
 G3. Elevation vertical datum is NAVD88, in U.S. survey ft.
 G4. Results are reported in mg/kg.
 G5. 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>).
 G6. Site 137 North is comprised of Site 137A and the northern portion of Site 137B, and generally coincides with Phase 3B North.
 G7. This figure presents data only for locations within the Site boundary that have samples remaining in place.

SPECIFIC NOTES:
 S1. Property lines and pre-construction topographical contours are sourced from the "Boundary & Topographical Survey, PPG Site, Lot 5, Block 21510, Jersey City, Hudson County, New Jersey" prepared by Borbas Surveying and Mapping, LLC, dated May 30, 2014 and the "Boundary & Topographical Survey, PPG Sites 132 and 143, Lots 1 and 2, Block 21510, Jersey City, Hudson County, New Jersey" prepared by Borbas Surveying and Mapping, LLC, dated September 4, 2014.
 S2. Post-excavation elevation survey points were sourced from the "Post Excavation Elevation Plan for ENACT, LLC; PPG Site 137 Excavation," prepared by Maser Consulting P.A., dated 05/25/2018.
 S3. In Grids N27A, Q24A, P28A, S26A, S27A, T25A, and U22A, two sample locations are located adjacent therefore the sampling location symbols overlap on the figure.
 S4. The pit bottom sample and as-built TEE for Grid W21A were inadvertently collected and measured at the edge of Grid W20A.
 S5. The following grids are partially located within the Site 137 North boundary, however the as-built TEE applies to the entire grid: M16A, M17A, M18A, M19A, M20A, M21A, M24A, M25A, M26A, M27A, M28A, M29A, and M30A.
 S6. The selected PAHs on this figure and associated Table 5-3 are included based on the November 11, 2014 Phase 3B "Emanating from" Technical Memorandum.

LEGEND

- ⊗ SAMPLING LOCATION (REMAINING SAMPLES)
- REMAINING SAMPLES NOT ANALYZED FOR PAHS
- RESULT IS BELOW THE MOST STRINGENT STANDARD
- RESULT EXCEEDS THE MOST STRINGENT STANDARD, BUT ARE IN COMPLIANCE WITH REMEDIATION OBJECTIVES
- NAPHTHALENE (NAPH)
- ⊗ POST-EXCAVATION ELEVATION SURVEY POINT REPRESENTING AVERAGE ELEVATION 13.9 FT NAVD88
- ⊗ AS-BUILT TERMINAL EXCAVATION ELEVATION ACROSS GRID, UNLESS OTHERWISE NOTED (FT NAVD88)
- ⋯ APPROXIMATE LOCATION OF GRID SPLIT
- IN PLACE SHEET PILE (AS OF MARCH 2018)
- REMOVED SHEET PILE
- PRE-REMEDIATION ELEVATION CONTOUR (1-FOOT INTERVAL IN FT NAVD88)
- PROPERTY LINE
- FORMER BUILDING SLAB (AVERAGE ELEVATION 13.9 FT NAVD88)
- GRID LAYOUT
- SITE 137 NORTH BOUNDARY

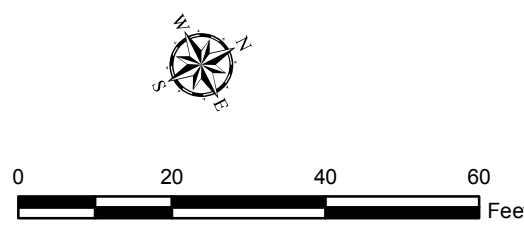
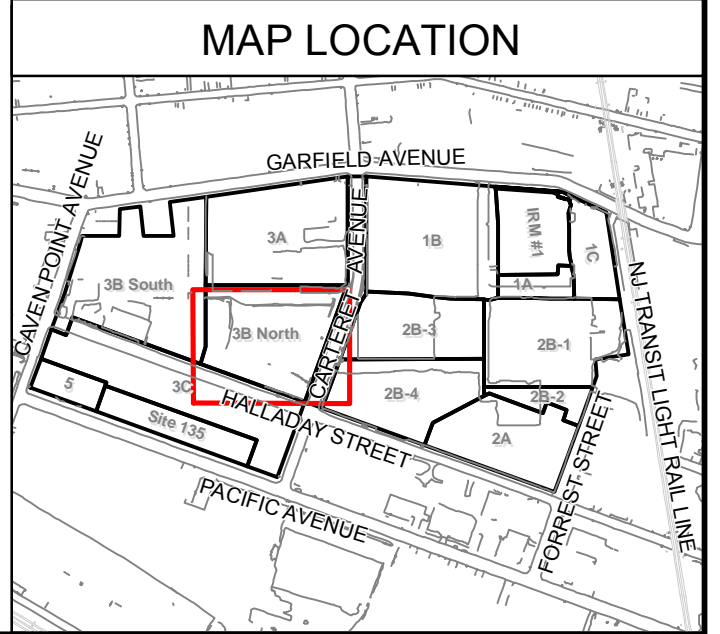
Soil Remediation Standards (mg/kg)

Analyte	RDCSRS	NRDCSRS
BENZO(A)ANTHRACENE	5	17
BENZO(B)FLUORANTHENE	5	17
BENZO(K)FLUORANTHENE	45	170
INDEN(1,2,3-CD)PYRENE	5	17
NAPHTHALENE	6	17

137-X21A-PB 4/21/2015
 Elevation Depth bgs Naph
 -6.5 to -7.0 17.8 - 18.3 24.2 J

137-X20A-PB 2/11/2015
 Elevation Depth bgs Naph
 -5.5 to -6.0 17.2 - 17.7 150 J

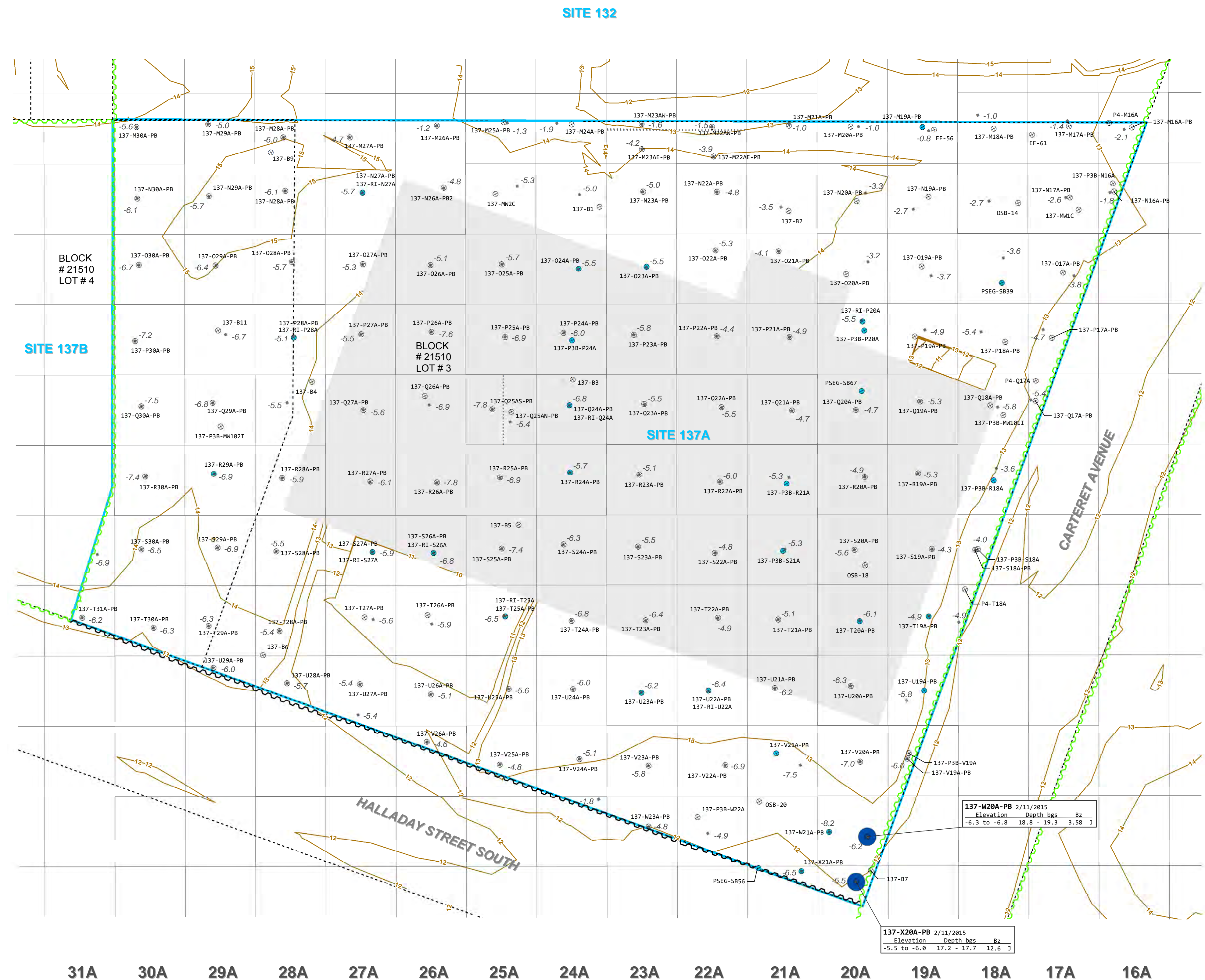
137-W20A-PB 2/11/2015
 Elevation Depth bgs Naph
 -6.3 to -6.8 18.8 - 19.3 80.6 J



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SAMPLE MAP FOR SELECT PAHS
 COMPARED TO SOIL REMEDIATION
 STANDARDS
 FIGURE 5-3

M
N
O
P
Q
R
S
T
U
V
W
X



SITE 132

SITE 137B

SITE 137A

BLOCK #21510 LOT #4

BLOCK #21510 LOT #3

HALLADAY STREET SOUTH

CARTERET AVENUE

31A 30A 29A 28A 27A 26A 25A 24A 23A 22A 21A 20A 19A 18A 17A 16A

ABBREVIATIONS:
 bgs - below ground surface
 Bz - benzene
 ft - feet
 mg/kg - milligrams per kilogram
 NAVD88 - North American Vertical Datum of 1988
 NRDCSRS - New Jersey Department of Environmental Protection Non-Residential Direct Contact Soil Remediation Standard
 RDCSRS - New Jersey Department of Environmental Protection Residential Direct Contact Soil Remediation Standard

QUALIFIERS:
 J - The result was an estimated value; the associated numerical value was an approximate concentration of the analyte in the sample.

GENERAL NOTES:
 G1. The benzene data associated with the sample locations shown on this figure are provided in Table 5-4. Data presented in call out boxes on this figure are outliers (i.e., data points that require further explanation). Specific notes for each outlier sample are provided in the specific notes in Table 5-4.
 G2. "Elevation" refers to the sample elevation based on the pre-remediation surface elevation for samples collected from the pit bottom, and the surface elevation of the sample location when the sample was collected via boring or test pit.
 G3. Elevation vertical datum is NAVD88, in U.S. survey ft.
 G4. Results are reported in mg/kg.
 G5. 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>).
 G6. Site 137 North is comprised of Site 137A and the northern portion of Site 137B, and generally coincides with Phase 3B North.
 G7. This figure presents data only for locations within the Site boundary that have samples remaining in place.

SPECIFIC NOTES:
 S1. Property lines and pre-construction topographical contours are sourced from the "Boundary & Topographical Survey, PPG Site, Lot 5, Block 21510, Jersey City, Hudson County, New Jersey" prepared by Borbas Surveying and Mapping, LLC, dated May 30, 2014 and the "Boundary & Topographical Survey, PPG Sites 132 and 143, Lots 1 and 2, Block 21510, Jersey City, Hudson County, New Jersey" prepared by Borbas Surveying and Mapping, LLC, dated September 4, 2014.
 S2. Post-excavation elevation survey points were sourced from the "Post Excavation Elevation Plan for ENTACT, LLC, PPG Site 137 Excavation," prepared by Maser Consulting P.A., dated 05/25/2018.
 S3. In Grids N27A, Q24A, P28A, S26A, S27A, T25A, and U22A, two sample locations are located adjacent therefore the sampling location symbols overlap on the figure.
 S4. The pit bottom sample and as-built TEE for Grid W21A were inadvertently collected and measured at the edge of Grid W20A.
 S5. The following grids are partially located within the Site 137 North boundary, however the as-built TEE applies to the entire grid: M16A, M17A, M18A, M19A, M20A, M21A, M24A, M25A, M26A, M27A, M28A, M29A, and M30A.

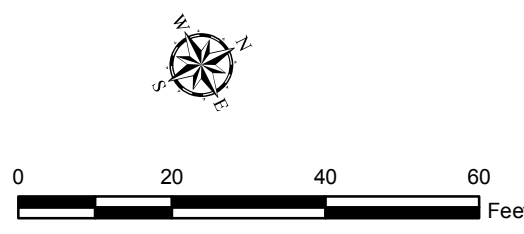
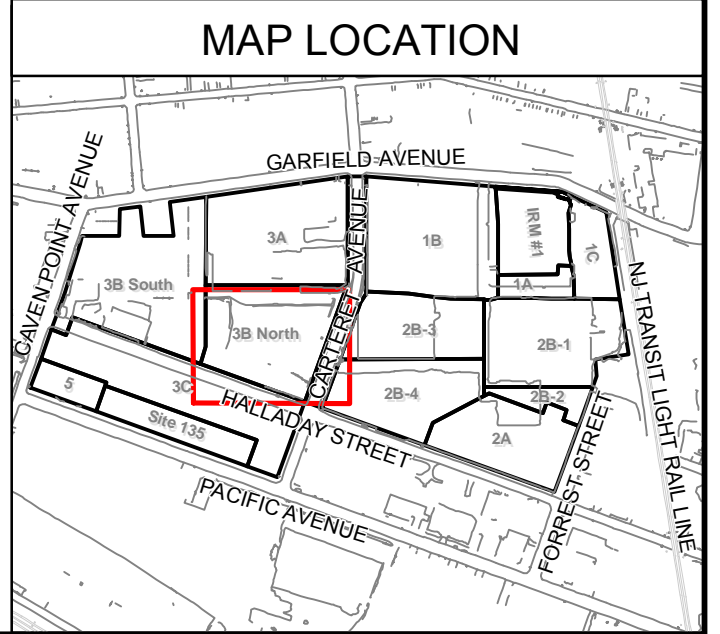
LEGEND

⊗	SAMPLING LOCATION (REMAINING SAMPLES)	▲	POST-EXCAVATION ELEVATION SURVEY POINT REPRESENTING AS-BUILT TERMINAL EXCAVATION ELEVATION ACROSS GRID, UNLESS OTHERWISE NOTED (FT NAVD88)	■	FORMER BUILDING SLAB (AVERAGE ELEVATION 13.9 FT NAVD88)
○	REMAINING SAMPLES NOT ANALYZED FOR BENZENE	⋯	APPROXIMATE LOCATION OF GRID SPLIT	□	GRID LAYOUT
●	RESULT IS BELOW THE MOST STRINGENT STANDARD	—	IN PLACE SHEET PILE (AS OF MARCH 2018)	▭	SITE 137 NORTH BOUNDARY
●	RESULTS EXCEED THE MOST STRINGENT STANDARD, BUT ARE IN COMPLIANCE WITH REMEDIATION OBJECTIVES	—	REMOVED SHEET PILE		
■	BENZENE (Bz)	—	PRE-REMEDIATION ELEVATION CONTOUR (1-FOOT INTERVAL IN FT NAVD88)		
		---	PROPERTY LINE		

Soil Remediation Standards (mg/kg)		
Analyte	RDCSRS	NRDCSRS
BENZENE	2	5

137-W20A-PB	2/11/2015	
Elevation	Depth bgs	Bz
-6.3 to -6.8	18.8 - 19.3	3.58 J

137-X20A-PB	2/11/2015	
Elevation	Depth bgs	Bz
-5.5 to -6.0	17.2 - 17.7	12.6 J



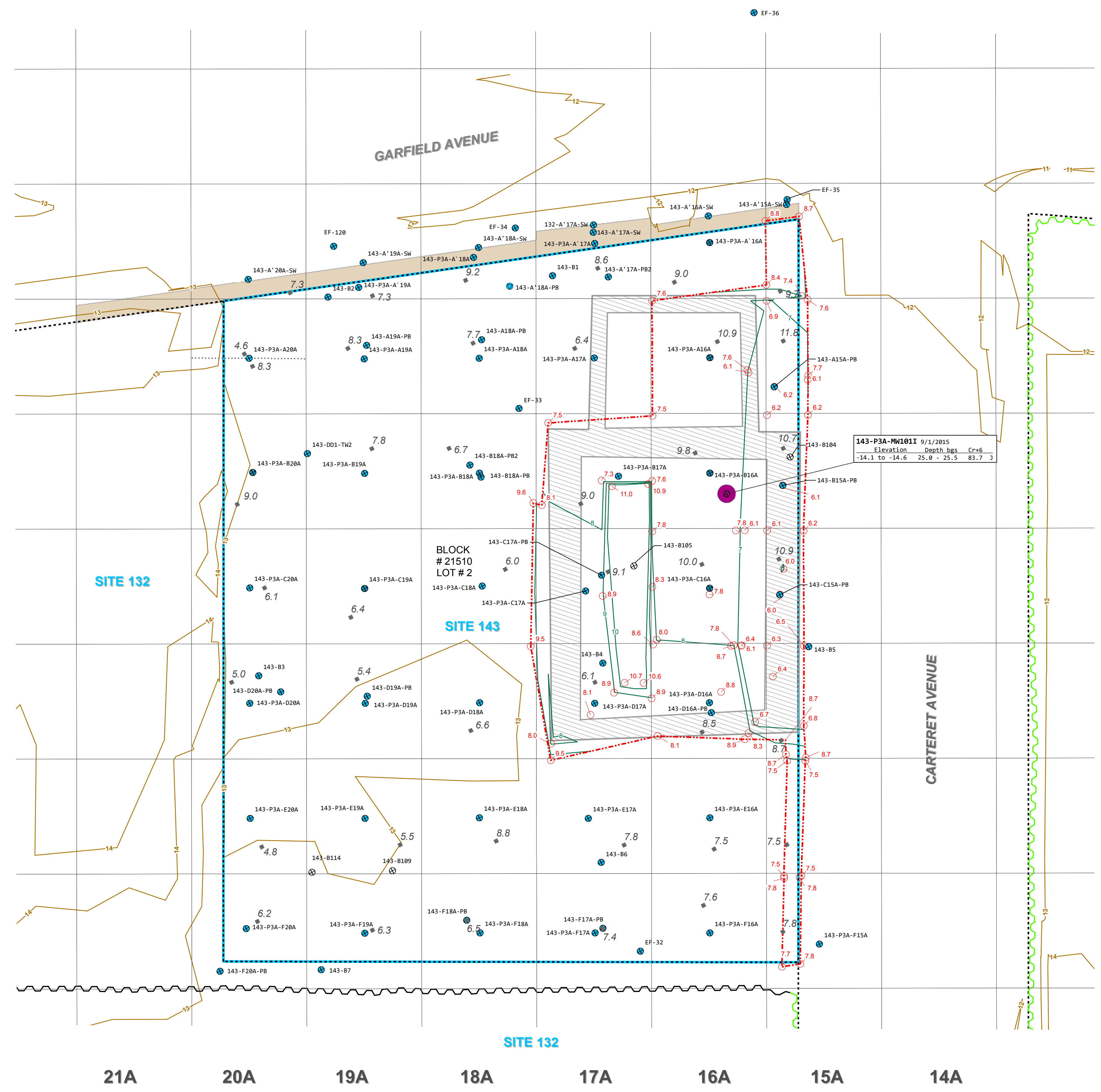
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 JERSEY CITY, NEW JERSEY
 DATE: 12/04/2018

SAMPLE MAP FOR BENZENE
 COMPARED TO SOIL REMEDIATION STANDARDS
 FIGURE 5-4

Appendix D-2

Site 143 Sample Maps

B'
A'
A
B
C
D
E
F



ABBREVIATIONS:
 bgs - below ground surface
 CrSCC - Chromium Soil Cleanup Criterion
 Cr⁺⁶ - hexavalent chromium
 ft - feet
 mg/kg - milligrams per kilogram
 NAVD88 - North American Vertical Datum of 1988
 NJDEP - New Jersey Department of Environmental Protection
 TEE - Terminal Excavation Elevation

QUALIFIERS:
 J - The result was an estimated value; the associated numerical value was an approximate concentration of the analyte in the sample.

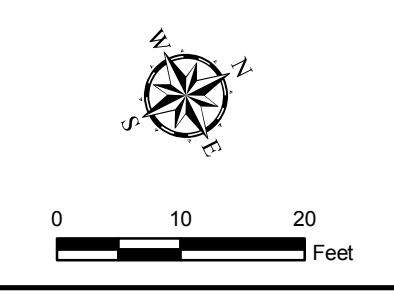
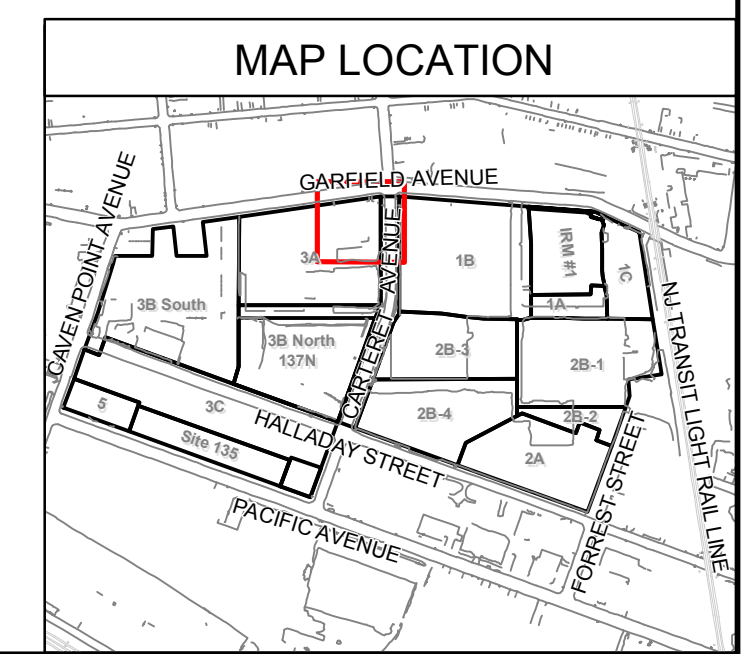
GENERAL NOTES:
 G1. The hexavalent chromium data associated with the sample locations shown on this figure are provided in Table 5-1. Data presented in call out boxes on this figure are outliers (i.e., data points that require further explanation). Specific notes on how the New Jersey Department of Environmental Protection's remedial standards are being met and/or how remedial completion is being achieved/completed for each outlier sample are provided in the Specific Notes in Table 5-1.
 G2. "Elevation" refers to the sample elevation based on the pre-remediation surface elevation for samples collected from the pit bottom, and the surface elevation of the sample location when the sample was collected via boring or test pit.
 G3. Elevation vertical datum is NAVD88, in U.S. survey ft.
 G4. Results are reported in mg/kg.
 G5. 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>).
 G6. 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. Property lines and pre-construction topographical contours are sourced from the "Boundary & Topographical Survey, PPG Sites 132 and 143, Lots 1 and 2, Block 21510, Jersey City, Hudson County, New Jersey" prepared by Borbas Surveying and Mapping, LLC, dated September 4, 2014.
 S2. Post-excavation elevation survey points were taken from the "Post Excavation Elevation Plan for ENTACT, LLC; PPG Site 143 Excavation," produced by Maser Consulting P.A., dated 05/25/2018.
 S3. Grids A20A, B20A, C20A, D20A, E20A, F15A, F16A, F17A, F18A, F19A, and F20A are partially located within the Site 143 boundary; however, the as-built terminal excavation elevation applies to the entire grid.
 S4. Within the Site 143 boundary, Grids A15A, A16A, B15A, B16A, B17A, C15A, C16A, C17A, D15A, D16A, D17A, and portions of Grids E15A and F15A were re-excavated during 2017. This figure shows the extent of the 2017 excavation activities, the post-excavation pit bottom survey points, and 1-ft post-excavation contours representing the 2017 as-built TEEs in these grids. As shown on this figure, excavation in Grid A15A was extended to the Site 143 northern property line and to the proposed TEE. Excavation in Grids A15A, B15A, C15A, and D15A was extended to the Site 143 northern property line and to sufficient depths to remove observed CCPW material. Excavation in Grids E15A and F15A was extended to the Site 143 northern property line at their original as-built TEEs. Excavation was extended into Grids A16A, B16A, B17A, C16A, C17A, D16A, and D17A to determine the limits of, and remove, the former building footer. Portions of Grids B17A and C17A were not re-excavated below the original as-built TEEs from 2014, and the re-excavated portions of Grids D16A and D17A did not extend below the original as-built TEEs.

LEGEND

- ⊙ SAMPLING LOCATION (REMAINING SAMPLES)
- ⊙ SAMPLING LOCATION (REMOVED/CONFIRMATION SAMPLES)
- REMAINING SAMPLES NOT ANALYZED FOR Cr⁺⁶
- RESULT IS BELOW THE MOST STRINGENT STANDARD
- RESULTS EXCEED THE MOST STRINGENT STANDARD, BUT ARE IN COMPLIANCE WITH REMEDIATION OBJECTIVES
- ◆ 2014 POST-EXCAVATION ELEVATION SURVEY POINT REPRESENTING AS-BUILT TERMINAL EXCAVATION ELEVATION ACROSS GRID, UNLESS OTHERWISE NOTED (FT NAVD88)
- 2017 EXCAVATION LATERAL EXTENT
- 2017 POST-EXCAVATION ELEVATION SURVEY POINT AT AS-BUILT TEE (FT NAVD88)
- 2017 POST-EXCAVATION ELEVATION CONTOURS (1-FOOT INTERVAL IN FT NAVD88)
- IN PLACE SHEET PILE (AS OF JANUARY 2018)
- REMOVED SHEET PILE
- APPROXIMATE LOCATION OF GRID SPLIT
- PROPERTY LINE
- PRE-REMEDIATION ELEVATION CONTOUR (1-FOOT INTERVAL IN FT NAVD88)
- CLEAN CORRIDOR EXCAVATION
- GRID LAYOUT
- FORMER BUILDING FOOTER
- SITE 143 BOUNDARY

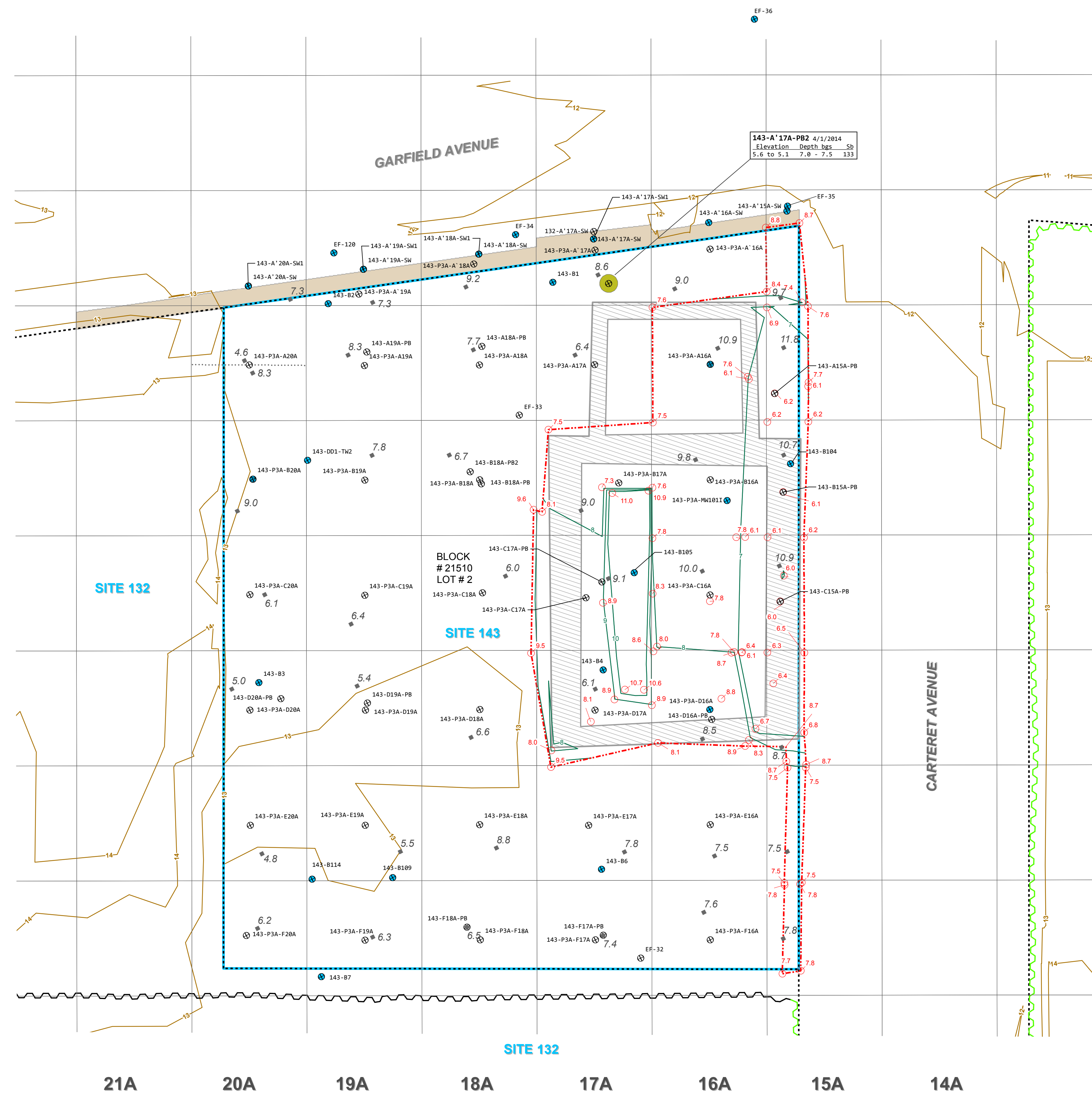
Soil Cleanup Criteria (mg/kg)	
Analyte	CrSCC
CHROMIUM (HEXAVALENT)	20



PPG
 SITE 143
 GARFIELD AVENUE GROUP
 JERSEY CITY, NEW JERSEY
 DATE: 07/18/2018

SAMPLE MAP FOR Cr⁺⁶ COMPARED
 TO CHROMIUM SOIL CLEANUP CRITERION
 FIGURE 5-1

B'
A'
A
B
C
D
E
F



ABBREVIATIONS:
 bgs - below ground surface
 CCPW - Chromate Chemical Production Waste
 Cr - total chromium
 Cr³⁺ - trivalent chromium
 ft - feet
 mg/kg - milligrams per kilogram
 N/A - not applicable
 NAVD88 - North American Vertical Datum of 1988
 NJDEP - New Jersey Department of Environmental Protection
 NRDCSRS - New Jersey Department of Environmental Protection Non-Residential Direct Contact Soil Remediation Standard
 RDCSRS - New Jersey Department of Environmental Protection Residential Direct Contact Soil Remediation Standard
 RDCSRS-GAG - Residential Direct Contact Soil Remediation Standard - Garfield Avenue Group (alternative remediation standard approved by the New Jersey Department of Environmental Protection on December 28, 2016)
 Sb - antimony
 SCC - Soil Cleanup Criteria
 SRS - Soil Remediation Standard
 TEE - Terminal Excavation Elevation

GENERAL NOTES:
 G1. The CCPW metals data associated with the sample locations shown on this figure are provided in Table 5-2. Data presented in call out boxes on this figure are outliers (i.e., data points that require further explanation). Specific notes on how the New Jersey Department of Environmental Protection's remedial standards are being met and/or how remedial completion is being achieved/completed for each outlier sample are provided in the Specific Notes in Table 5-2.
 G2. "Elevation" refers to the sample elevation based on the pre-remediation surface elevation for samples collected from the pit bottom, and the surface elevation of the sample location when the sample was collected via boring or test pit.
 G3. Elevation vertical datum is NAVD88, in U.S. survey ft.
 G4. Results are reported in mg/kg.
 G5. 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>).
 G6. 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 5-2 include discussion of these situations, if necessary.
 G7. There is currently no NJDEP SRS and no NJDEP SCC for total Cr. Therefore, total Cr results are compared to the interim NJDEP Residential SCC for Cr³⁺ of 120,000 mg/kg as the cleanup criteria for soil at the Garfield Avenue Group Sites. There is no non-residential SCC for Cr³⁺.

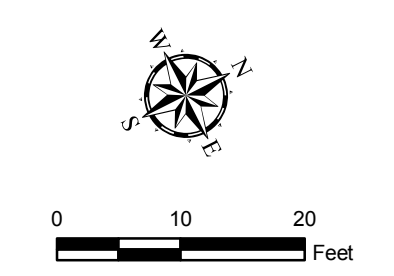
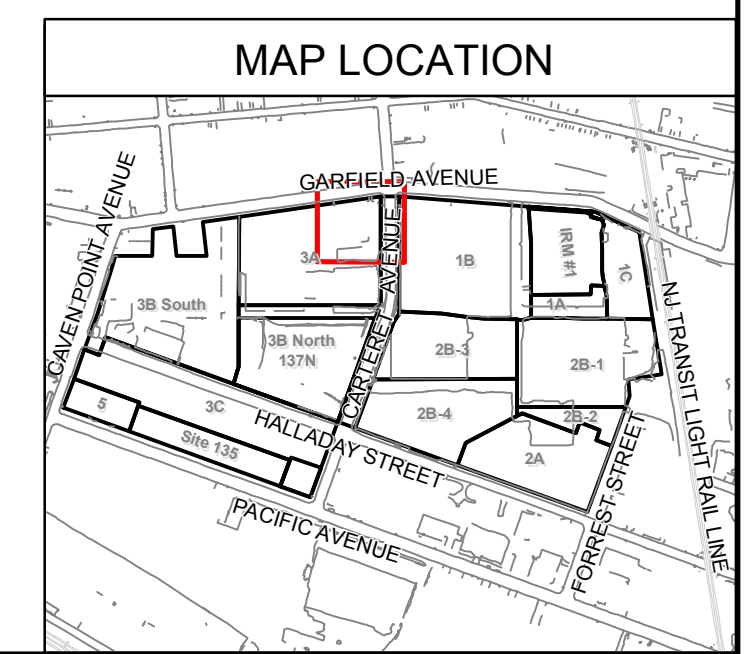
SPECIFIC NOTES:
 S1. Property lines and pre-construction topographical contours are sourced from the "Boundary & Topographical Survey, PPG Sites 132 and 143, Lots 1 and 2, Block 21510, Jersey City, Hudson County, New Jersey" prepared by Borbas Surveying and Mapping, LLC, dated September 4, 2014.
 S2. Post-excavation elevation survey points were taken from the "Post Excavation Elevation Plan for ENACT, LLC; PPG Site 143 Excavation," produced by Maser Consulting P.A., dated 05/25/2018.
 S3. Grids A20A, B20A, C20A, D20A, E20A, F15A, F16A, F17A, F18A, F19A, and F20A are partially located within the Site 143 boundary, however, the as-built terminal excavation elevation applies to the entire grid.
 S4. Within the Site 143 boundary, Grids A'15A, A15A, A16A, B15A, B16A, B17A, C15A, C16A, C17A, D15A, D16A, D17A, and portions of Grids E15A and F15A were re-excavated during 2017. This figure shows the extent of the 2017 excavation activities, the post-excavation pit bottom survey points, and 1-ft post-excavation contours representing the 2017 as-built TEEs in these grids. As shown on this figure, excavation in Grid A'15A was extended to the Site 143 northern property line and to the proposed TEE. Excavation in Grids A15A, B15A, C15A, and D15A was extended to the Site 143 northern property line and to sufficient depths to remove observed CCPW material. Excavation in Grids E15A and F15A was extended to the Site 143 northern property line at their original as-built TEEs. Excavation was extended into Grids A16A, B16A, B17A, C16A, C17A, D16A, and D17A to determine the limits of, and remove, the former building footer. Portions of Grids B17A and C17A were not re-excavated below the original as-built TEEs from 2014, and the re-excavated portions of Grids D16A and D17A did not extend below the original as-built TEEs.

LEGEND

- ⊗ SAMPLING LOCATION (REMAINING SAMPLES)
- ⊙ SAMPLING LOCATION (REMOVED CONFIRMATION SAMPLES)
- REMAINING SAMPLES NOT ANALYZED FOR CCPW METALS
- RESULT IS BELOW THE MOST STRINGENT STANDARD
- RESULTS EXCEED THE MOST STRINGENT STANDARD, BUT ARE IN COMPLIANCE WITH REMEDIATION OBJECTIVES
- ANTIMONY (Sb)
- ◆ 2014 POST-EXCAVATION SURVEY POINT REPRESENTING 3.9 AS-BUILT TERMINAL EXCAVATION ELEVATION ACROSS GRID, UNLESS OTHERWISE NOTED (FT NAVD88)
- 2017 EXCAVATION LATERAL EXTENT
- 2017 POST-EXCAVATION SURVEY POINT AT AS-BUILT TEE (FT NAVD88)
- 2017 POST-EXCAVATION ELEVATION CONTOURS (1-FOOT INTERVAL IN FT NAVD88)
- IN PLACE SHEET PILE (AS OF JANUARY 2018)
- REMOVED SHEET PILE
- APPROXIMATE LOCATION OF GRID SPLIT
- PROPERTY LINE
- PRE-REMEDIATION ELEVATION CONTOUR (1-FOOT INTERVAL IN FT NAVD88)
- CLEAN CORRIDOR EXCAVATION
- GRID LAYOUT
- FORMER BUILDING FOOTER
- SITE 143 BOUNDARY

Soil Remediation Standards (mg/kg)

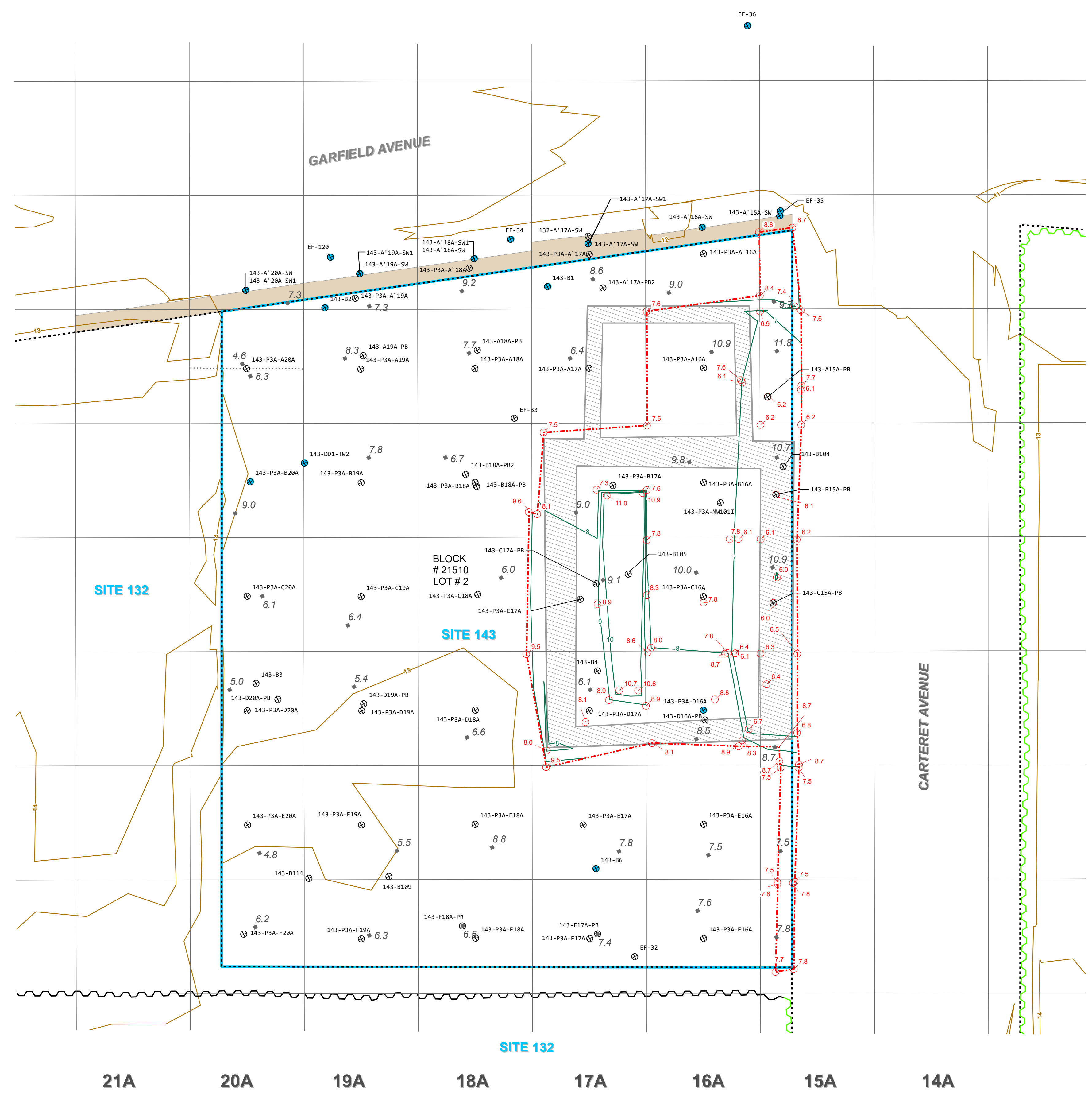
Analyte	RDCSRS	RDCSRS-GAG	NRDCSRS
ANTIMONY	31	N/A	450
CHROMIUM	120000	N/A	N/A
NICKEL	1600	N/A	23000
THALLIUM	N/A	N/A	N/A
VANADIUM	N/A	390	1100



PPG
 SITE 143
 GARFIELD AVENUE GROUP
 JERSEY CITY, NEW JERSEY
 DATE: 07/18/2018

SAMPLE MAP FOR CCPW METALS
 COMPARED TO SOIL REMEDIATION STANDARDS
 FIGURE 5-2

B'
A'
A
B
C
D
E
F



ABBREVIATIONS:
 CCPW - Chromate Chemical Production Waste
 DIGWSSL - Default Impact to Groundwater Soil Screening Level
 El. - elevation
 ft - feet
 IGW - Impact to Groundwater
 IGWRSR-GAG - Impact to Groundwater Soil Remediation Standard - Garfield Avenue Group (alternative remediation standard as proposed in the *Supplemental Soil Remedial Investigation Report, Final Revision 1*, PPG Garfield Avenue Group, Hudson County Chromium Sites, Jersey City, New Jersey, AECOM, 08/30/18 and approved by NJDEP on 10/22/18)
 mg/kg - milligram per kilogram
 N/A - not applicable
 NAVD88 - North American Vertical Datum of 1988
 NJDEP - New Jersey Department of Environmental Protection
 TEE - Terminal Excavation Elevation

GENERAL NOTES:
 G1. The CCPW metals data associated with the sample locations shown on this figure are provided in Table 5-3. None of the detected CCPW metals results exceeded the standards.
 G2. "Elevation" refers to the sample elevation based on the pre-remediation surface elevation for samples collected from the pit bottom, and the surface elevation of the sample location when the sample was collected via boring or test pit.
 G3. Elevation vertical datum is NAVD88, in U.S. survey ft.
 G4. 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>).
 G5. This figure presents data only for locations within the Site boundary that have samples in the unsaturated zone remaining in place. In addition, locations from outside the Site boundary may be shown to demonstrate compliance with the remediation objectives. The Specific Notes on Table 5-3 include discussion of these situations, if necessary.

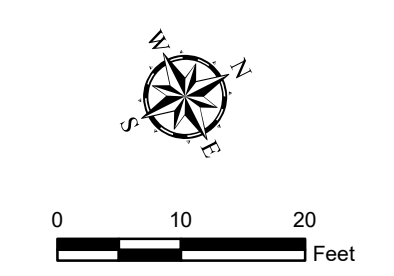
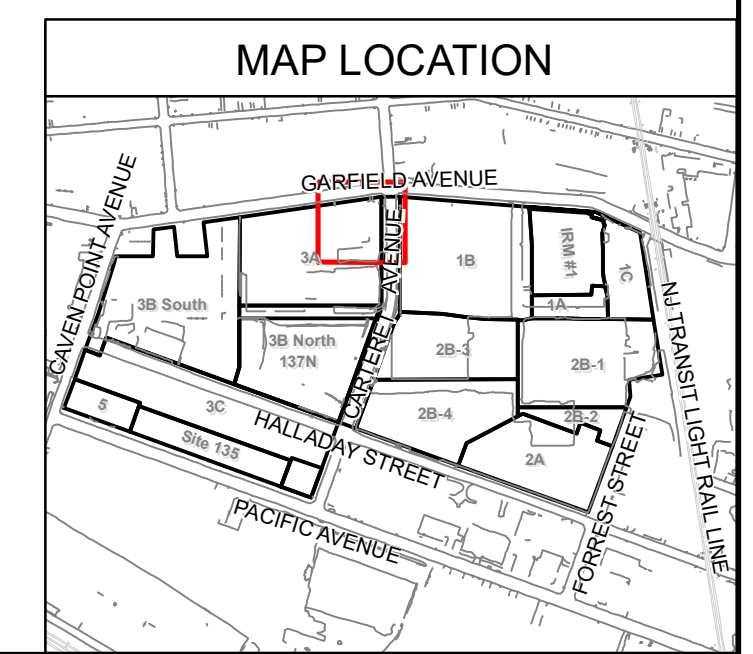
SPECIFIC NOTES:
 S1. Property lines and pre-construction topographical contours are sourced from the "Boundary & Topographical Survey, PPG Sites 132 and 143, Lots 1 and 2, Block 21510, Jersey City, Hudson County, New Jersey" prepared by Borbas Surveying and Mapping, LLC, dated September 4, 2014.
 S2. Post-excavation elevation survey points were taken from the "Post Excavation Elevation Plan for ENTACT, LLC; PPG Site 143 Excavation," produced by Maser Consulting P.A., dated 05/25/2018.
 S3. Grids A20A, B20A, C20A, D20A, E20A, F15A, F16A, F17A, F18A, F19A, and F20A are partially located within the Site 143 boundary, however, the as-built terminal excavation elevation applies to the entire grid.
 S4. Within the Site 143 boundary, Grids A15A, A16A, B15A, B16A, B17A, C15A, C16A, C17A, D15A, D16A, D17A, and portions of Grids E15A and F15A were re-excavated during 2017. This figure shows the extent of the 2017 excavation activities, the post-excavation pit bottom survey points, and 1-ft post-excavation contours representing the 2017 as-built TEEs in these grids. As shown on this figure, excavation in Grid A15A was extended to the Site 143 northern property line and to the proposed TEE. Excavation in Grids A15A, B15A, C15A, and D15A was extended to the Site 143 northern property line and to sufficient depths to remove observed CCPW material. Excavation in Grids E15A and F15A was extended to the Site 143 northern property line at their original as-built TEEs. Excavation was extended into Grids A16A, B16A, B17A, C16A, C17A, D16A, and D17A to determine the limits of, and remove, the former building footer. Portions of Grids B17A and C17A were not re-excavated below the original as-built TEEs from 2014, and the re-excavated portions of Grids D16A and D17A did not extend below the original as-built TEEs.
 S5. This figure shows sample results from the unsaturated zone compared to the DIGWSSL and the IGWRSR-GAG. The groundwater elevation (above which is the unsaturated zone) on this Site was estimated as the 50th percentile groundwater elevation from 5 monitoring wells located on or adjacent to Site 143 gauged between February 2007 and December 2016. The monitoring well locations and data are included in Appendix A. The estimated groundwater elevation for this Site is El. 6.4 ft NAVD88.

LEGEND

- ⊗ SAMPLING LOCATION (REMAINING SAMPLES)
- ⊙ SAMPLING LOCATION (REMOVED CONFIRMATION SAMPLES)
- REMAINING SAMPLES NOT ANALYZED FOR CCPW METALS
- RESULT IS BELOW THE MOST STRINGENT STANDARD
- ◆ 3.9 2014 POST-EXCAVATION ELEVATION SURVEY POINT REPRESENTING AS-BUILT TERMINAL EXCAVATION ELEVATION ACROSS GRID, UNLESS OTHERWISE NOTED (FT NAVD88)
- ⊙ 7.8 2017 POST-EXCAVATION ELEVATION SURVEY POINT AT AS-BUILT TEE (FT NAVD88)
- 2017 POST-EXCAVATION ELEVATION CONTOURS (1-FOOT INTERVAL IN FT NAVD88)
- 2014 POST-EXCAVATION ELEVATION SURVEY POINT REPRESENTING AS-BUILT TERMINAL EXCAVATION ELEVATION ACROSS GRID, UNLESS OTHERWISE NOTED (FT NAVD88)
- APPROXIMATE LOCATION OF GRID SPLIT
- PROPERTY LINE
- PRE-REMEDIATION ELEVATION CONTOUR (1-FOOT INTERVAL IN FT NAVD88)
- CLEAN CORRIDOR EXCAVATION
- GRID LAYOUT
- FORMER BUILDING FOOTER
- SITE 143 BOUNDARY
- IN PLACE SHEET PILE (AS OF JANUARY 2018)
- REMOVED SHEET PILE

Soil Screening Level & Soil Remediation Standards (mg/kg)

Analyte	DIGWSSL	IGWRSR-GAG
ANTIMONY	N/A	62.7
CHROMIUM	N/A	N/A
NICKEL	N/A	170
THALLIUM	3	N/A
VANADIUM	N/A	N/A



PPG
 SITE 143
 GARFIELD AVENUE GROUP
 JERSEY CITY, NEW JERSEY
 DATE: 07/11/2019

SAMPLE MAP FOR CCPW METALS
 IN THE UNSATURATED SOIL ZONE
 COMPARED TO IGW SOIL SCREENING
 LEVEL AND SOIL REMEDIATION STANDARDS
 FIGURE 5-3

Appendix D-3

Site 137 North Analytical Results Tables

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criteria
Site 137 North, Garfield Avenue Group
PPG, Jersey City, New Jersey

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7, G8)	Sample ID (G9)	Depth Interval (ft bgs) (G10)	Sample Start Elevation (ft NAVD88) (G4, G7, G8, G11, G13)	Sample End Elevation (ft NAVD88) (G4, G12, G13)	Lab ID (G14)	Lab SDG (G14)	Date Collected (G15)	Sample Status (G16)	Sample Type (G17)	Validated (Y/N) (G18)	Matrix (G19)	Analyte CAS RN Units CrSCC		CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20		Specific Notes
															Result (G20, G21)	Qualifier (G22, G23)			
M16A	137-M16A-PB	12.5	-2.1	137-M16A-PB-14.7-15.2	14.7 - 15.2 ft	-2.2	-2.7	JB82743-5	JB82743	11/25/2014	remaining	N	Y			0.61	J		
M16A	P4-M16A	12.7	-2.1	P4-M16A-16.0-16.5	16.0 - 16.5 ft	-3.3	-3.8	JB61331-11	JB61331	03/07/2014	remaining	N	Y	UNDorg (OL)		53.7	RA	S1	
M16A	P4-M16A	12.7	-2.1	P4-M16A-18.0-18.5	18.0 - 18.5 ft	-5.3	-5.8	JB61331-12	JB61331	03/07/2014	remaining	N	Y			0.76	RA		
M16A	P4-M16A	12.7	-2.1	P4-M16A-20.0-20.5	20.0 - 20.5 ft	-7.3	-7.8	JB61331-13T	JB61331T	03/07/2014	remaining	N	Y			5.4	RA		
M17A	137-M17A-PB	13.4	-1.4	137-M17A-PB-14.8-15.3	14.8 - 15.3 ft	-1.4	-1.9	JB82743-4	JB82743	11/25/2014	remaining	N	Y			0.57	J		
M18A	137-M18A-PB	14.0	-1.0	137-M18A-PB-15.0-15.5	15.0 - 15.5 ft	-1.0	-1.5	JB82946-2R	JB82946R	12/01/2014	remaining	N	Y			4.8	J		
M19A	137-M19A-PB	14.0	-0.8	137-M19A-PB-14.8-15.3	14.8 - 15.3 ft	-0.8	-1.3	JB83045-3	JB83045	12/02/2014	remaining	N	Y			3.7	J		
M19A	EF-56	13.4	-0.8	EF-B56-21	21.0 - 21.5 ft	-7.6	-8.1	460-26847-5	460268471	05/23/2011	remaining	N	Y			1.3	J		
M20A	137-M20A-PB	13.4	-1.0	137-M20A-PB-14.4-14.9	14.4 - 14.9 ft	-1.0	-1.5	JB83166-4	JB83166	12/03/2014	remaining	N	Y			3.0	J		
M21A	137-M21A-PB	13.1	-1.0	137-M21A-PB-14.1-14.6	14.1 - 14.6 ft	-1.0	-1.5	JB83166-5	JB83166	12/03/2014	remaining	N	Y			1.5	J		
M21A	137-M21A-PB	13.1	-1.0	137-M21A-PB-14.1-14.6X	14.1 - 14.6 ft	-1.0	-1.5	JB83166-6	JB83166	12/03/2014	remaining	FD	Y			2.0	J		
M22A	137-M22AE-PB	12.9	-3.9	137-M22AE-PB-16.8-17.3	16.8 - 17.3 ft	-3.9	-4.4	JB84646-4	JB84646	12/18/2014	remaining	N	Y			1.2	RA	S2	
M22A	137-M22AW-PB	12.9	-1.5	137-M22AW-PB-14.4-14.9	14.4 - 14.9 ft	-1.5	-2.0	JB84646-3	JB84646	12/18/2014	remaining	N	Y			2.8	RA	S2	
M23A	137-M23AE-PB	13.2	-4.2	137-M23AE-PB-17.4-17.9	17.4 - 17.9 ft	-4.2	-4.7	JB84798-4	JB84798	12/19/2014	remaining	N	Y			< 0.18	RA	S2	
M23A	137-M23AW-PB	13.2	-1.6	137-M23AW-PB-14.8-15.3	14.8 - 15.3 ft	-1.6	-2.1	JB84798-3R	JB84798R	12/19/2014	remaining	N	Y			5.6	RA	S2	
M24A	137-M24A-PB	13.7	-1.9	137-M24A-PB-15.6-16.1	15.6 - 16.1 ft	-1.9	-2.4	JB84890-1	JB84890	12/22/2014	remaining	N	Y			1.5	RA		
M25A	137-M25A-PB	13.9	-1.3	137-M25A-PB-15.2-15.7	15.2 - 15.7 ft	-1.3	-1.8	JB84890-2	JB84890	12/22/2014	remaining	N	Y			2.0	RA		
M26A	137-M26A-PB	14.2	-1.2	137-M26A-PB-15.2-15.7	15.2 - 15.7 ft	-1.0	-1.5	JB90069-2R	JB90069R	03/16/2015	remaining	N	Y			0.86	J		
M27A	137-M27A-PB	14.7	-4.7	137-M27A-PB-19.4-19.9	19.4 - 19.9 ft	-4.7	-5.2	JB91487-4	JB91487	04/02/2015	remaining	N	Y			0.62	J		
M28A	137-B9	15.1	-6.0	137B9K 22.5-22.9_801735	22.5 - 22.9 ft	-7.4	-7.8	801735	C185	01/23/2007	remaining	N	Y			< 2.4	UJ		
M28A	137-M28A-PB	15.0	-6.0	137-M28A-PB-21.0-21.5	21.0 - 21.5 ft	-6.0	-6.5	JB91487-2	JB91487	04/02/2015	remaining	N	Y			1.9	J		
M29A	137-M29A-PB	14.7	-5.0	137-M29A-PB-19.7-20.2	19.7 - 20.2 ft	-5.0	-5.5	JB91365-2	JB91365	04/01/2015	remaining	N	Y			< 0.41	RA		
M30A	137-M30A-PB	14.2	-5.6	137-M30A-PB-19.8-20.3	19.8 - 20.3 ft	-5.6	-6.1	JB91263-2	JB91263	03/31/2015	remaining	N	Y			0.99	RA		
N16A	137-N16A-PB	13.2	-1.8	137-N16A-PB-15.0-15.5	15.0 - 15.5 ft	-1.8	-2.3	JB83297-2	JB83297	12/04/2014	remaining	N	Y			0.74	J		
N16A	137-P3B-N16A	13.2	-1.8	137-P3B-N16A-15.0-15.5	15.0 - 15.5 ft	-1.8	-2.3	JB42171-4R	JB42171R	07/15/2013	remaining	N	Y			2.3	J		
N17A	137-MW1C	13.5	-2.6	137-1CI_16.0-17.0_812397	16.0 - 17.0 ft	-2.5	-3.5	812397	D734	03/08/2007	remaining	N	Y			< 3.11	UJ		
N17A	137-MW1C	13.5	-2.6	137-1CJ_17.4-18.0_813085	17.4 - 18.0 ft	-3.9	-4.5	813085	D845	03/12/2007	remaining	N	Y			< 3.76	UJ		
N17A	137-MW1C	13.5	-2.6	137-1CJD_17.4-18.0_813086	17.4 - 18.0 ft	-3.9	-4.5	813086	D845	03/12/2007	remaining	FD	Y			< 3.56	UJ		
N17A	137-MW1C	13.5	-2.6	137-1CK_23.0-23.5_813087	23.0 - 23.5 ft	-9.5	-10.0	813087	D845	03/12/2007	remaining	N	Y			< 3.63	UJ		
N17A	137-MW1C	13.5	-2.6	137-1CL_23.5-24.3_813088	23.5 - 24.3 ft	-10.0	-10.8	813088	D845	03/12/2007	remaining	N	Y			< 2.64	UJ		
N17A	137-N17A-PB	13.4	-2.6	137-N17A-PB-16.0-16.5	16.0 - 16.5 ft	-2.6	-3.1	JB83297-3	JB83297	12/04/2014	remaining	N	Y			2.2	J		
N18A	OSB-14	13.5	-2.7	114-OSB-14F(16-16.5)J42409-17	16.0 - 16.5 ft	-2.5	-3.0	J42409-17	J42409	09/28/2006	remaining	N	Y			11.6			
N19A	137-N19A-PB	13.6	-2.7	137-N19A-PB-16.3-16.8	16.3 - 16.8 ft	-2.7	-3.2	JB83803-1	JB83803	12/10/2014	remaining	N	Y			1.6	J		
N20A	137-N20A-PB	13.7	-3.3	137-N20A-PB-17.2-17.7	17.2 - 17.7 ft	-3.5	-4.0	JB83954-2	JB83954	12/11/2014	remaining	N	Y			0.51	J		
N21A	137-B2	14.3	-3.5	137-B2I_17.6-18.1	17.6 - 18.1 ft	-3.3	-3.8	791332	A575	12/07/2006	remaining	N	Y			< 4.62	U		
N21A	137-B2	14.3	-3.5	137-B2J_20-20.5	20.0 - 20.5 ft	-5.7	-6.2	791333	A575	12/07/2006	remaining	N	Y			< 3.41	U		
N21A	137-B2	14.3	-3.5	137-B2K_22.2-22.7	22.2 - 22.7 ft	-7.9	-8.4	791334	A575	12/07/2006	remaining	N	Y			< 2.46	U		
N22A	137-N22A-PB	14.4	-4.8	137-N22A-PB-19.3-19.8	19.3 - 19.8 ft	-4.9	-5.4	JB85837-1R	JB85837R	01/07/2015	remaining	N	Y			1.7	RA		
N23A	137-N23A-PB	14.2	-5.0	137-N23A-PB-19.2-19.7	19.2 - 19.7 ft	-5.0	-5.5	JB85837-3R	JB85837R	01/07/2015	remaining	N	Y			2.0	RA		
N24A	137-B1	14.4	-5.0	137-B1H_19.2-19.7	19.2 - 19.7 ft	-4.8	-5.3	791324	A575	12/07/2006	remaining	N	Y			< 3.31	U		
N24A	137-B1	14.4	-5.0	137-B1I_21-21.5	21.0 - 21.5 ft	-6.6	-7.1	791325	A575	12/07/2006	remaining	N	Y			< 3.34	U		
N25A	137-MW2C	14.4	-5.3	137-2CJ_19.5-20.5_809374	19.5 - 20.5 ft	-5.1	-6.1	809374	D253	02/23/2007	remaining	N	Y			< 3.39	UJ		
N25A	137-MW2C	14.4	-5.3	137-2CJ_22.0-23.0_810317	22.0 - 23.0 ft	-7.6	-8.6	810317	D373	02/27/2007	remaining	N	Y				R		
N25A	137-MW2C	14.4	-5.3	137-2CK_24.0-24.5_810318	24.0 - 24.5 ft	-9.6	-10.1	810318	D373	02/27/2007	remaining	N	Y			< 3.02	UJ		
N25A	137-MW2C	14.4	-5.3	137-2CKD_24.0-24.5_810319	24.0 - 24.5 ft	-9.6	-10.1	810319	D373	02/27/2007	remaining	FD	Y			< 2.74	UJ		
N25A	137-MW2C	14.4	-5.3	137-2CL_24.5-25.0_810320	24.5 - 25.0 ft	-10.1	-10.6	810320	D373	02/27/2007	remaining	N	Y				R		
N26A	137-N26A-PB2	14.4	-4.8	137-N26A-PB-19.2-19.7	19.2 - 19.7 ft	-4.8	-5.3	JB90154-2	JB90154	03/17/2015	remaining	N	Y			0.39	RA		
N27A	137-N27A-PB	14.5	-5.7	137-N27A-PB-20.2-20.7	20.2 - 20.7 ft	-5.7	-6.2	JB91487-5	JB91487	04/02/2015	remaining	N	Y			1.0	J		
N28A	137-N28A-PB	15.1	-6.1	137-N28A-PB-21.1-21.6	21.1 - 21.6 ft	-6.0	-6.5	JB91487-3	JB91487	04/02/2015	remaining	N	Y			3.1	J		
N29A	137-N29A-PB	14.4	-5.7	137-N29A-PB-20.1-20.6	20.1 - 20.6 ft	-5.7	-6.2	JB91365-3	JB91365	04/01/2015	remaining	N	Y			< 0.44	RA		
N30A	137-N30A-PB	14.0	-6.1	137-N30A-PB-20.1-20.6	20.1 - 20.6 ft	-6.1	-6.6	JB91263-3	JB91263	03/31/2015	remaining	N	Y			1.1	RA		

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criteria
Site 137 North, Garfield Avenue Group
PPG, Jersey City, New Jersey

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7, G8)	Sample ID (G9)	Depth Interval (ft bgs) (G10)	Sample Start Elevation (ft NAVD88) (G4, G7, G8, G11, G13)	Sample End Elevation (ft NAVD88) (G4, G12, G13)	Lab ID (G14)	Lab SDG (G14)	Date Collected (G15)	Sample Status (G16)	Sample Type (G17)	Validated (Y/N) (G18)	Matrix (G19)	Analyte CAS RN Units CrSCC		CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20		Specific Notes
															Result (G20, G21)	Qualifier (G22, G23)			
O17A	137-O17A-PB	13.2	-3.8	137-O17A-PB-17.0-17.5	17.0 - 17.5 ft	-3.8	-4.3	JB83430-2R	JB83430R	12/05/2014	remaining	N	Y			< 0.28	RA		
O18A	PSEG-SB39	13.7	-3.6	PSEG-SB39E(17.0-17.5)J46996-17	17.0 - 17.5 ft	-3.3	-3.8	J46996-17	J46996	11/20/2006	remaining	N	Y			3.1	BF		
O18A	PSEG-SB39	13.7	-3.6	PSEG-SB39F(19.0-19.5)J46996-18	19.0 - 19.5 ft	-5.3	-5.8	J46996-18	J46996	11/20/2006	remaining	N	Y			< 1.7	UJ		
O18A	PSEG-SB39	13.7	-3.6	PSEG-SB39G(21.0-21.5)J46996-19	21.0 - 21.5 ft	-7.3	-7.8	J46996-19	J46996	11/20/2006	remaining	N	Y			< 1.7	UJ		
O18A	PSEG-SB39	13.7	-3.6	PSEG-SB39H(23.0-23.5)J46996-20	23.0 - 23.5 ft	-9.3	-9.8	J46996-20	J46996	11/20/2006	remaining	N	Y			< 1.6	UJ		
O18A	PSEG-SB39	13.7	-3.6	PSEG-SB39I(24.5-25.0)J46996-21R	24.5 - 25.0 ft	-10.8	-11.3	J46996-21R	J46996	11/20/2006	remaining	N	Y			< 1.3	UJ		
O19A	137-O19A-PB	13.6	-3.7	137-O19A-PB-17.3-17.8	17.3 - 17.8 ft	-3.7	-4.2	JB84070-2	JB84070	12/12/2014	remaining	N	Y			0.95	J		
O19A	137-O19A-PB	13.6	-3.7	137-O19A-PB-17.3-17.8X	17.3 - 17.8 ft	-3.7	-4.2	JB84070-3	JB84070	12/12/2014	remaining	FD	Y			0.81	J		
O20A	137-O20A-PB	13.7	-3.2	137-O20A-PB-16.9-17.4	16.9 - 17.4 ft	-3.2	-3.7	JB84988-2R	JB84988R	12/23/2014	remaining	N	Y			1.6	J		
O21A	137-O21A-PB	14.1	-4.1	137-O21A-PB-18.3-18.8	18.3 - 18.8 ft	-4.2	-4.7	JB86372-2R	JB86372R	01/14/2015	remaining	N	Y			1.6	RA		
O22A	137-O22A-PB	14.4	-5.3	137-O22A-PB-19.7-20.2	19.7 - 20.2 ft	-5.3	-5.8	JB86372-3R	JB86372R	01/14/2015	remaining	N	Y			3.5	RA		
O23A	137-O23A-PB	14.5	-5.5	137-O23A-PB-20.0-20.5	20.0 - 20.5 ft	-5.5	-6.0	JB87356-3	JB87356	01/30/2015	remaining	N	Y			0.84	RA		
O24A	137-O24A-PB	14.4	-5.5	137-O24A-PB-19.9-20.4	19.9 - 20.4 ft	-5.5	-6.0	JB87356-2R	JB87356R	01/30/2015	remaining	N	Y			1.6	RA		
O25A	137-O25A-PB	14.2	-5.7	137-O25A-PB-19.9-20.4	19.9 - 20.4 ft	-5.7	-6.2	JB90534-3	JB90534	03/20/2015	remaining	N	Y			0.40	RA		
O26A	137-O26A-PB	14.1	-5.1	137-O26A-PB-19.2-19.7	19.2 - 19.7 ft	-5.1	-5.6	JB91694-2R	JB91694R	04/06/2015	remaining	N	Y			1.5	J		
O26A	137-O26A-PB	14.1	-5.1	137-O26A-PB-19.2-19.7X	19.2 - 19.7 ft	-5.1	-5.6	JB91694-3R	JB91694R	04/06/2015	remaining	FD	Y			0.67	J		
O27A	137-O27A-PB	14.1	-5.3	137-O27A-PB-19.4-19.9	19.4 - 19.9 ft	-5.3	-5.8	JB92302-2R	JB92302R	04/13/2015	remaining	N	Y			1.3	J		
O28A	137-O28A-PB	14.5	-5.7	137-O28A-PB-20.2-20.7	20.2 - 20.7 ft	-5.7	-6.2	JB92519-4	JB92519	04/15/2015	remaining	N	Y			0.47	J		
O29A	137-O29A-PB	14.2	-6.4	137-O29A-PB-20.6-21.1	20.6 - 21.1 ft	-6.4	-6.9	JB92519-3	JB92519	04/15/2015	remaining	N	Y			1.8	J		
O30A	137-O30A-PB	13.9	-6.7	137-O30A-PB-20.6-21.1	20.6 - 21.1 ft	-6.7	-7.2	JB92121-2	JB92121	04/10/2015	remaining	N	Y			0.66	RA		
P17A	137-P17A-PB	12.9	-4.7	137-P17A-PB-17.6-18.1	17.6 - 18.1 ft	-4.7	-5.2	JB83553-1R	JB83553R	12/08/2014	remaining	N	Y			1.6	J		
P18A	137-P18A-PB	13.4	-5.4	137-P18A-PB-18.9-19.4	18.9 - 19.4 ft	-5.5	-6.0	JB83553-2	JB83553	12/08/2014	remaining	N	Y			2.9	J		
P19A	137-P19A-PB	10.1	-4.9	137-P19A-PB-15.1-15.6	15.1 - 15.6 ft	-5.0	-5.5	JB84070-1	JB84070	12/12/2014	remaining	N	Y			1.2	J		
P20A	137-P3B-P20A	13.7	-5.5	137-P3B-P20A-19.2-19.7	19.2 - 19.7 ft	-5.5	-6.0	JB41084-1	JB41084	07/01/2013	remaining	N	Y			2.0			
P21A	137-P21A-PB	13.9	-4.9	137-P21A-PB-18.8-19.3	18.8 - 19.3 ft	-4.9	-5.4	JB86875-2R	JB86875R	01/21/2015	remaining	N	Y			1.3	RA		
P22A	137-P22A-PB	14.3	-4.4	137-P22A-PB-18.8-19.3	18.8 - 19.3 ft	-4.5	-5.0	JB86956-5	JB86956	01/22/2015	remaining	N	Y			< 0.27	UJ		
P23A	137-P23A-PB	14.3	-5.8	137-P23A-PB-20.1-20.6	20.1 - 20.6 ft	-5.8	-6.3	JB90263-2	JB90263	03/18/2015	remaining	N	Y			2.1	J		
P24A	137-P24A-PB	13.8	-6.0	137-P24A-PB-19.8-20.3	19.8 - 20.3 ft	-6.0	-6.5	JB90263-3	JB90263	03/18/2015	remaining	N	Y			1.4	J		
P24A	137-P3B-P24A	13.8	-6.0	137-P3B-P24A-19.5-20.0	19.5 - 20.0 ft	-5.7	-6.2	JB44370-25	JB44370	08/08/2013	remaining	N	Y			7.3	J		
P25A	137-P25A-PB	13.6	-6.9	137-P25A-PB-20.4-20.9	20.4 - 20.9 ft	-6.8	-7.3	JB90534-6	JB90534	03/20/2015	remaining	N	Y			< 0.26	RA		
P26A	137-P26A-PB	13.8	-7.6	137-P26A-PB-21.4-21.9	21.4 - 21.9 ft	-7.6	-8.1	JB91786-2R	JB91786R	04/07/2015	remaining	N	Y			3.9	J		
P27A	137-P27A-PB	13.8	-5.5	137-P27A-PB-19.3-19.8	19.3 - 19.8 ft	-5.5	-6.0	JB92359-2	JB92359	04/14/2015	remaining	N	Y			0.74	RA		
P28A	137-P28A-PB	14.3	-5.1	137-P28A-PB-19.5-20.0	19.5 - 20.0 ft	-5.2	-5.7	JB93171-3	JB93171	04/23/2015	remaining	N	Y			< 0.26	UJ		
P29A	137-B11	14.7	-6.7	137B11J_21.5-22.0_801725	21.5 - 22.0 ft	-6.8	-7.3	801725	C185	01/23/2007	remaining	N	Y			< 3.43	UJ	S3	
P29A	137-B11	14.7	-6.7	137B11J_25.1-25.6_801726	25.1 - 25.6 ft	-10.4	-10.9	801726	C185	01/23/2007	remaining	N	Y			< 2.5	UJ		
P29A	137-P3B-P29A	14.8	-6.7	137-P3B-P29A-20.0-20.5	20.0 - 20.5 ft	-5.2	-5.7	JB41848-9R	JB41848R	07/11/2013	removed	N	Y			3.4	J	S3	
P30A	137-P30A-PB	14.8	-7.2	137-P30A-PB-22.0-22.5	22.0 - 22.5 ft	-7.2	-7.7	JB93271-1	JB93271	04/24/2015	remaining	N	Y			4.4	RA		
Q17A	137-Q17A-PB	13.6	-5.4	137-Q17A-PB-19.0-19.5	19.0 - 19.5 ft	-5.4	-5.9	JB84207-1	JB84207	12/15/2014	remaining	N	Y			< 0.32	RA		
Q17A	P4-Q17A	12.9	-5.4	P4-Q17A-18.5-19.0	18.5 - 19.0 ft	-5.6	-6.1	JB61217-12R	JB61217R	03/06/2014	remaining	N	Y			13.2	RA		
Q17A	P4-Q17A	12.9	-5.4	P4-Q17A-20.0-20.5	20.0 - 20.5 ft	-7.1	-7.6	JB61217-13	JB61217	03/06/2014	remaining	N	Y			3.8	RA		
Q18A	137-P3B-MW1011	10.8	-5.8	137-P3B-MW1011-35.0-35.5	35.0 - 35.5 ft	-24.2	-24.7	JC3896-14	JC3896	09/14/2015	remaining	N	Y			< 0.23	UJ		
Q18A	137-P3B-MW1011	10.8	-5.8	137-P3B-MW1011-40.0-40.5	40.0 - 40.5 ft	-29.2	-29.7	JC3896-15R	JC3896R	09/14/2015	remaining	N	Y			3.0	J		
Q18A	137-Q18A-PB	13.6	-5.8	137-Q18A-PB-19.4-19.9	19.4 - 19.9 ft	-5.8	-6.3	JB84207-2	JB84207	12/15/2014	remaining	N	Y			< 0.30	RA		
Q19A	137-Q19A-PB	13.5	-5.3	137-Q19A-PB-18.8-19.3	18.8 - 19.3 ft	-5.3	-5.8	JB85245-1R	JB85245R	12/30/2014	remaining	N	Y			1.9	RA		
Q20A	137-Q20A-PB	13.6	-4.7	137-Q20A-PB-18.3-18.8	18.3 - 18.8 ft	-4.7	-5.2	JB86475-3	JB86475	01/15/2015	remaining	N	Y			1.3	RA		
Q21A	137-Q21A-PB	13.8	-4.7	137-Q21A-PB-18.5-19.0	18.5 - 19.0 ft	-4.7	-5.2	JB86875-3R	JB86875R	01/21/2015	remaining	N	Y			2.8	RA		
Q21A	137-Q21A-PB	13.8	-4.7	137-Q21A-PB-18.5-19.0X	18.5 - 19.0 ft	-4.7	-5.2	JB86875-4R	JB86875R	01/21/2015	remaining	FD	Y			1.8	RA		
Q22A	137-Q22A-PB	14.2	-5.5	137-Q22A-PB-19.7-20.2	19.7 - 20.2 ft	-5.5	-6.0	JB89599-2R	JB89599R	03/10/2015	remaining	N	Y			1.1	RA		
Q23A	137-Q23A-PB	14.2	-5.5	137-Q23A-PB-19.7-20.2	19.7 - 20.2 ft	-5.5	-6.0	JB90354-2R	JB90354R	03/19/2015	remaining	N	Y			0.31	J		
Q24A	137-B3	13.4	-6.8	PPG-137-B3F (21.0-21.5)J43432-18	21.0 - 21.5 ft	-7.6	-8.1	J43432-18	J43432	10/10/2006	remaining	N	Y			3.8			
Q24A	137-Q24A-PB	12.6	-6.8	137-Q24A-PB-19.5-20.0	19.5 - 20.0 ft	-6.9	-7.4	JB90534-2	JB90534	03/20/2015	remaining	N	Y			0.34	RA		

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criteria
Site 137 North, Garfield Avenue Group
PPG, Jersey City, New Jersey

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7, G8)	Sample ID (G9)	Depth Interval (ft bgs) (G10)	Sample Start Elevation (ft NAVD88) (G4, G7, G8, G11, G13)	Sample End Elevation (ft NAVD88) (G4, G12, G13)	Lab ID (G14)	Lab SDG (G14)	Date Collected (G15)	Sample Status (G16)	Sample Type (G17)	Validated (Y/N) (G18)	Matrix (G19)	Analyte CAS RN Units CrSCC		CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20		Specific Notes
															Result (G20, G21)	Qualifier (G22, G23)			
Q25A	137-Q25AN-PB	12.5	-5.4	137-Q25AN-PB-17.9-18.4	17.9 - 18.4 ft	-5.4	-5.9	JB90534-7	JB90534	03/20/2015	remaining	N	Y			0.42	RA	S2	
Q25A	137-Q25AS-PB	12.5	-7.8	137-Q25AS-PB-20.4-20.9	20.4 - 20.9 ft	-7.9	-8.4	JB90534-8	JB90534	03/20/2015	remaining	N	Y			< 0.26	RA	S2	
Q26A	137-Q26A-PB	12.7	-6.9	137-Q26A-PB-19.6-20.1	19.6 - 20.1 ft	-6.9	-7.4	JB91943-2R	JB91943R	04/08/2015	remaining	N	Y			1.3	J		
Q27A	137-Q27A-PB	13.0	-5.6	137-Q27A-PB-18.6-19.1	18.6 - 19.1 ft	-5.6	-6.1	JB92359-3	JB92359	04/14/2015	remaining	N	Y			0.87	RA		
Q28A	137-B4	13.9	-5.5	137-B4H 17.7-18.2	17.7 - 18.2 ft	-3.8	-4.3	791758	A623	12/08/2006	removed	N	Y			<3.51	U	S4	
Q28A	137-B4	13.9	-5.5	137-B4H 20-20.5	20.0 - 20.5 ft	-6.1	-6.6	791759	A623	12/08/2006	remaining	N	Y			< 3.11	U	S4	
Q28A	137-B4	13.9	-5.5	137-B4I 22-22.5	22.0 - 22.5 ft	-8.1	-8.6	791760	A623	12/08/2006	remaining	N	Y			< 3.08	U		
Q28A	137-B4	13.9	-5.5	137-B4J 24-24.5	24.0 - 24.5 ft	-10.1	-10.6	791761	A623	12/08/2006	remaining	N	Y			< 2.47	U		
Q29A	137-P3B-MW102I	11.0	-6.8	137-P3B-MW102I-40.0-40.5	40.0 - 40.5 ft	-29.0	-29.5	JC3896-11	JC3896	09/11/2015	remaining	N	Y			< 0.23	UJ		
Q29A	137-P3B-MW102I	11.0	-6.8	137-P3B-MW102I-45.0-45.5	45.0 - 45.5 ft	-34.0	-34.5	JC3896-12	JC3896	09/11/2015	remaining	N	Y			0.44	J		
Q29A	137-P3B-MW102I	11.0	-6.8	137-P3B-MW102I-48.5-49.0	48.5 - 49.0 ft	-37.5	-38.0	JC3896-13	JC3896	09/11/2015	remaining	N	Y			< 0.23	UJ		
Q29A	137-Q29A-PB	12.9	-6.8	137-Q29A-PB-19.7-20.2	19.7 - 20.2 ft	-6.8	-7.3	JB93887-2	JB93887	05/04/2015	remaining	N	Y			0.61	J		
Q30A	137-Q30A-PB	14.7	-7.5	137-Q30A-PB-22.2-22.7	22.2 - 22.7 ft	-7.5	-8.0	JB93582-2	JB93582	04/29/2015	remaining	N	Y			1.7	RA		
R18A	137-P3B-R18A	12.9	-3.6	137-P3B-R18A-16.5-17.0	16.5 - 17.0 ft	-3.6	-4.1	JB40821-11R	JB40821R	06/27/2013	remaining	N	Y			1.6	J		
R19A	137-R19A-PB	13.9	-5.3	137-R19A-PB-19.2-19.7	19.2 - 19.7 ft	-5.3	-5.8	JB85143-2	JB85143	12/29/2014	remaining	N	Y			0.47	RA		
R20A	137-R20A-PB	13.9	-4.9	137-R20A-PB-18.9-19.4	18.9 - 19.4 ft	-5.0	-5.5	JB86589-2R	JB86589R	01/16/2015	remaining	N	Y			1.5	RA		
R21A	137-P3B-R21A	13.8	-5.3	137-P3B-R21A-19.0-19.5	19.0 - 19.5 ft	-5.2	-5.7	JB44333-14	JB44333	08/07/2013	remaining	N	Y			1.8	J		
R21A	137-P3B-R21A	13.8	-5.3	137-P3B-R21A-19.0-19.5X	19.0 - 19.5 ft	-5.2	-5.7	JB44333-13	JB44333	08/07/2013	remaining	FD	Y			0.95	J		
R22A	137-R22A-PB	14.1	-6.0	137-R22A-PB-20.1-20.6	20.1 - 20.6 ft	-6.0	-6.5	JB89599-3R	JB89599R	03/10/2015	remaining	N	Y			1.5	RA		
R22A	137-R22A-PB	14.1	-6.0	137-R22A-PB-20.1-20.6X	20.1 - 20.6 ft	-6.0	-6.5	JB89599-4R	JB89599R	03/10/2015	remaining	FD	Y			1.0	RA		
R23A	137-R23A-PB	14.0	-5.1	137-R23A-PB-19.2-19.7	19.2 - 19.7 ft	-5.2	-5.7	JB90534-4	JB90534	03/20/2015	remaining	N	Y			0.49	RA		
R24A	137-R24A-PB	14.0	-5.7	137-R24A-PB-19.7-20.2	19.7 - 20.2 ft	-5.7	-6.2	JB90534-5	JB90534	03/20/2015	remaining	N	Y			1.1	RA		
R25A	137-R25A-PB	11.4	-6.9	137-R25A-PB-18.3-18.8	18.3 - 18.8 ft	-6.9	-7.4	JB90824-7R	JB90824R	03/25/2015	remaining	N	Y			0.79	RA		
R26A	137-R26A-PB	11.6	-7.8	137-R26A-PB-19.4-19.9	19.4 - 19.9 ft	-7.8	-8.3	JB90912-3	JB90912	03/26/2015	remaining	N	Y			0.84	J		
R27A	137-R27A-PB	13.1	-6.1	137-R27A-PB-19.2-19.7	19.2 - 19.7 ft	-6.1	-6.6	JB92519-2	JB92519	04/15/2015	remaining	N	Y			< 0.25	UJ		
R28A	137-R28A-PB	14.3	-5.9	137-R28A-PB-20.2-20.7	20.2 - 20.7 ft	-5.9	-6.4	JB94844-2	JB94844	05/15/2015	remaining	N	Y			0.50	RA		
R29A	137-R29A-PB	14.5	-6.9	137-R29A-PB-21.5-22.0	21.5 - 22.0 ft	-7.0	-7.5	JB94085-2	JB94085	05/06/2015	remaining	N	Y			1.4	RA		
R29A	137-R29A-PB	14.5	-6.9	137-R29A-PB-21.5-22.0X	21.5 - 22.0 ft	-7.0	-7.5	JB94085-3	JB94085	05/06/2015	remaining	FD	Y			1.1	RA		
R30A	137-R30A-PB	14.6	-7.4	137-R30A-PB-22.0-22.5	22.0 - 22.5 ft	-7.4	-7.9	JB93705-2	JB93705	04/30/2015	remaining	N	Y			1.2	RA		
S18A	137-P3B-S18A	12.7	-4.0	137-P3B-S18A-17.5-18.0	17.5 - 18.0 ft	-4.8	-5.3	JB42171-6	JB42171	07/15/2013	remaining	N	Y			0.62	J		
S18A	137-P3B-S18A	12.7	-4.0	137-P3B-S18A-18.0-18.5	18.0 - 18.5 ft	-5.3	-5.8	JB42171-7R	JB42171R	07/15/2013	remaining	N	Y			1.5	J		
S18A	137-S18A-PB	12.7	-4.0	137-S18A-PB-16.7-17.2	16.7 - 17.2 ft	-4.3	-4.5	JB85751-5	JB85751	01/06/2015	remaining	N	Y			0.39	J		
S19A	137-S19A-PB	13.4	-4.3	137-S19A-PB-17.7-18.2	17.7 - 18.2 ft	-4.3	-4.8	JB85751-6	JB85751	01/06/2015	remaining	N	Y			0.47	J		
S20A	137-S20A-PB	13.5	-5.6	137-S20A-PB-19.1-19.6	19.1 - 19.6 ft	-5.6	-6.1	JB87698-2R	JB87698R	02/05/2015	remaining	N	Y			2.0	RA		
S20A	OSB-18	13.7	-5.6	114-OSB-18H(21-21.5)J42409-39R	21.0 - 21.5 ft	-7.3	-7.8	J42409-39R	J42409	09/28/2006	remaining	N	Y				R		
S20A	OSB-18	13.7	-5.6	114-OSB-18I(25-25.5)J42409-40R	25.0 - 25.5 ft	-11.3	-11.8	J42409-40R	J42409	09/28/2006	remaining	N	Y				R		
S20A	OSB-18	13.7	-5.6	114-OSB-18J(27.5-28)J42409-41R	27.5 - 28.0 ft	-13.8	-14.3	J42409-41R	J42409	09/28/2006	remaining	N	Y				R		
S21A	137-P3B-S21A	13.8	-5.3	137-P3B-S21A-19.0-19.5	19.0 - 19.5 ft	-5.2	-5.7	JB44370-2	JB44370	08/08/2013	remaining	N	Y			0.59	J		
S22A	137-S22A-PB	13.9	-4.8	137-S22A-PB-18.8-19.3	18.8 - 19.3 ft	-4.9	-5.4	JB89442-2R	JB89442R	03/06/2015	remaining	N	Y			1.7	RA		
S23A	137-S23A-PB	13.8	-5.5	137-S23A-PB-18.8-19.3	18.8 - 19.3 ft	-5.0	-5.5	JB90534-9	JB90534	03/20/2015	remaining	N	Y			< 0.26	RA		
S24A	137-S24A-PB	13.9	-6.3	137-S24A-PB-20.2-20.7	20.0 - 20.5 ft	-6.1	-6.6	JB90534-10	JB90534	03/20/2015	remaining	N	Y			< 0.27	RA		
S25A	137-B5	13.9	-7.4	PPG-137-B5F (21.0-21.5)J43432-7	21.0 - 21.5 ft	-7.1	-7.6	J43432-7	J43432	10/10/2006	remaining	N	Y			3.3			
S25A	137-S25A-PB	13.8	-7.4	137-S25A-PB-21.2-21.7	21.2 - 21.7 ft	-7.4	-7.9	JB90824-6R	JB90824R	03/25/2015	remaining	N	Y			0.28	RA		
S26A	137-S26A-PB	11.0	-6.8	137-S26A-PB-17.8-18.3	17.8 - 18.3 ft	-6.8	-7.3	JB90912-2	JB90912	03/26/2015	remaining	N	Y			0.73	J		
S27A	137-S27A-PB	10.7	-5.9	137-S27A-PB-16.6-17.1	16.6 - 17.1 ft	-5.9	-6.4	JB92013-3	JB92013	04/09/2015	remaining	N	Y			0.44	RA		
S28A	137-S28A-PB	14.4	-5.5	137-S28A-PB-20.0-20.5	20.0 - 20.5 ft	-5.6	-6.1	JB94691-2	JB94691	05/14/2015	remaining	N	Y			2.2	RA		
S29A	137-S29A-PB	13.9	-6.9	137-S29A-PB-20.8-21.3	20.8 - 21.3 ft	-6.9	-7.4	JB94204-2	JB94204	05/07/2015	remaining	N	Y			4.3	J		
S30A	137-S30A-PB	13.7	-6.5	137-S30A-PB-20.2-20.7	20.2 - 20.7 ft	-6.5	-7.0	JB93973-2	JB93973	05/05/2015	remaining	N	Y			1.2	RA		
S31A	137-P3B-S31A	14.3	-6.9	137-P3B-S31A-21.2-21.7	21.2 - 21.7 ft	-6.9	-7.4	JB41256-2R	JB41256R	07/03/2013	remaining	N	Y			2.9	J	S5	
T18A	P4-T18A	12.8	-4.9	P4-T18A-18.0-18.5	18.0 - 18.5 ft	-5.2	-5.7	JB61217-15	JB61217	03/06/2014	remaining	N	Y			1.4	RA	S6	
T18A	P4-T18A	12.8	-4.9	P4-T18A-18.0-18.5X	18.0 - 18.5 ft	-5.2	-5.7	JB61217-16	JB61217	03/06/2014	remaining	FD	Y			2.5	RA	S6	
T18A	P4-T18A	12.8	-4.9	P4-T18A-20.0-20.5	20.0 - 20.5 ft	-7.2	-7.7	JB61217-17R	JB61217R	03/06/2014	remaining	N	Y			8.2	RA		

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criteria
Site 137 North, Garfield Avenue Group
PPG, Jersey City, New Jersey

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7, G8)	Sample ID (G9)	Depth Interval (ft bgs) (G10)	Sample Start Elevation (ft NAVD88) (G4, G7, G8, G11, G13)	Sample End Elevation (ft NAVD88) (G4, G12, G13)	Lab ID (G14)	Lab SDG (G14)	Date Collected (G15)	Sample Status (G16)	Sample Type (G17)	Validated (Y/N) (G18)	Matrix (G19)	Analyte CAS RN Units CrSCC		CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20		Specific Notes
															Result (G20, G21)	Qualifier (G22, G23)	Result (G20, G21)	Qualifier (G22, G23)	
T19A	137-T19A-PB	13.3	-4.9	137-T19A-PB-18.2-18.7	18.2 - 18.7 ft	-4.9	-5.4	JB87078-1	JB87078	01/23/2015	remaining	N	Y			1.7	RA	S6	
T20A	137-T20A-PB	13.5	-6.1	137-T20A-PB-19.7-20.2	19.7 - 20.2 ft	-6.2	-6.7	JB87834-2	JB87834	02/06/2015	remaining	N	Y			1.2	RA		
T21A	137-T21A-PB	13.6	-5.1	137-T21A-PB-18.6-19.1	18.6 - 19.1 ft	-5.0	-5.5	JB89302-2R	JB89302R	03/04/2015	remaining	N	Y			1.8	J		
T22A	137-T22A-PB	13.8	-4.9	137-T22A-PB-18.7-19.2	18.7 - 19.2 ft	-4.9	-5.4	JB89442-3	JB89442	03/06/2015	remaining	N	Y			0.77	RA		
T23A	137-T23A-PB	13.8	-6.4	137-T23A-PB-20.2-20.7	20.2 - 20.7 ft	-6.4	-6.9	JB90628-2	JB90628	03/23/2015	remaining	N	Y			2.4	RA		
T24A	137-T24A-PB	13.7	-6.8	137-T24A-PB-20.5-21.0	20.5 - 21.0 ft	-6.8	-7.3	JB90628-3R	JB90628R	03/23/2015	remaining	N	Y			0.54	RA		
T25A	137-T25A-PB	10.2	-6.5	137-T25A-PB-16.7-17.2	16.7 - 17.2 ft	-6.5	-7.0	JB90734-6	JB90734	03/24/2015	remaining	N	Y			1.1	RA		
T26A	137-T26A-PB	10.5	-5.9	137-T26A-PB-16.4-16.9	16.4 - 16.9 ft	-5.9	-6.4	JB90824-5R	JB90824R	03/25/2015	remaining	N	Y			0.30	RA		
T27A	137-T27A-PB	10.9	-5.6	137-T27A-PB-16.5-17.0	16.5 - 17.0 ft	-5.6	-6.1	JB92013-2R	JB92013R	04/09/2015	remaining	N	Y			1.8	RA		
T28A	137-B6	13.5	-5.4	137_B6H_20-20.5	20.0 - 20.5 ft	-6.5	-7.0	790550	A461	12/06/2006	remaining	N	Y			< 3.28	U		
T28A	137-T28A-PB	13.3	-5.4	137-T28A-PB-18.8-19.3	18.8 - 19.3 ft	-5.5	-6.0	JB93026-3R	JB93026R	04/22/2015	remaining	N	Y			5.3	J		
T29A	137-T29A-PB	13.7	-6.3	137-T29A-PB-20.0-20.5	20.0 - 20.5 ft	-6.3	-6.8	JB93026-2R	JB93026R	04/22/2015	remaining	N	Y			1.3	J		
T30A	137-T30A-PB	13.3	-6.3	137-T30A-PB-19.6-20.1	19.6 - 20.1 ft	-6.3	-6.8	JB93501-2	JB93501	04/28/2015	remaining	N	Y			< 0.32	RA		
T31A	137-T31A-PB	13.1	-6.2	137-T31A-PB-19.3-19.8	19.3 - 19.8 ft	-6.2	-6.7	JB93501-3R	JB93501R	04/28/2015	remaining	N	Y			0.99	RA		
U19A	137-U19A-PB	13.0	-5.8	137-U19A-PB-18.8-19.3	18.8 - 19.3 ft	-5.8	-6.3	JB87593-2	JB87593	02/04/2015	remaining	N	Y			0.57	RA		
U20A	137-U20A-PB	13.6	-6.3	137-U20A-PB-19.9-20.4	19.9 - 20.4 ft	-6.3	-6.8	JB88195-2R	JB88195R	02/12/2015	remaining	N	Y			2.8	RA		
U21A	137-U21A-PB	12.7	-6.2	137-U21A-PB-18.9-19.4	18.9 - 19.4 ft	-6.2	-6.7	JB89834-2	JB89834	03/12/2015	remaining	N	Y			0.79	J		
U22A	137-U22A-PB	13.5	-6.4	137-U22A-PB-19.9-20.4	19.9 - 20.4 ft	-6.4	-6.9	JB89971-2R	JB89971R	03/13/2015	remaining	N	Y			3.3	RA		
U23A	137-U23A-PB	13.4	-6.2	137-U23A-PB-19.6-20.1	19.6 - 20.1 ft	-6.2	-6.7	JB90734-2	JB90734	03/24/2015	remaining	N	Y			1.6	RA		
U24A	137-U24A-PB	13.5	-6.0	137-U24A-PB-19.5-20.0	19.5 - 20.0 ft	-6.0	-6.5	JB90734-3	JB90734	03/24/2015	remaining	N	Y			0.89	RA		
U25A	137-U25A-PB	12.4	-5.6	137-U25A-PB-18.0-18.5	18.0 - 18.5 ft	-5.6	-6.1	JB90734-7	JB90734	03/24/2015	remaining	N	Y			2.0	RA		
U26A	137-U26A-PB	11.3	-5.1	137-U26A-PB-16.5-17.0	16.5 - 17.0 ft	-5.2	-5.7	JB90824-3R	JB90824R	03/25/2015	remaining	N	Y			0.57	RA		
U26A	137-U26A-PB	11.3	-5.1	137-U26A-PB-16.5-17.0X	16.5 - 17.0 ft	-5.2	-5.7	JB90824-4R	JB90824R	03/25/2015	remaining	FD	Y			0.52	RA		
U27A	137-U27A-PB	11.8	-5.4	137-U27A-PB-17.2-17.7	17.2 - 17.7 ft	-5.4	-5.9	JB91633-2	JB91633	04/03/2015	remaining	N	Y			1.2	RA		
U28A	137-U28A-PB	12.1	-5.7	137-U28A-PB-17.9-18.4	17.9 - 18.4 ft	-5.8	-6.3	JB93026-4	JB93026	04/22/2015	remaining	N	Y			< 0.27	UJ		
U29A	137-U29A-PB	13.7	-6.0	137-U29A-PB-19.7-20.2	19.7 - 20.2 ft	-6.0	-6.5	JB93171-2R	JB93171R	04/23/2015	remaining	N	Y			1.2	J		
V19A	137-P3B-V19A	13.3	-6.0	137-P3B-V19A-19.0-19.5	19.0 - 19.5 ft	-5.7	-6.2	JB41962-4R	JB41962R	07/12/2013	remaining	N	Y			3.1	J		
V19A	137-V19A-PB	13.3	-6.0	137-V19A-PB-19.3-19.8	19.3 - 19.8 ft	-6.0	-6.5	JB87983-2	JB87983	02/10/2015	remaining	N	Y			1.2	RA		
V20A	137-V20A-PB	13.2	-7.0	137-V20A-PB-20.2-20.7	20.2 - 20.7 ft	-7.0	-7.5	JB87983-3R	JB87983R	02/10/2015	remaining	N	Y			3.3	RA		
V21A	137-V21A-PB	12.7	-7.5	137-V21A-PB-20.2-20.7	20.0 - 20.5 ft	-7.3	-7.8	JB89724-2R	JB89724R	03/11/2015	remaining	N	Y			3.0	RA		
V22A	137-V22A-PB	12.8	-6.9	137-V22A-PB-19.7-20.2	19.7 - 20.2 ft	-6.9	-7.4	JB89834-3	JB89834	03/12/2015	remaining	N	Y			0.93	J		
V22A	137-V22A-PB	12.8	-6.9	137-V22A-PB-19.7-20.2X	19.7 - 20.2 ft	-6.9	-7.4	JB89834-4	JB89834	03/12/2015	remaining	FD	Y			1.5	J		
V23A	137-V23A-PB	13.0	-5.8	137-V23A-PB-18.8-19.3	18.8 - 19.3 ft	-5.8	-6.3	JB89971-3R	JB89971R	03/13/2015	remaining	N	Y			3.5	RA		
V24A	137-V24A-PB	13.0	-5.1	137-V24A-PB-18.1-18.6	18.1 - 18.6 ft	-5.1	-5.6	JB90734-5	JB90734	03/24/2015	remaining	N	Y			0.93	RA		
V25A	137-V25A-PB	13.2	-4.8	137-V25A-PB-18.0-18.5	18.0 - 18.5 ft	-4.8	-5.3	JB90734-4	JB90734	03/24/2015	remaining	N	Y			0.51	RA		
V26A	137-V26A-PB	12.2	-4.6	137-V26A-PB-16.8-17.3	16.8 - 17.3 ft	-4.6	-5.1	JB90824-2R	JB90824R	03/25/2015	remaining	N	Y			0.48	RA		
W20A	137-W20A-PB	12.5	-6.2	137-W20A-PB-18.8-19.3	18.8 - 19.3 ft	-6.3	-6.8	JB88082-2R	JB88082R	02/11/2015	remaining	N	Y			2.8	J		
W20A	137-W21A-PB	12.2	-8.2	137-W21A-PB-20.4-20.9	20.4 - 20.9 ft	-8.2	-8.7	JB92818-2	JB92818	04/20/2015	remaining	N	Y			1.3	RA	S7	
W21A	OSB-20	12.2	-8.2	114-OSB-20ID(26.5-27)J42409-11	26.5 - 27.0 ft	-14.3	-14.8	J42409-11	J42409	09/28/2006	remaining	N	Y			4.5		S7	
W22A	137-P3B-W22A	12.2	-4.9	137-P3B-W22A-17.0-17.5	17.0 - 17.5 ft	-4.8	-5.3	JB42281-8R	JB42281R	07/16/2013	remaining	N	Y			3.8	RA		
W22A	137-P3B-W22A	12.2	-4.9	137-P3B-W22A-17.5-18.0	17.5 - 18.0 ft	-5.3	-5.8	JB42281-9R	JB42281R	07/16/2013	remaining	N	Y			2.4	RA		
W23A	137-W23A-PB	11.9	-4.8	137-W23A-PB-16.7-17.2	16.7 - 17.2 ft	-4.8	-5.3	JB89834-5	JB89834	03/12/2015	remaining	N	Y			2.1	J		
X20A	137-B7	12.0	-5.5	137_B7H_20.2-20.7	20.2 - 20.7 ft	-8.2	-8.7	790557	A461	12/06/2006	remaining	N	Y			< 2.68	U		
X20A	137-X20A-PB	11.7	-5.5	137-X20A-PB-17.2-17.7	17.2 - 17.7 ft	-5.5	-6.0	JB88082-3R	JB88082R	02/11/2015	remaining	N	Y			1.6	J		
X21A	137-X21A-PB	11.3	-6.5	137-X21A-PB-17.8-18.3	17.8 - 18.3 ft	-6.5	-7.0	JB92920-2	JB92920	04/21/2015	remaining	N	Y			1.2	RA		
X21A	PSEG-SB56	12.0	-6.5	PSEG-SB56G(19.5-20.0)J46996-8	19.5 - 20.0 ft	-7.5	-8.0	J46996-8	J46996	11/20/2006	remaining	N	Y			4.4	BF		
X21A	PSEG-SB56	12.0	-6.5	PSEG-SB56H(21.0-21.5)J46996-9R	21.0 - 21.5 ft	-9.0	-9.5	J46996-9R	J46996	11/20/2006	remaining	N	Y			< 1.4	UJ		

Table 5-1
Cr⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criteria
Site 137 North, Garfield Avenue Group
PPG, Jersey City, New Jersey

ABBREVIATIONS:

bgs - below ground surface
CAS RN - Chemical Abstracts Service Registry Number
CCPW - Chromate Chemical Production Waste
Chromium Policy - Memorandum from NJDEP Commissioner Lisa P. Jackson to Irene Kropp, Subject: Chromium Moratorium (Chromium Policy), dated February 8, 2007
Cr⁶ - hexavalent chromium
CrSCC - Chromium Soil Cleanup Criteria
El. - elevation
FD - field duplicate sample type
ft - feet
Method to Determine Compliance - Letter from Mr. Thomas Cozzi to W. Michael McCabe, Subject: Re: Updated Method to Determine Compliance with the Department's Chromium Policy, Garfield Avenue – Sites 114, 132, 133, 135, 137, and 143, Jersey City, NJ. August 13, 2013.
mg/kg - milligrams per kilogram
N - normal sample type
NAVD88 - North American Vertical Datum of 1988
NJDEP - New Jersey Department of Environmental Protection
PDI - Pre-Design Investigation
SDG - sample delivery group
TEE - terminal excavation elevation (represents elevation across grid)
USCS - Unified Soil Classification System

MATRICES:

FILL - fill
MM - meadow mat
UND - undisturbed native deposit
UNDno - non-organic undisturbed native deposit
UNDorg - organic undisturbed native deposit

USCS CLASSIFICATION:

OL - organic silt

QUALIFIERS:

BF - The positive hexavalent chromium results in these samples were qualified as negated since the concentration of hexavalent chromium in these sample was $\leq 3X$ the maximum blank concentration.
J - The result was an estimated value; the associated numerical value was an approximate concentration of the analyte in the sample.
R - The result was rejected due to serious deficiencies; the presence or absence of the analyte could not be confirmed.
RA - The result was rejected due to deficiencies but is considered usable for decision making-purposes.
U - The analyte was not detected above the sample reporting limit shown.
UJ - The analyte was not detected above the sample reporting limit shown and the reporting limit was approximate.

GENERAL NOTES:

G1. "Grid ID" refers to an area, typically 30 ft by 30 ft, identified as Grid Rows M through X (extending west to east) and Grid Columns 16A through 31A (extending from north to south).
G2. "Location ID" refers to the location name where samples were collected.
G3. "Location Elevation" refers to the pre-remediation surface elevation for samples collected from the pit bottom, and the surface elevation of the sample location when the sample was collected via boring or test pit.
G4. Elevation vertical datum is NAVD88, in U.S. survey ft.
G5. For some borings, the Location Elevations presented in this table were revised compared to the Location Elevations used in the proposed TEE Technical Memoranda. The revisions were based on a review of available survey data for individual locations, site-wide topographical surveys, and field notes to provide the most accurate and representative ground surface elevations. In addition, ground surface elevations for borings advanced prior to 2011 were reviewed and, if necessary, converted from the site-specific vertical datum used prior to 2011 into NAVD88.
G6. "As-built TEE" refers to the pit bottom elevation of the grid. However, a grid may be split and have two as-built TEEs.
G7. In some grids, the sample start elevation of the pit bottom sample (typically designated by "PB" in the Location ID) and the as-built TEE are slightly different (typically 0.5 ft or less) because separate elevation measurements were taken for the pit bottom sample and the as-built TEE.
G8. In some grids, there may be up to 0.1 ft variation between the sample start elevation of the pit bottom and the post-excavation elevation survey point due to rounding of the numbers.
G9. "Sample ID" refers to the name of a sample collected at a given location and is unique to the depth of the sample collected. The depth listed in the Sample ID may not necessarily correspond to the actual sample depth interval due to corrections made as a result of post-field work review of surveyed surface elevations and/or boring logs.
G10. "Depth Interval" is based on the "Location Elevation."
G11. "Sample Start Elevation" refers to the start of the sample interval. There may be up to 0.1 ft variation between the listed Sample Start Elevation and the elevation calculated using the Location Elevation and Depth Interval due to rounding of the numbers.
G12. "Sample End Elevation" refers to the end of the sample interval. There may be up to 0.1 ft variation between the listed Sample End Elevation and the elevation calculated using the Location Elevation and Depth Interval due to rounding of the numbers.
G13. In some grids, the clean confirmation sample was collected prior to excavation and therefore a pit bottom sample was not collected. As a result, the clean confirmation sample elevation may vary from the as-built TEE. In addition, sometimes the clean confirmation sample was removed during excavation.
G14. "Lab ID" refers to the identification number assigned to the sample by the analytical laboratory performing the sample analysis. "Lab SDG" refers to the delivery group number assigned to the sample by the analytical laboratory.
G15. "Date Collected" refers to the date the soil sample was collected.
G16. "Sample Status" indicates whether a sample is remaining or removed:
- "Remaining" indicates the soil in that interval is outside the excavation footprint, and remains in-place at that location; and
- "Removed" indicates the sample was removed during excavation.

Table 5-1
Cr⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criteria
Site 137 North, Garfield Avenue Group
PPG, Jersey City, New Jersey

G17. "Sample Type" indicates whether the sample type is normal (N) or a field duplicate (FD).

G18. "Y" indicates that a sample underwent data validation and "N" indicates that data validation was not conducted.

G19. For samples with Cr⁶ CrSCC exceedances, the USCS Classification is provided. Where the sample was collected above 20 ft bgs, the matrix (e.g., MM, UND, UNDno, UNDorg, or FILL) is also specified.

G20. "Result" refers to the analytical result which is reported in mg/kg.

G21. Bold text indicates that the result exceeds the CrSCC. Non-bold text indicates that the result does not exceed the CrSCC.

G22. "Qualifier" refers to the data qualifier assigned by the data validation team reviewing the data from the laboratory for validated data. For unvalidated data, it refers to the qualifier assigned by the laboratory.

G23. Non-detect results are shown on this table using the Method Detection Limit, if available; otherwise they are shown at the Reporting Limit.

SPECIFIC NOTES:

S1. In Grid M16A, the Cr⁶ result for sample P4-M16A-16.0-16.5 (El. -3.3 to -3.8 ft NAVD88) was greater than 20 mg/kg but in compliance with the Chromium Policy per the Method to Determine Compliance because the sample is: 1) below MM where UND+MM was greater than 1 ft thick, 2) with no CCPW observed, (3) less than 1,000 mg/kg, and (4) excavation to this depth would compromise MM. This sample was part of the PDI program where samples were collected at 2-ft intervals starting from El. -0.3 and through the MM (at elevation El. -1.8 ft NAVD88). In addition, excavation was conducted to the anticipated remedial limits (MM), the as-built TEE for this grid was in the MM at El. -2.1 ft NAVD88, and there was no visual observation of contamination.

S2. The following grids were excavated as split grids, each with two distinct as-built TEEs: Grids M22A, M23A, and Q25A.

S3. In Grid P29A, the as-built TEE is El. -6.7 ft NAVD88. The closest remaining sample is 137B11I_21.5-22.0_801725 (El. -6.8 to -7.3 ft NAVD88), which is 0.1 ft below the TEE. Therefore, removed sample 137-P3B-P29A-20.0-20.5 (El. -5.2 to -5.7 ft NAVD88) is included in this table to demonstrate compliance at the as-built TEE.

S4. In Grid Q28A, the as-built TEE is El. -5.5 ft NAVD88. The closest remaining sample is 137-B4H_20-20.5 (El. -6.1 to -6.6 ft NAVD88), which is 0.6 ft below the TEE. Therefore, removed sample 137-B4H_17.7-18.2 (El. -3.8 to -4.3 ft NAVD88) was included in this table to demonstrate compliance at the as-built TEE.

S5. In Grid S31A, a sample collected from Site 137 South was used in the evaluation of compliance for the portion of that grid located within Site 137 North.

S6. In partial Grid T18A, the as-built TEE is El. -4.9 ft NAVD88. The closest remaining sample within Grid T18A is P4-T18A-18.0-18.5 (El. -5.2 to -5.7 ft NAVD88) and its duplicate P4-T18A-18.1-18.5X, which are 0.3 ft below the TEE. The clean confirmation pit bottom sample from adjacent Grid T19A (137-T19A-PB-18.2-18.7, El. -4.9 to -5.4 ft NAVD88), which was collected from the same elevation as the as-built TEE in Grid T18A, is being used as the as-built TEE in partial Grid T18A.

S7. The pit bottom sample and as-built TEE for Grid W21A were inadvertently collected and measured at the edge of Grid W20A.

Table 5-2
CCPW Metals Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Site 137 North, Garfield Avenue Group
PPG, Jersey City, New Jersey

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7)	Sample ID (G8)	Depth Interval (ft bgs) (G9)	Sample Start Elevation (ft NAVD88) (G4, G7, G10)	Sample End Elevation (ft NAVD88) (G4, G11)	Lab ID (G12)	Lab SDG (G12)	Date Collected (G13)	Sample Status (G14)	Sample Type (G15)	Validated (Y/N) (G16)	ANTIMONY 7440-36-0 mg/kg 31 N/A 450		CHROMIUM 7440-47-3 mg/kg 120000 N/A N/A		NICKEL 7440-02-0 mg/kg 1600 N/A 23000		THALLIUM 7440-28-0 mg/kg N/A N/A N/A		VANADIUM 7440-62-2 mg/kg N/A 390 1100		Specific Notes			
														Result (G17, G18)	Qualifier (G19, G20)	Result (G17, G21, G22)	Qualifier (G19, G20)	Result (G17, G18)	Qualifier (G19, G20)	Result (G17, G18)	Qualifier (G19, G20)	Result (G17, G18)	Qualifier (G19, G20)				
M17A	EF-61	13.2	-1.4	EF-B61-12.5	12.5 - 13.0 ft	0.7	0.2	460-27166-7	460271661	06/02/2011	removed	N	Y										330		S1		
M17A	EF-61	13.2	-1.4	EF-B61-17.5	17.5 - 18.0 ft	-4.3	-4.8	460-27166-9	460271661	06/02/2011	remaining	N	Y											38.1		S1	
M19A	137-M19A-PB	14.0	-0.8	137-M19A-PB-14.8-15.3	14.8 - 15.3 ft	-0.8	-1.3	JB83045-3A	JB83045A	12/02/2014	remaining	N	Y	< 0.70	UJ	29.1	J	22.5	J	< 1.1	UJ			44.8	J		
M19A	EF-56	13.4	-0.8	EF-B56-21	21.0 - 21.5 ft	-7.6	-8.1	460-26847-5	460268471	05/23/2011	remaining	N	Y											14.9			
M28A	137-B9	15.1	-6.0	137B9J_20.0-20.5_801734	20.0 - 20.5 ft	-4.9	-5.4	801734	C185	01/23/2007	removed	N	Y	< 2	UJ	404	J	23.9		< 1.7	U			37		S1	
M28A	137-B9	15.1	-6.0	137B9K_22.5-22.9_801735	22.5 - 22.9 ft	-7.4	-7.8	801735	C185	01/23/2007	remaining	N	Y	< 1.4	UJ	62.2	J	7.4		< 1.1	U			16.1		S1	
N17A	137-MW1C	13.5	-2.6	137-1CI_16.0-17.0_812397	16.0 - 17.0 ft	-2.5	-3.5	812397	D734	03/08/2007	remaining	N	Y	< 1.8	UJ	249	J	24.8		< 1.5	U			34.6			
N17A	137-MW1C	13.5	-2.6	137-1CJ_17.4-18.0_813085	17.4 - 18.0 ft	-3.9	-4.5	813085	D845	03/12/2007	remaining	N	Y	2.3	J	951		51.9		< 1.8	U			64.3			
N17A	137-MW1C	13.5	-2.6	137-1CJD_17.4-18.0_813086	17.4 - 18.0 ft	-3.9	-4.5	813086	D845	03/12/2007	remaining	FD	Y	2.7	J	1070		54.6		< 1.7	U			65.3			
N17A	137-MW1C	13.5	-2.6	137-1CK_23.0-23.5_813087	23.0 - 23.5 ft	-9.5	-10.0	813087	D845	03/12/2007	remaining	N	Y	3.6	J	1480		60.6		< 1.7	U			73.5			
N17A	137-MW1C	13.5	-2.6	137-1CL_23.5-24.3_813088	23.5 - 24.3 ft	-10.0	-10.8	813088	D845	03/12/2007	remaining	N	Y	< 1.3	UJ	289		15.9		< 1.3	U			21.9			
N18A	OSB-14	13.5	-2.7	114-OSB-14F(16-16.5)J42409-17	16.0 - 16.5 ft	-2.5	-3.0	J42409-17	J42409	09/28/2006	remaining	N	Y	11.3	J	3510		107	J	< 2.0	U			78.4			
N21A	137-B2	14.3	-3.5	137-B2I_17.6-18.1	17.6 - 18.1 ft	-3.3	-3.8	791332	A575	12/07/2006	remaining	N	Y	< 2.7	UJ	77.1		30.5		< 1.1	U			33.9	J		
N21A	137-B2	14.3	-3.5	137-B2J_20-20.5	20.0 - 20.5 ft	-5.7	-6.2	791333	A575	12/07/2006	remaining	N	Y	< 2.0	UJ	584		35.1		< 1.6	U			42.2	J		
N21A	137-B2	14.3	-3.5	137-B2K_22.2-22.7	22.2 - 22.7 ft	-7.9	-8.4	791334	A575	12/07/2006	remaining	N	Y	< 1.2	UJ	15.1	Jf	5.8		< 1.2	U			21.4	J		
N24A	137-B1	14.4	-5.0	137-B1H_19.2-19.7	19.2 - 19.7 ft	-4.8	-5.3	791324	A575	12/07/2006	remaining	N	Y	< 1.7	UJ	3030		82.9		< 1.4	U			50.5	J		
N24A	137-B1	14.4	-5.0	137-B1I_21-21.5	21.0 - 21.5 ft	-6.6	-7.1	791325	A575	12/07/2006	remaining	N	Y	< 1.6	UJ	142		27.5		< 1.6	U			40.7	J		
N25A	137-MW2C	14.4	-5.3	137-2CJ_19.5-20.5_809374	19.5 - 20.5 ft	-5.1	-6.1	809374	D253	02/23/2007	remaining	N	Y	4.3	J	1810		38.5		< 1.6	U			41.6			
N25A	137-MW2C	14.4	-5.3	137-2CJ_22.0-23.0_810317	22.0 - 23.0 ft	-7.6	-8.6	810317	D373	02/27/2007	remaining	N	Y	< 1.5	UJ	300	J	25.3		< 1.5	U			32.4			
N25A	137-MW2C	14.4	-5.3	137-2CK_24.0-24.5_810318	24.0 - 24.5 ft	-9.6	-10.1	810318	D373	02/27/2007	remaining	N	Y	2.7	J	740	J	21		< 1.5	U			23.1			
N25A	137-MW2C	14.4	-5.3	137-2CKD_24.0-24.5_810319	24.0 - 24.5 ft	-9.6	-10.1	810319	D373	02/27/2007	remaining	FD	Y	1.9	J	585	J	21.9		< 1.3	U			30			
N25A	137-MW2C	14.4	-5.3	137-2CL_24.5-25.0_810320	24.5 - 25.0 ft	-10.1	-10.6	810320	D373	02/27/2007	remaining	N	Y	< 1.2	UJ	90.2	J	19.4		< 1.1	U			26.4			
N27A	137-RI-N27A	14.5	-5.7	137-RI-N27A-20-20.7	20.2 - 20.7 ft	-5.7	-6.2	JB91517-2	JB91517	04/02/2015	remaining	N	Y	< 0.72	UJ	22.1	J	34.5	J	< 0.44	UJ			31.2	J		
O18A	PSEG-SB39	13.7	-3.6	PSEG-SB39E(17.0-17.5)J46996-17	17.0 - 17.5 ft	-3.3	-3.8	J46996-17	J46996	11/20/2006	remaining	N	Y	< 3.5	UJ	288	J	35.3		< 1.8	U			33.9			
O18A	PSEG-SB39	13.7	-3.6	PSEG-SB39F(19.0-19.5)J46996-18	19.0 - 19.5 ft	-5.3	-5.8	J46996-18	J46996	11/20/2006	remaining	N	Y	< 3.4	UJ	240	J	28		< 1.7	U			40.9			
O18A	PSEG-SB39	13.7	-3.6	PSEG-SB39G(21.0-21.5)J46996-19	21.0 - 21.5 ft	-7.3	-7.8	J46996-19	J46996	11/20/2006	remaining	N	Y	< 3.6	UJ	193	J	26.1		< 1.8	U			41.3			
O18A	PSEG-SB39	13.7	-3.6	PSEG-SB39H(23.0-23.5)J46996-20	23.0 - 23.5 ft	-9.3	-9.8	J46996-20	J46996	11/20/2006	remaining	N	Y	< 3.4	UJ	124	J	20.1		< 1.7	U			32.4			
O18A	PSEG-SB39	13.7	-3.6	PSEG-SB39I(24.5-25.0)J46996-21	24.5 - 25.0 ft	-10.8	-11.3	J46996-21	J46996	11/20/2006	remaining	N	Y	< 2.5	UJ	122	J	10.9		< 1.3	U			11.1			
O18A	PSEG-SB39	13.7	-3.6	NJD981084668-11/20/2006-SB39_26	26.5 - 27.0 ft	-12.8	-13.3	786457	Z842	11/20/2006	remaining	N	N	< 1.3	U	33		10.8		< 1.1	U			22.3		S2	
O18A	PSEG-SB39	13.7	-3.6	NJD981084668-11/21/2006-SB39_36	36.0 - 36.5 ft	-22.3	-22.8	786458	Z842	11/21/2006	remaining	N	N	< 1.4	U	47.3		3.5	B	< 1.2	U			6.9	B	S2	
O18A	PSEG-SB39	13.7	-3.6	NJD981084668-11/21/2006-SB39_D	36.0 - 36.5 ft	-22.3	-22.8	786459	Z842	11/21/2006	remaining	FD	N	< 1.4	U	82.8		3.9	B	< 1.2	U			7.6	B	S2	
O18A	PSEG-SB39	13.7	-3.6	NJD981084668-11/21/2006-SB39_47	47.5 - 48.0 ft	-33.8	-34.3	786460	Z842	11/21/2006	remaining	N	N	< 1.4	U	102		3.4	B	< 1.1	U			8.1	B	S2	
P20A	137-P3B-P20A	13.7	-5.5	137-P3B-P20A-19.2-19.7	19.2 - 19.7 ft	-5.5	-6.0	JB41084-1A	JB41084A	07/01/2013	remaining	N	Y	2.9	J	1760	J	56.4	J	< 0.45	U			51.1	J		
P20A	137-RI-P20A	13.7	-5.5	137-RI-P20A-19.2-19.7	19.2 - 19.7 ft	-5.5	-6.0	JB86872-2	JB86872	01/21/2015	remaining	N	Y	< 0.45	U	38.4		28.0		< 0.69	U			52.9			
P24A	137-P3B-P24A	13.8	-6.0	137-P3B-P24A-19.5-20.0	19.5 - 20.0 ft	-5.7	-6.2	JB44370-25A	JB44370A	08/08/2013	remaining	N	Y	1.3	J	290		20.2	J	< 0.29	U			23.6			
P28A	137-RI-P28A	14.3	-5.1	137-RI-P28A-19.5-20.0	19.5 - 20.0 ft	-5.2	-5.7	JB93162-1	JB93162	04/23/2015	remaining	N	Y	< 0.38	U	36.3		30.5		0.42	J			41.2			
P29A	137-B11	14.7	-6.7	137B11I_21.5-22.0_801725	21.5 - 22.0 ft	-6.8	-7.3	801725	C185	01/23/2007	remaining	N	Y	< 2	UJ	291	J	18.3		< 1.6	U			25.6			
P29A	137-B11	14.7	-6.7	137B11J_25.1-25.6_801726	25.1 - 25.6 ft	-10.4	-10.9	801726	C185	01/23/2007	remaining	N	Y	< 1.4	UJ	35.3	J	8.1		< 1.2	U			24.2			
Q18A	137-P3B-MW101I	10.8	-5.8	137-P3B-MW101I-35.0-35.5	35.0 - 35.5 ft	-24.2	-24.7	JC3896-14A	JC3896A	09/14/2015	remaining	N	Y			4.5										S3	
Q18A	137-P3B-MW101I	10.8	-5.8	137-P3B-MW101I-40.0-40.5	40.0 - 40.5 ft	-29.2	-29.7	JC3896-15A	JC3896A	09/14/2015	remaining	N	Y			62.3											
Q24A	137-B3	13.4	-6.8	PPG-137-B3F(21.0-21.5)J43432-18	21.0 - 21.5 ft	-7.6	-8.1	J43432-18	J43432	10/10/2006	remaining	N	Y	< 3.0	UJ	182	J	29.7	J	< 1.5	U			39.4			
Q24A	137-RI-Q24A	12.6	-6.8	137-RI-Q24A-19.5-20.0	19.5 - 20.0 ft	-6.9	-7.4	JB90538-2	JB90538	03/20/2015	remaining	N	Y	< 0.47	UJ	39.2		32.8		0.37	J			43.4			
Q24A	137-RI-Q24A	12.6	-6.8	137-RI-Q24A-19.5-20.0X	19.5 - 20.0 ft	-6.9	-7.4	JB90538-3	JB90538	03/20/2015	remaining	FD	Y	< 0.51	UJ	39.0		32.9		< 0.31	U			45.4			
Q28A	137-B4	13.9	-5.5	137-B4G_17.7-18.2	17.7 - 18.2 ft	-3.8	-4.3	791758	A623	12/08/2006	removed	N	Y	< 1.7	U	2420		18.9		< 1.7	U			39.5	J	S1	
Q28A	137-B4	13.9	-5.5	137-B4H_20-20.5	20.0 - 20.5 ft	-6.1	-6.6	791759	A623	12/08/2006	remaining	N	Y	< 1.5	U	82.3		24.9		< 1.5	U			37.8	J	S1	
Q28A	137-B4	13.9	-5.5	137-B4I_22-22.5	22.0 - 22.5 ft	-8.1	-8.6	791760	A623	12/08/2006	remaining	N	Y	< 1.5	U	144		26.5		< 1.5	U			38.5	J		
Q28A	137-B4	13.9	-5.5	137-B4J_24-24.5	24.0 - 24.5 ft	-10.1	-10.6	791761	A623	12/08/2006	remaining	N	Y	< 1.2	U	29.5		11.4		< 1.2	U			27	J		
Q29A	137-P3B-MW102I	11.0	-6.8	137-P3B-MW102I-40.0-40.5	40.0 - 40.5 ft	-29.0	-29.5	JC3896-11A	JC3896A	09/11/2015	remaining	N	Y			5.9										S3	
Q29A	137-P3B-MW102I	11.0	-6.8	137-P3B-MW102I-45.0-45.5	45.0 - 45.5 ft	-34.0	-34.5	JC3896-12A	JC3896A	09/11/2015	remaining	N	Y			4.8											
Q29A	137-P3B-MW102I	11																									

Table 5-2
CCPW Metals Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Site 137 North, Garfield Avenue Group
PPG, Jersey City, New Jersey

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7)	Sample ID (G8)	Depth Interval (ft bgs) (G9)	Sample Start Elevation (ft NAVD88) (G4, G7, G10)	Sample End Elevation (ft NAVD88) (G4, G11)	Lab ID (G12)	Lab SDG (G12)	Date Collected (G13)	Sample Status (G14)	Sample Type (G15)	Validated (Y/N) (G16)	ANTIMONY 7440-36-0 mg/kg 31 N/A 450		CHROMIUM 7440-47-3 mg/kg 120000 N/A N/A		NICKEL 7440-02-0 mg/kg 1600 N/A 23000		THALLIUM 7440-28-0 mg/kg N/A N/A N/A		VANADIUM 7440-62-2 mg/kg N/A 390 1100		Specific Notes
														Result (G17, G18)	Qualifier (G19, G20)	Result (G17, G21, G22)	Qualifier (G19, G20)	Result (G17, G18)	Qualifier (G19, G20)	Result (G17, G18)	Qualifier (G19, G20)	Result (G17, G18)	Qualifier (G19, G20)	
R18A	137-P3B-R18A	12.9	-3.6	137-P3B-R18A-16.5-17.0	16.5 - 17.0 ft	-3.6	-4.1	JB40821-11A	JB40821A	06/27/2013	remaining	N	Y	0.43	J	159	J	29.6	J	< 0.50	U	46.0		
R21A	137-P3B-R21A	13.8	-5.3	137-P3B-R21A-19.0-19.5	19.0 - 19.5 ft	-5.3	-5.7	JB44333-14A	JB44333A	08/07/2013	remaining	N	Y	< 0.23	UJ	199		31.2	J	< 0.87	U	46.7	J	
R21A	137-P3B-R21A	13.8	-5.3	137-P3B-R21A-19.0-19.5X	19.0 - 19.5 ft	-5.2	-5.7	JB44333-13A	JB44333A	08/07/2013	remaining	FD	Y	< 0.24	UJ	203		28.4	J	< 0.89	U	41.5	J	
R24A	137-R24A-PB	14.0	-5.7	137-R24A-PB-19.7-20.2	19.7 - 20.2 ft	-5.7	-6.2	JB90534-5A	JB90534A	03/20/2015	remaining	N	Y	< 0.44	UJ	38.7		27.8		< 0.67	U	44.4		
R29A	137-R29A-PB	14.5	-6.9	137-R29A-PB-21.5-22.0	21.5 - 22.0 ft	-7.0	-7.5	JB94085-2A	JB94085A	05/06/2015	remaining	N	Y	< 0.66	UJ	22.3	J	15.0	J	0.51	J	31.4	J	
R29A	137-R29A-PB	14.5	-6.9	137-R29A-PB-21.5-22.0X	21.5 - 22.0 ft	-7.0	-7.5	JB94085-3A	JB94085A	05/06/2015	remaining	FD	Y	< 0.65	UJ	15.8	J	13.3	J	< 0.40	UJ	24.9	J	
S20A	OSB-18	13.7	-5.6	114-OSB-18G(18.5-19)J42409-38	18.5 - 19.0 ft	-4.8	-5.3	J42409-38	J42409	09/28/2006	removed	N	Y	< 10	UJ	19700	J	112	J	< 5.0	U	72.7		S1
S20A	OSB-18	13.7	-5.6	114-OSB-18H(21-21.5)J42409-39R	21.0 - 21.5 ft	-7.3	-7.8	J42409-39R	J42409	09/28/2006	remaining	N	Y	< 3.1	UJ	219	J	24.8	J	< 1.5	U	41.2		S1
S20A	OSB-18	13.7	-5.6	114-OSB-18I(25-25.5)J42409-40R	25.0 - 25.5 ft	-11.3	-11.8	J42409-40R	J42409	09/28/2006	remaining	N	Y	< 2.6	UJ	14.8	J	12.5	J	< 1.3	U	18.9		
S20A	OSB-18	13.7	-5.6	114-OSB-18J(27.5-28)J42409-41R	27.5 - 28.0 ft	-13.8	-14.3	J42409-41R	J42409	09/28/2006	remaining	N	Y	< 2.4	UJ	44.2	J	13.4	J	< 1.2	U	16.0		
S21A	137-P3B-S21A	13.8	-5.3	137-P3B-S21A-19.0-19.5	19.0 - 19.5 ft	-5.2	-5.7	JB44370-2A	JB44370A	08/08/2013	remaining	N	Y	0.85	J	97.8		25.1	J	< 0.30	U	28.8		
S25A	137-B5	13.9	-7.4	PPG-137-B5F (21.0-21.5)J43432-7	21.0 - 21.5 ft	-7.1	-7.6	J43432-7	J43432	10/10/2006	remaining	N	Y	< 3.2	UJ	224	J	31.1	J	< 1.6	U	32.0		
S26A	137-RI-S26A	11.0	-6.8	137-RI-S26A-17.8-18.3	17.8 - 18.3 ft	-6.8	-7.3	JB90929-2	JB90929	03/26/2015	remaining	N	Y	< 0.51	U	36.4		30.4		< 0.31	U	43.1		
S27A	137-RI-S27A	10.7	-5.9	137-RI-S27A-16.6-17.1	16.6 - 17.1 ft	-5.9	-6.4	JB92117-2	JB92117	04/10/2015	remaining	N	Y	0.94	J	33.2		28.6		< 0.29	U	39.5		
T19A	137-T19A-PB	13.3	-4.9	137-T19A-PB-18.2-18.7	18.2 - 18.7 ft	-4.9	-5.4	JB87088-1	JB87088	01/23/2015	remaining	N	Y	< 0.48	U	23.6		17.1	J	1.3	J	32.2		
T20A	137-T20A-PB	13.5	-6.1	137-T20A-PB-19.7-20.2	19.7 - 20.2 ft	-6.2	-6.7	JB87834-2A	JB87834A	02/06/2015	remaining	N	Y	0.84	J	40.0		29.2		< 0.66	U	51.2		
T25A	137-RI-T25A	10.2	-6.5	137-RI-T25A-16.7-17.2	16.7 - 17.2 ft	-6.5	-7.0	JB90725-2	JB90725	03/24/2015	remaining	N	Y	< 0.49	U	36.2		30.4		< 0.30	U	51.1		
T28A	137-B6	13.5	-5.4	137 B6G 16.3-16.8	16.3 - 16.8 ft	-2.8	-3.3	790548	A461	12/06/2006	removed	N	Y	17.6		32800		36.6		< 2.0	U	39.9		S1
T28A	137-B6	13.5	-5.4	137 B6H 20.0-20.5	20.0 - 20.5 ft	-6.5	-7.0	790550	A461	12/06/2006	remaining	N	Y	< 1.9	U	33.8		25.8		1.6	B	40.6		S1
U19A	137-U19A-PB	13.0	-5.8	137-U19A-PB-18.8-19.3	18.8 - 19.3 ft	-5.8	-6.3	JB87600-1	JB87600	02/04/2015	remaining	N	Y	1.1	J	59.4	J	17.5	J	1.5	J	36.1	J	
U22A	137-RI-U22A	13.5	-6.4	137-RI-U22A-19.9-20.4	19.9 - 20.4 ft	-6.4	-6.9	JB89975-2	JB89975	03/13/2015	remaining	N	Y	< 0.50	UJ	40.5		34.5		< 0.76	U	47.0		
U23A	137-U23A-PB	13.4	-6.2	137-U23A-PB-19.6-20.1	19.6 - 20.1 ft	-6.2	-6.7	JB90733-1	JB90733	03/24/2015	remaining	N	Y	< 0.59	U	27.0		18.8		< 0.36	U	33.0		
V21A	137-V21A-PB	12.7	-7.5	137-V21A-PB-20.2-20.7	20.0 - 20.5 ft	-7.3	-7.8	JB89724-2A	JB89724A	03/11/2015	remaining	N	Y	0.71	J	28.2	J	15.9	J	< 0.94	UJ	39.7	J	
W20A	137-W20A-PB	12.5	-6.2	137-W20A-PB-18.8-19.3	18.8 - 19.3 ft	-6.3	-6.8	JB88092-2	JB88092	02/11/2015	remaining	N	Y	< 0.73	UJ	25.9	J	15.2	J	< 1.1	UJ	37.2	J	
W20A	137-W21A-PB	12.2	-8.2	137-W21A-PB-20.4-20.9	20.4 - 20.9 ft	-8.2	-8.7	JB92819-1	JB92819	04/20/2015	remaining	N	Y	< 1.0	UJ	13.7	J	16.3	J	< 0.63	UJ	35.8	J	
W21A	OSB-20	12.2	-8.2	114-OSB-20F(17.9-18.4)J42409-7	17.9 - 18.4 ft	-5.7	-6.2	J42409-7	J42409	09/28/2006	removed	N	Y	< 3.9	UJ	193	J	35.7	J	< 2.0	U	32.4		S1
W21A	OSB-20	12.2	-8.2	114-OSB-20ID(26.5-27)J42409-11	26.5 - 27.0 ft	-14.3	-14.8	J42409-11	J42409	09/28/2006	remaining	N	Y	< 2.4	UJ	38.9	J	14.2	J	< 1.2	U	24.0		S1
X20A	137-B7	12.0	-5.5	137 B7H 20.2-20.7	20.2 - 20.7 ft	-8.2	-8.7	790557	A461	12/06/2006	remaining	N	Y	< 1.6	U	44.2		11.9		< 1.3	U	21		
X20A	137-X20A-PB	11.7	-5.5	137-X20A-PB-17.2-17.7	17.2 - 17.7 ft	-5.5	-6.0	JB88092-1	JB88092	02/11/2015	remaining	N	Y	< 0.84	UJ	21.4	J	6.0	J	< 1.3	UJ	31.1	J	
X21A	137-X21A-PB	11.3	-6.5	137-X21A-PB-17.8-18.3	17.8 - 18.3 ft	-6.5	-7.0	JB92922-1	JB92922	04/21/2015	remaining	N	Y	< 0.43	U	13.9		9.7		< 0.27	U	18.7		
X21A	PSEG-SB56	12.0	-6.5	NJD981084668-11/20/2006-SB56_19	19.0 - 19.5 ft	-7.0	-7.5	786454	Z842	11/20/2006	remaining	N	N	< 3.5	U	1180		31.5		< 1.4	U	38.8		S2
X21A	PSEG-SB56	12.0	-6.5	PSEG-SB56G(19.5-20.0)J46996-8	19.5 - 20.0 ft	-7.5	-8.0	J46996-8	J46996	11/20/2006	remaining	N	Y	< 6.9	UJ	748	J	30.5		< 3.5	U	38.4		
X21A	PSEG-SB56	12.0	-6.5	PSEG-SB56H(21.0-21.5)J46996-9	21.0 - 21.5 ft	-9.0	-9.5	J46996-9	J46996	11/20/2006	remaining	N	Y	< 13	UJ	34000	J	680		< 6.6	U	295		
X21A	PSEG-SB56	12.0	-6.5	NJD981084668-11/20/2006-SB56_30	30.5 - 31.0 ft	-18.5	-19.0	786455	Z842	11/20/2006	remaining	N	N	< 1.2	U	97.9		9.6		< 0.99	U	15		S2

Table 5-2
CCPW Metals Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Site 137 North, Garfield Avenue Group
PPG, Jersey City, New Jersey

ABBREVIATIONS:

bgs - below ground surface
CAS RN - Chemical Abstracts Service Registry Number
CCPW - Chromate Chemical Production Waste
Cr - chromium
Cr⁺³ - trivalent chromium
El. - elevation
FD - field duplicate sample type
ft - feet
mg/kg - milligrams per kilogram
N - normal sample type
NAVD88 - North American Vertical Datum of 1988
NJDEP - New Jersey Department of Environmental Protection
N.J.A.C. - New Jersey Administrative Code
NRDCSRS - Non-Residential Direct Contact Soil Remediation Standard
N/A - not applicable
RDCSRS - Residential Direct Contact Soil Remediation Standard
RDCSRS-GAG - Residential Direct Contact Soil Remediation Standard - Garfield Avenue Group (alternative remediation standard approved by the New Jersey Department of Environmental Protection on December 28, 2016)
SCC - Soil Cleanup Criteria
SDG - sample delivery group
SRS - Soil Remediation Standard
TEE - terminal excavation elevation (represents elevation across grid)

QUALIFIERS:

B - Indicates that the analyte was detected at a concentration less than the Practical Quantitation Limit but greater than or equal to the Instrument Detection Limit.
J - The result was an estimated value; the associated numerical value was an approximate concentration of the analyte in the sample.
Jf - The positive result was qualified as estimated since the concentration of chromium in this sample was >3x but ≤10x the maximum field blank contamination.
U - The analyte was not detected above the sample reporting limit shown.
UJ - The analyte was not detected above the sample reporting limit shown and the reporting limit was approximate.

GENERAL NOTES:

G1. "Grid ID" refers to an area, typically 30 ft by 30 ft, identified as Grid Rows M through Row X (extending west to east) and Grid Column 16A through Column Grid 31A (extending from north to south).
G2. "Location ID" refers to the location name where samples were collected.
G3. "Location Elevation" refers to the pre-remediation surface elevation for samples collected from the pit bottom, and the surface elevation of the sample location when the sample was collected via boring or test pit.
G4. Elevation vertical datum is NAVD88, in U.S. survey ft.
G5. For some borings, the Location Elevations presented in this table were revised compared to the Location Elevations used in the proposed TEE Technical Memoranda. The revisions were based on a review of available survey data for individual locations, site-wide topographical surveys, and field notes to provide the most accurate and representative ground surface elevations. In addition, ground surface elevations for borings advanced prior to 2011 were reviewed and, if necessary, converted from the site-specific vertical datum used prior to 2011 into NAVD88.
G6. "As-built TEE" refers to the pit bottom elevation of the grid. However, a grid may be split and have two as-built TEEs.
G7. In some grids, the sample start elevation of the clean confirmation pit bottom sample (typically designated by "PB" in the Location ID) and the as-built TEE are slightly different (typically 0.5 ft or less) because separate elevation measurements were taken for the pit bottom sample and the as-built TEE.
G8. "Sample ID" refers to the name of a sample collected at a given location and is unique to the depth of the sample collected. The depth listed in the Sample ID may not necessarily correspond to the actual sample depth interval due to corrections made as a result of post-field work review of surveyed surface elevations and/or boring logs.
G9. "Depth Interval" is based on the "Location Elevation."
G10. "Sample Start Elevation" refers to the start of the sample interval. There may be up to 0.1 ft variation between the listed Sample Start Elevation and the elevation calculated using the Location Elevation and Depth Interval due to rounding of the numbers.
G11. "Sample End Elevation" refers to the end of the sample interval. There may be up to 0.1 ft variation between the listed Sample End Elevation and the elevation calculated using the Location Elevation and Depth Interval due to rounding of the numbers.
G12. "Lab ID" refers to the identification number assigned to the sample by the analytical laboratory performing the sample analysis. "Lab SDG" refers to the delivery group number assigned to the sample by the analytical laboratory.
G13. "Date Collected" refers to the date the soil sample was collected.
G14. "Sample Status" of "remaining" indicates the soil in that interval is outside the excavation footprint, and remains in-place at that location. A Sample Status of "removed" indicates the sample was removed during excavation.
G15. "Sample Type" indicates whether the sample type is normal (N) or a field duplicate (FD).
G16. "Y" indicates that a sample underwent data validation and "N" indicates that data validation was not conducted.
G17. "Result" refers to the analytical result, which is reported in mg/kg. A blank entry indicates that the sample was not tested for that analyte.
G18. Bold text indicates that the result exceeds the RDCSRS or RDCSRS-GAG. Bold and italicized text indicates that the result exceeds the NRDCSRS. Non-bold and non-italicized text indicates that the result does not exceed the most stringent SRS.
G19. "Qualifier" refers to the data qualifier assigned by the data validation team reviewing the data from the laboratory for validated data. For unvalidated data, it refers to the qualifier assigned by the laboratory.
G20. Non-detect results are shown on this table using the Method Detection Limit, if available; otherwise they are shown at the Reporting Limit.
G21. There is currently no NJDEP SRS and no NJDEP SCC for total Cr. Therefore, total Cr results are compared to the interim NJDEP Residential SCC for Cr⁺³ of 120,000 mg/kg as the cleanup criteria for soil at the Garfield Avenue Group Sites. There is no non-residential SCC for Cr⁺³. Bold values indicate a result that exceeds the interim NJDEP Residential SCC.
G22. Thallium no longer has an RDCSRS or NRDCSRS, per the Site Remediation & Waste Management Program, Implementation of Updated Soil Remediation Standards, N.J.A.C. 7:26D, effective September 18, 2017.

Table 5-2
CCPW Metals Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Site 137 North, Garfield Avenue Group
PPG, Jersey City, New Jersey

SPECIFIC NOTES:

S1. In the following grids, a sample was not collected at the as-built TEE for analysis of CCPW metals, and the closest removed sample to the as-built TEE with CCPW metals results is included on this table: Grids M17A, M28A, Q28A, S20A, T28A, and W21A.

S2. This sample was collected by another party. A data validation memorandum has not been identified.

S3. In Grid Q18A, sample 137-P3B-MW1011-35.0-35.5 (El. -24.2 to -24.7 ft NAVD88) is the closest remaining CCPW metals sample to the as-built TEE of El. -5.8 ft NAVD88. In Grid Q29A, sample 137-P3B-MW1021-40.0-40.5 (El. -29.0 to -29.5 ft NAVD88) is the closest remaining CCPW metals sample to the as-built TEE of El. -6.8 ft NAVD88. In these grids, there were no removed samples collected from above the as-built TEE that were analyzed for CCPW metals.

**Table 5-3
Select PAH Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Site 137 North, Garfield Avenue Group
PPG, Jersey City, New Jersey**

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7, G8)	Sample ID (G9)	Depth Interval (ft bgs) (G10)	Sample Start Elevation (ft NAVD88) (G4, G7, G8, G11)	Sample End Elevation (ft NAVD88) (G4, G12)	Lab ID (G13)	Lab SDG (G13)	Date Collected (G14)	Sample Status (G15)	Sample Type (G16)	Validated (Y/N) (G17)	BENZO(A)ANTHRACENE 56-55-3 mg/kg 5 17		BENZO(B)FLUORANTHENE 205-99-2 mg/kg 5 17		BENZO(K)FLUORANTHENE 207-08-9 mg/kg 45 170		INDENO(1,2,3-CD)PYRENE 193-39-5 mg/kg 5 17		NAPHTHALENE 91-20-3 mg/kg 6 17		Specific Notes
														Result (G18, G19, G22)	Qualifier (G20, G21)	Result (G18, G19, G22)	Qualifier (G20, G21)	Result (G18, G19, G22)	Qualifier (G20, G21)	Result (G18, G19, G22)	Qualifier (G20, G21)	Result (G18, G19, G22)	Qualifier (G20, G21)	
M19A	137-M19A-PB	14.0	-0.8	137-M19A-PB-14.8-15.3	14.8 - 15.3 ft	-0.8	-1.3	JB83045-3A	JB83045A	12/02/2014	remaining	N	Y	< 0.026	UJ	< 0.027	UJ	< 0.03	UJ	< 0.028	UJ	< 0.022	UJ	
N27A	137-RI-N27A	14.5	-5.7	137-RI-N27A-20.2-20.7	20.2 - 20.7 ft	-5.7	-6.2	JB91517-2	JB91517	04/02/2015	remaining	N	Y	< 0.073	U	< 0.075	U	< 0.085	U	< 0.078	U	< 0.061	U	
O18A	PSEG-SB39	13.7	-3.6	NJD981084668-11/20/2006-SB39_26	26.5 - 27.0 ft	-12.8	-13.3	786457	Z842	11/20/2006	remaining	N	N	< 0.038	U	< 0.038	U	< 0.038	U	< 0.038	U	< 0.38	U	S1
O18A	PSEG-SB39	13.7	-3.6	NJD981084668-11/21/2006-SB39_36	36.0 - 36.5 ft	-22.3	-22.8	786458	Z842	11/21/2006	remaining	N	N	< 0.041	U	< 0.041	U	< 0.041	U	< 0.041	U	< 0.41	U	S1
O18A	PSEG-SB39	13.7	-3.6	NJD981084668-11/21/2006-SB39_D	36.0 - 36.5 ft	-22.3	-22.8	786459	Z842	11/21/2006	remaining	FD	N	< 0.041	U	< 0.041	U	< 0.041	U	< 0.041	U	< 0.41	U	S1
O18A	PSEG-SB39	13.7	-3.6	NJD981084668-11/21/2006-SB39_47	47.5 - 48.0 ft	-33.8	-34.3	786460	Z842	11/21/2006	remaining	N	N	< 0.041	U	< 0.041	U	< 0.041	U	< 0.041	U	< 0.41	U	S1
O23A	137-O23A-PB	14.5	-5.5	137-RI-O23A-20.0-20.5	20.0 - 20.5 ft	-5.5	-6.0	JB87366-1	JB87366	01/30/2015	remaining	N	Y	< 0.022	U	< 0.022	U	< 0.025	U	< 0.023	U	< 0.018	U	
O24A	137-O24A-PB	14.4	-5.5	137-RI-O24A-19.9-20.4	19.9 - 20.4 ft	-5.5	-6.0	JB87366-2	JB87366	01/30/2015	remaining	N	Y	< 0.02	U	< 0.02	U	< 0.023	U	< 0.021	U	< 0.017	U	
P20A	137-P3B-P20A	13.7	-5.5	137-P3B-P20A-19.2-19.7	19.2 - 19.7 ft	-5.5	-6.0	JB41084-1A	JB41084A	07/01/2013	remaining	N	Y	< 0.02	U	< 0.02	U	< 0.024	U	< 0.017	U	< 0.025	U	
P20A	137-RI-P20A	13.7	-5.5	137-RI-P20A-19.2-19.7	19.2 - 19.7 ft	-5.5	-6.0	JB86872-2	JB86872	01/21/2015	remaining	N	Y	< 0.016	U	< 0.016	U	< 0.018	U	< 0.017	U	< 0.013	U	
P24A	137-P3B-P24A	13.8	-6.0	137-P3B-P24A-19.5-20.0	19.5 - 20.0 ft	-5.7	-6.2	JB44370-25A	JB44370A	08/08/2013	remaining	N	Y	< 0.015	U	< 0.015	U	< 0.017	U	< 0.016	U	< 0.012	U	
P28A	137-RI-P28A	14.3	-5.1	137-RI-P28A-19.5-20.0	19.5 - 20.0 ft	-5.2	-5.7	JB93162-1	JB93162	04/23/2015	remaining	N	Y	< 0.016	U	< 0.017	U	< 0.019	U	< 0.017	U	< 0.014	U	
Q20A	PSEG-SB67	13.9	-4.7	NJD981084668-8/28/2007-4	19.5 - 20.0 ft	-5.6	-6.1	856780	K415	08/28/2007	remaining	N	N	< 0.052	U	< 0.052	U	< 0.052	U	< 0.052	U	0.093	J	S1
Q20A	PSEG-SB67	13.9	-4.7	NJD981084668-8/28/2007-20	35.0 - 35.5 ft	-21.1	-21.6	857208	K477	08/28/2007	remaining	N	N	< 0.041	U	< 0.041	U	< 0.041	U	< 0.041	U	< 0.41	U	S1
Q20A	PSEG-SB67	13.9	-4.7	NJD981084668-8/28/2007-30	49.5 - 50.0 ft	-35.6	-36.1	857209	K477	08/28/2007	remaining	N	N	< 0.041	U	< 0.041	U	< 0.041	U	< 0.041	U	< 0.41	U	S1
Q24A	137-RI-Q24A	12.6	-6.8	137-RI-Q24A-19.5-20.0	19.5 - 20.0 ft	-6.9	-7.4	JB90538-2	JB90538	03/20/2015	remaining	N	Y	< 0.016	U	< 0.016	U	< 0.018	U	< 0.017	U	< 0.013	U	
Q24A	137-RI-Q24A	12.6	-6.8	137-RI-Q24A-19.5-20.0X	19.5 - 20.0 ft	-6.9	-7.4	JB90538-3	JB90538	03/20/2015	remaining	FD	Y		R		R		R		0.0509	J+		
R18A	137-P3B-R18A	12.9	-3.6	137-P3B-R18A-16.5-17.0	16.5 - 17.0 ft	-3.6	-4.1	JB40821-11A	JB40821A	06/27/2013	remaining	N	Y	< 0.029	U	< 0.029	U	< 0.035	U	< 0.029	U	< 0.03	U	
R21A	137-P3B-R21A	13.8	-5.3	137-P3B-R21A-19.0-19.5	19.0 - 19.5 ft	-5.2	-5.7	JB44333-14A	JB44333A	08/07/2013	remaining	N	Y	< 0.019	U	< 0.019	U	< 0.022	U	< 0.02	U	< 0.016	U	
R21A	137-P3B-R21A	13.8	-5.3	137-P3B-R21A-19.0-19.5X	19.0 - 19.5 ft	-5.2	-5.7	JB44333-13A	JB44333A	08/07/2013	remaining	FD	Y	< 0.017	U	< 0.018	U	< 0.02	U	< 0.018	U	< 0.014	U	
R24A	137-R24A-PB	14.0	-5.7	137-R24A-PB-19.7-20.2	19.7 - 20.2 ft	-5.7	-6.2	JB90534-5A	JB90534A	03/20/2015	remaining	N	Y	< 0.017	U	< 0.017	U	< 0.019	U	< 0.018	UJ	< 0.014	U	
R29A	137-R29A-PB	14.5	-6.9	137-R29A-PB-21.5-22.0	21.5 - 22.0 ft	-7.0	-7.5	JB94085-2A	JB94085A	05/06/2015	remaining	N	Y	< 0.11	UJ	< 0.11	UJ	< 0.12	UJ	< 0.11	UJ	< 0.089	UJ	
R29A	137-R29A-PB	14.5	-6.9	137-R29A-PB-21.5-22.0X	21.5 - 22.0 ft	-7.0	-7.5	JB94085-3A	JB94085A	05/06/2015	remaining	FD	Y	< 0.023	UJ	< 0.024	UJ	< 0.027	UJ	< 0.025	UJ	< 0.02	UJ	
S21A	137-P3B-S21A	13.8	-5.3	137-P3B-S21A-19.0-19.5	19.0 - 19.5 ft	-5.2	-5.7	JB44370-2A	JB44370A	08/08/2013	remaining	N	Y	< 0.016	U	< 0.017	U	< 0.019	U	< 0.017	U	< 0.014	U	
S26A	137-RI-S26A	11.0	-6.8	137-RI-S26A-17.8-18.3	17.8 - 18.3 ft	-6.8	-7.3	JB90929-2	JB90929	03/26/2015	remaining	N	Y	< 0.017	U	< 0.017	U	< 0.019	U	< 0.018	U	< 0.014	U	
S27A	137-RI-S27A	10.7	-5.9	137-RI-S27A-16.6-17.1	16.6 - 17.1 ft	-5.9	-6.4	JB92117-2	JB92117	04/10/2015	remaining	N	Y	< 0.017	U	< 0.017	U	< 0.019	U	< 0.018	UJ	< 0.014	U	
T19A	137-T19A-PB	13.3	-4.9	137-T19A-PB-18.2-18.7	18.2 - 18.7 ft	-4.9	-5.4	JB87088-1	JB87088	01/23/2015	remaining	N	Y	< 0.019	U	< 0.019	U	< 0.022	U	< 0.02	U	0.685	J	
T20A	137-T20A-PB	13.5	-6.1	137-T20A-PB-19.7-20.2	19.7 - 20.2 ft	-6.2	-6.7	JB87834-2A	JB87834A	02/06/2015	remaining	N	Y	< 0.017	U	< 0.018	U	< 0.02	U	< 0.018	U	< 0.014	U	
T25A	137-RI-T25A	10.2	-6.5	137-RI-T25A-16.7-17.2	16.7 - 17.2 ft	-6.5	-7.0	JB90725-2	JB90725	03/24/2015	remaining	N	Y	< 0.015	U	< 0.016	U	< 0.018	U	< 0.016	U	< 0.013	U	
U19A	137-U19A-PB	13.0	-5.8	137-U19A-PB-18.8-19.3	18.8 - 19.3 ft	-5.8	-6.3	JB87600-1	JB87600	02/04/2015	remaining	N	Y	< 0.027	UJ	< 0.027	UJ	< 0.031	UJ	< 0.028	UJ	0.941	J	
U22A	137-RI-U22A	13.5	-6.4	137-RI-U22A-19.9-20.4	19.9 - 20.4 ft	-6.4	-6.9	JB89975-2	JB89975	03/13/2015	remaining	N	Y	< 0.02	UJ	< 0.021	UJ	< 0.023	UJ	< 0.022	UJ	< 0.017	UJ	
U23A	137-U23A-PB	13.4	-6.2	137-U23A-PB-19.6-20.1	19.6 - 20.1 ft	-6.2	-6.7	JB90733-1	JB90733	03/24/2015	remaining	N	Y	< 0.02	U	< 0.021	U	< 0.024	U	< 0.022	U	< 0.017	U	
V21A	137-V21A-PB	12.7	-7.5	137-V21A-PB-20.2-20.7	20.0 - 20.5 ft	-7.3	-7.8	JB89724-2A	JB89724A	03/11/2015	remaining	N	Y	< 0.024	UJ	< 0.025	UJ	< 0.028	UJ	< 0.026	UJ	< 0.02	UJ	
W20A	137-W20A-PB	12.5	-6.2	137-W20A-PB-18.8-19.3	18.8 - 19.3 ft	-6.3	-6.8	JB88092-2	JB88092	02/11/2015	remaining	N	Y	< 0.027	UJ	< 0.028	UJ	< 0.031	UJ	< 0.029	UJ	80.6	J	S2
W20A	137-W21A-PB	12.2	-8.2	137-W21A-PB-20.4-20.9	20.4 - 20.9 ft	-8.2	-8.7	JB92819-1	JB92819	04/20/2015	remaining	N	Y	< 0.071	UJ	< 0.073	UJ	< 0.082	UJ	< 0.075	UJ	< 0.059	UJ	
X20A	137-X20A-PB	11.7	-5.5	137-X20A-PB-17.2-17.7	17.2 - 17.7 ft	-5.5	-6.0	JB88092-1	JB88092	02/11/2015	remaining	N	Y	0.132	J	0.0651	J	< 0.038	UJ	< 0.035	UJ	150	J	S2
X21A	PSEG-SB56	11.3	-6.5	137-X21A-PB-17.8-18.3	17.8 - 18.3 ft	-6.5	-7.0	JB92922-1	JB92922	04/21/2015	remaining	N	Y	< 0.03	UJ	< 0.03	UJ	< 0.034	UJ	< 0.032	UJ	24.2	J	S2
X21A	PSEG-SB56	12.0	-6.5	NJD981084668-11/20/2006-SB56_19	19.0 - 19.5 ft	-7.0	-7.5	786454	Z842	11/20/2006	remaining	N	N	< 0.1	U	< 0.1	U	< 0.1	U	< 0.1	U	0.032	J	S1
X21A	PSEG-SB56	12.0	-6.5	NJD981084668-11/20/2006-SB56_30	30.5 - 31.0 ft	-18.5	-19.0	786455	Z842	11/20/2006	remaining	N	N	< 0.039	U	< 0.039	U	< 0.039	U	< 0.039	U	< 0.39	U	S1

Table 5-3
Select PAHs Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Site 137 North, Garfield Avenue Group
PPG, Jersey City, New Jersey

ABBREVIATIONS:

ACO - Administrative Consent Order
bgs - below ground surface
CAS RN - Chemical Abstracts Service Registry Number
FD - field duplicate sample type
ft -feet
JCO - Judicial Consent Order between the NJDEP, the City of Jersey City, and PPG for remediation of chromium contamination
MGP - manufactured gas plant
mg/kg - milligrams per kilogram
N - normal sample type
NAVD88 - North American Vertical Datum of 1988
NJDEP - New Jersey Department of Environmental Protection
NRDCSRS - Non-Residential Direct Contact Soil Remediation Standard
PDI - Pre-Design Investigation
RDCSRS - Residential Direct Contact Soil Remediation Standard
PAHs - polycyclic aromatic hydrocarbons
SDG - sample delivery group
SRS - Soil Remediation Standard
TEE - terminal excavation elevation (represents elevation across grid)

QUALIFIERS:

J - The result was an estimated value; the associated numerical value was an approximate concentration of the analyte in the sample.
J+ - The internal standard criteria were not met for sample 137-RI-Q24A-19.5-20.0x. The positive naphthalene result is considered usable as an estimated amount.
R - The result was rejected due to serious deficiencies; the presence or absence of the analyte could not be confirmed.
U - The analyte was not detected above the sample reporting limit shown.
UJ - The analyte was not detected above the sample reporting limit shown and the reporting limit was approximate.

GENERAL NOTES:

G1. "Grid ID" refers to an area, typically 30 ft by 30 ft, identified as Grid Rows M through X (extending west to east) and Grid Columns 16A through 31A (extending from north to south).
G2. "Location ID" refers to the location name where samples were collected.
G3. "Location Elevation" refers to the pre-remediation surface elevation for samples collected from the pit bottom, and the surface elevation of the sample location when the sample was collected via boring or test pit.
G4. Elevation vertical datum is NAVD88, in U.S. survey ft.
G5. For some borings, the Location Elevations presented in this table were revised compared to the Location Elevations used in the proposed TEE Technical Memoranda. The revisions were based on a review of available survey data for individual locations, site-wide topographical surveys, and field notes to provide the most accurate and representative ground surface elevations. In addition, ground surface elevations for borings advanced prior to 2011 were reviewed and, if necessary, converted from the site-specific vertical datum used prior to 2011 into NAVD88.
G6. "As-built TEE" refers to the pit bottom elevation of the grid. However, a grid may be split and have two as-built TEEs.
G7. In some grids, the sample start elevation of the pit bottom sample (typically designated by "PB" in the Location ID) and the as-built TEE are slightly different (typically 0.5 ft or less) because separate elevation measurements were taken for the pit bottom sample and the as-built TEE.
G8. In some grids, there may be up to 0.1 ft variation between the sample start elevation of the pit bottom and the post-excavation elevation survey point due to rounding of the numbers.
G9. "Sample ID" refers to the name of a sample collected at a given location and is unique to the depth of the sample collected. The depth listed in the Sample ID may not necessarily correspond to the actual sample depth interval due to corrections made as a result of post-field work review of surveyed surface elevations and/or boring logs.
G10. "Depth Interval" is based on the "Location Elevation."
G11. "Sample Start Elevation" refers to the start of the sample interval. There may be up to 0.1 ft variation between the listed Sample Start Elevation and the elevation calculated using the Location Elevation and Depth Interval due to rounding of the numbers.
G12. "Sample End Elevation" refers to the end of the sample interval. There may be up to 0.1 ft variation between the listed Sample End Elevation and the elevation calculated using the Location Elevation and Depth Interval due to rounding of the numbers.
G13. "Lab ID" refers to the identification number assigned to the sample by the analytical laboratory performing the sample analysis. "Lab SDG" refers to the delivery group number assigned to the sample by the analytical laboratory.
G14. "Date Collected" refers to the date the soil sample was collected.
G15. "Sample Status" of "remaining" indicates the soil in that interval is outside the excavation footprint, and remains in-place at that location.
G16. "Sample Type" indicates whether the sample type is normal (N) or a field duplicate (FD).
G17. "Y" indicates that a sample underwent data validation and "N" indicates that data validation was not conducted.
G18. "Result" refers to the analytical result, which is reported in mg/kg.
G19. Bold text indicates that the result exceeds the RDCSRS. Bold and italicized text indicates that the result exceeds the NRDCSRS. Non-bold and non-italicized text indicates that the result does not exceed the most stringent SRS.
G20. "Qualifier" refers to the data qualifier assigned by the data validation team reviewing the data from the laboratory for validated data. For unvalidated data, it refers to the qualifier assigned by the laboratory.
G21. Non-detect results are shown on this table using the Method Detection Limit, if available; otherwise they are shown at the Reporting Limit.
G22. The selected PAHs on this table and associated Figure 5-3 are included based on the November 11, 2014 Phase 3B "Emanating From" Technical Memorandum.

SPECIFIC NOTES:

S1. This sample was collected by another party. A data validation memorandum has not been identified.

S2. Naphthalene exceedances were observed in only three samples and are limited to the northeastern corner of Site 137 North. They are assumed to be related to off-site MGP impacts. The November 11, 2014 Phase 3B "Emanating from" Technical Memorandum describes the identification of naphthalene as a compound emanating from Site 114 onto the northeastern portion of the Phase 3B area. A statistical evaluation of the naphthalene data at Site 137 North using the NJDEP *Technical Guidance of the Attainment of Remediation Standards and Site-Specific Criteria* documented the attainment of remediation standards (see Technical Memorandum *PPG Site 137N, Compliance Averaging for Naphthalene in Soil*, AECOM, March 2018). Per the ACO and JCO, PPG and/or PSEG are jointly responsible for remediation of the MGP impacts emanating from Site 114.

Table 5-4
Benzene Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Site 137 North, Garfield Avenue Group
PPG, Jersey City, New Jersey

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7, G8)	Sample ID (G9)	Depth Interval (ft bgs) (G10)	Sample Start Elevation (ft NAVD88) (G4, G7, G8, G11)	Sample End Elevation (ft NAVD88) (G4, G12)	Lab ID (G13)	Lab SDG (G13)	Date Collected (G14)	Sample Status (G15)	Sample Type (G16)	Validated (Y/N) (G17)	Analyte CAS RN Units RDCSRS NRDCSRS		Result (G18, G19)	Qualifier (G20, G21)	Specific Notes
														71-43-2 mg/kg 2	5			
M19A	137-M19A-PB	14.0	-0.8	137-M19A-PB-14.8-15.3	14.8 - 15.3 ft	-0.8	-1.3	JB83045-3A	JB83045A	12/02/2014	remaining	N	Y			< 0.00061	UJ	
N27A	137-RI-N27A	14.5	-5.7	137-RI-N27A-20.2-20.7	20.2 - 20.7 ft	-5.7	-6.2	JB91517-2	JB91517	04/02/2015	remaining	N	Y			< 0.00046	UJ	
O18A	PSEG-SB39	13.7	-3.6	NJD981084668-11/20/2006-SB39_26	26.5 - 27.0 ft	-12.8	-13.3	786457	Z842	11/20/2006	remaining	N	N			< 0.001	U	S1
O18A	PSEG-SB39	13.7	-3.6	NJD981084668-11/21/2006-SB39_36	36.0 - 36.5 ft	-22.3	-22.8	786458	Z842	11/21/2006	remaining	N	N			< 0.0012	U	S1
O18A	PSEG-SB39	13.7	-3.6	NJD981084668-11/21/2006-SB39_D	36.0 - 36.5 ft	-22.3	-22.8	786459	Z842	11/21/2006	remaining	FD	N			< 0.0012	U	S1
O18A	PSEG-SB39	13.7	-3.6	NJD981084668-11/21/2006-SB39_47	47.5 - 48.0 ft	-33.8	-34.3	786460	Z842	11/21/2006	remaining	N	N			< 0.0011	U	S1
O23A	137-O23A-PB	14.5	-5.5	137-RI-O23A-20.0-20.5	20.0 - 20.5 ft	-5.5	-6.0	JB87366-1	JB87366	01/30/2015	remaining	N	Y			0.0278		
O24A	137-O24A-PB	14.4	-5.5	137-RI-O24A-19.9-20.4	19.9 - 20.4 ft	-5.5	-6.0	JB87366-2	JB87366	01/30/2015	remaining	N	Y			0.0206		
P20A	137-P3B-P20A	13.7	-5.5	137-P3B-P20A-19.2-19.7	19.2 - 19.7 ft	-5.5	-6.0	JB41084-1A	JB41084A	07/01/2013	remaining	N	Y			< 0.14	U	
P20A	137-RI-P20A	13.7	-5.5	137-RI-P20A-19.2-19.7	19.2 - 19.7 ft	-5.5	-6.0	JB86872-2	JB86872	01/21/2015	remaining	N	Y			0.0019		
P24A	137-P3B-P24A	13.8	-6.0	137-P3B-P24A-19.5-20.0	19.5 - 20.0 ft	-5.7	-6.2	JB44370-25A	JB44370A	08/08/2013	remaining	N	Y			0.00064	J	
P28A	137-RI-P28A	14.3	-5.1	137-RI-P28A-19.5-20.0	19.5 - 20.0 ft	-5.2	-5.7	JB93162-1	JB93162	04/23/2015	remaining	N	Y			< 0.00021	U	
Q20A	PSEG-SB67	13.9	-4.7	NJD981084668-8/28/2007-4	19.5 - 20.0 ft	-5.6	-6.1	856780	K415	08/28/2007	remaining	N	N			0.016		S1
Q20A	PSEG-SB67	13.9	-4.7	NJD981084668-8/28/2007-20	35.0 - 35.5 ft	-21.1	-21.6	857208	K477	08/28/2007	remaining	N	N			< 0.0011	U	S1
Q20A	PSEG-SB67	13.9	-4.7	NJD981084668-8/28/2007-30	49.5 - 50.0 ft	-35.6	-36.1	857209	K477	08/28/2007	remaining	N	N			< 0.0012	U	S1
Q24A	137-RI-Q24A	12.6	-6.8	137-RI-Q24A-19.5-20.0	19.5 - 20.0 ft	-6.9	-7.4	JB90538-2	JB90538	03/20/2015	remaining	N	Y			0.00048	J	
Q24A	137-RI-Q24A	12.6	-6.8	137-RI-Q24A-19.5-20.0X	19.5 - 20.0 ft	-6.9	-7.4	JB90538-3	JB90538	03/20/2015	remaining	FD	Y			0.00044	J	
R18A	137-P3B-R18A	12.9	-3.6	137-P3B-R18A-16.5-17.0	16.5 - 17.0 ft	-3.6	-4.1	JB40821-11A	JB40821A	06/27/2013	remaining	N	Y			0.0038	J	
R21A	137-P3B-R21A	13.8	-5.3	137-P3B-R21A-19.0-19.5	19.0 - 19.5 ft	-5.2	-5.7	JB44333-14A	JB44333A	08/07/2013	remaining	N	Y			0.0187		
R21A	137-P3B-R21A	13.8	-5.3	137-P3B-R21A-19.0-19.5X	19.0 - 19.5 ft	-5.2	-5.7	JB44333-13A	JB44333A	08/07/2013	remaining	FD	Y			0.0134		
R24A	137-R24A-PB	14.0	-5.7	137-R24A-PB-19.7-20.2	19.7 - 20.2 ft	-5.7	-6.2	JB90534-5A	JB90534A	03/20/2015	remaining	N	Y			0.0037		
R29A	137-R29A-PB	14.5	-6.9	137-R29A-PB-21.5-22.0	21.5 - 22.0 ft	-7.0	-7.5	JB94085-2A	JB94085A	05/06/2015	remaining	N	Y			< 0.00042	UJ	
R29A	137-R29A-PB	14.5	-6.9	137-R29A-PB-21.5-22.0X	21.5 - 22.0 ft	-7.0	-7.5	JB94085-3A	JB94085A	05/06/2015	remaining	FD	Y			< 0.00044	UJ	
S21A	137-P3B-S21A	13.8	-5.3	137-P3B-S21A-19.0-19.5	19.0 - 19.5 ft	-5.2	-5.7	JB44370-2A	JB44370A	08/08/2013	remaining	N	Y			0.0093		
S26A	137-RI-S26A	11.0	-6.8	137-RI-S26A-17.8-18.3	17.8 - 18.3 ft	-6.8	-7.3	JB90929-2	JB90929	03/26/2015	remaining	N	Y			0.0013		
S27A	137-RI-S27A	10.7	-5.9	137-RI-S27A-16.6-17.1	16.6 - 17.1 ft	-5.9	-6.4	JB92117-2	JB92117	04/10/2015	remaining	N	Y			0.0053		
T19A	137-T19A-PB	13.3	-4.9	137-T19A-PB-18.2-18.7	18.2 - 18.7 ft	-4.9	-5.4	JB87088-1	JB87088	01/23/2015	remaining	N	Y			0.0510	J	
T20A	137-T20A-PB	13.5	-6.1	137-T20A-PB-19.7-20.2	19.7 - 20.2 ft	-6.2	-6.7	JB87834-2A	JB87834A	02/06/2015	remaining	N	Y			0.00060	J	
T25A	137-RI-T25A	10.2	-6.5	137-RI-T25A-16.7-17.2	16.7 - 17.2 ft	-6.5	-7.0	JB90725-2	JB90725	03/24/2015	remaining	N	Y			0.0029		
U19A	137-U19A-PB	13.0	-5.8	137-U19A-PB-18.8-19.3	18.8 - 19.3 ft	-5.8	-6.3	JB87600-1	JB87600	02/04/2015	remaining	N	Y			0.15	J	
U22A	137-RI-U22A	13.5	-6.4	137-RI-U22A-19.9-20.4	19.9 - 20.4 ft	-6.4	-6.9	JB89975-2	JB89975	03/13/2015	remaining	N	Y			0.0098		
U23A	137-U23A-PB	13.4	-6.2	137-U23A-PB-19.6-20.1	19.6 - 20.1 ft	-6.2	-6.7	JB90733-1	JB90733	03/24/2015	remaining	N	Y			0.0135	J	
V21A	137-V21A-PB	12.7	-7.5	137-V21A-PB-20.2-20.7	20.0 - 20.5 ft	-7.3	-7.8	JB89724-2A	JB89724A	03/11/2015	remaining	N	Y			0.178	J	
W20A	137-W20A-PB	12.5	-6.2	137-W20A-PB-18.8-19.3	18.8 - 19.3 ft	-6.3	-6.8	JB88092-2	JB88092	02/11/2015	remaining	N	Y			3.58	J	S2
W20A	137-W21A-PB	12.2	-8.2	137-W21A-PB-20.4-20.9	20.4 - 20.9 ft	-8.2	-8.7	JB92819-1	JB92819	04/20/2015	remaining	N	Y			0.0634	J	
X20A	137-X20A-PB	11.7	-5.5	137-X20A-PB-17.2-17.7	17.2 - 17.7 ft	-5.5	-6.0	JB88092-1	JB88092	02/11/2015	remaining	N	Y			12.6	J	S2
X21A	137-X21A-PB	11.3	-6.5	137-X21A-PB-17.8-18.3	17.8 - 18.3 ft	-6.5	-7.0	JB92922-1	JB92922	04/21/2015	remaining	N	Y			0.208		
X21A	PSEG-SB56	12.0	-6.5	NJD981084668-11/20/2006-SB56_19	19.0 - 19.5 ft	-7.0	-7.5	786454	Z842	11/20/2006	remaining	N	N			0.019		S1
X21A	PSEG-SB56	12.0	-6.5	NJD981084668-11/20/2006-SB56_30	30.5 - 31.0 ft	-18.5	-19.0	786455	Z842	11/20/2006	remaining	N	N			< 0.0012	U	S1

Table 5-4
Benzene Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Site 137 North, Garfield Avenue Group
PPG, Jersey City, New Jersey

ABBREVIATIONS:

ACO - Administrative Consent Order
bgs - below ground surface
CAS RN - Chemical Abstracts Service Registry Number
FD - field duplicate sample type
ft - feet
JCO - Judicial Consent Order between the NJDEP, the City of Jersey City, and PPG for remediation of chromium contamination
MGP - manufactured gas plant
mg/kg - milligrams per kilogram
N - normal sample type
NAVD88 - North American Vertical Datum of 1988
NJDEP - New Jersey Department of Environmental Protection
NRDCSRS - Non-Residential Direct Contact Soil Remediation Standard
PSEG - Public Service Electric and Gas Company
RDCSRS - Residential Direct Contact Soil Remediation Standard
SDG - sample delivery group
SRS - Soil Remediation Standard
TEE - terminal excavation elevation (represents elevation across grid)

QUALIFIERS:

J - The result was an estimated value; the associated numerical value was an approximate concentration of the analyte in the sample.
U - The analyte was not detected above the sample reporting limit shown.
UJ - The analyte was not detected above the sample reporting limit shown and the reporting limit was approximate.

GENERAL NOTES:

G1. "Grid ID" refers to an area, typically 30 ft by 30 ft, identified as Grid Rows M through X (extending west to east) and Grid Columns 16A through 31A (extending from north to south).
G2. "Location ID" refers to the location name where samples were collected.
G3. "Location Elevation" refers to the pre-remediation surface elevation for samples collected from the pit bottom, and the surface elevation of the sample location when the sample was collected via boring or test pit.
G4. Elevation vertical datum is NAVD88, in U.S. survey ft.
G5. For some borings, the Location Elevations presented in this table were revised compared to the Location Elevations used in the proposed TEE Technical Memoranda. The revisions were based on a review of available survey data for individual locations, site-wide topographical surveys, and field notes to provide the most accurate and representative ground surface elevations. In addition, ground surface elevations for borings advanced prior to 2011 were reviewed and, if necessary, converted from the site-specific vertical datum used prior to 2011 into NAVD88.
G6. "As-built TEE" refers to the pit bottom elevation of the grid. However, a grid may be split and have two as-built TEEs.
G7. In some grids, the sample start elevation of the pit bottom sample (typically designated by "PB" in the Location ID) and the as-built TEE are slightly different (typically 0.5 ft or less) because separate elevation measurements were taken for the pit bottom sample and the as-built TEE.
G8. In some grids, there may be up to 0.1 ft variation between the sample start elevation of the pit bottom and the post-excavation elevation survey point due to rounding of the numbers.
G9. "Sample ID" refers to the name of a sample collected at a given location and is unique to the depth of the sample collected. The depth listed in the Sample ID may not necessarily correspond to the actual sample depth interval due to corrections made as a result of post-field work review of surveyed surface elevations and/or boring logs.
G10. "Depth Interval" is based on the "Location Elevation."
G11. "Sample Start Elevation" refers to the start of the sample interval. There may be up to 0.1 ft variation between the listed Sample Start Elevation and the elevation calculated using the Location Elevation and Depth Interval due to rounding of the numbers.
G12. "Sample End Elevation" refers to the end of the sample interval. There may be up to 0.1 ft variation between the listed Sample End Elevation and the elevation calculated using the Location Elevation and Depth Interval due to rounding of the numbers.
G13. "Lab ID" refers to the identification number assigned to the sample by the analytical laboratory performing the sample analysis. "Lab SDG" refers to the delivery group number assigned to the sample by the analytical laboratory.
G14. "Date Collected" refers to the date the soil sample was collected.
G15. "Sample Status" of "remaining" indicates the soil in that interval is outside the excavation footprint, and remains in-place at that location.
G16. "Sample Type" indicates whether the sample type is normal (N) or a field duplicate (FD).
G17. "Y" indicates that a sample underwent data validation and "N" indicates that data validation was not conducted.
G18. "Result" refers to the analytical result, which is reported in mg/kg.
G19. Bold text indicates that the result exceeds the RDCSRS. Bold and italicized text indicates that the result exceeds the NRDCSRS. Non-bold and non-italicized text indicates that the result does not exceed the most stringent SRS.
G20. "Qualifier" refers to the data qualifier assigned by the data validation team reviewing the data from the laboratory for validated data. For unvalidated data, it refers to the qualifier assigned by the laboratory.
G21. Non-detect results are shown on this table using the Method Detection Limit, if available; otherwise they are shown at the Reporting Limit.

SPECIFIC NOTES:

S1. This sample was collected by another party. A data validation memorandum has not been identified.

S2. Benzene exceedances were observed in only two samples and are limited to the northeastern corner of Site 137 North. The November 11, 2014 Phase 3B "Emanating from" Technical Memorandum describes the identification of naphthalene as a compound emanating from Site 114 onto the northeastern portion of the Phase 3B area. Although benzene was not identified as an "emanating from" compound, the benzene concentrations that exceed the RDCSRS or NRDCSRS in Grids W20A and X20A are co-located with naphthalene concentrations that exceed the RDCSRS and NRDCSRS. A statistical evaluation of the benzene data at Site 137 North using the NJDEP *Technical Guidance of the Attainment of Remediation Standards and Site-Specific Criteria* documented the attainment of remediation standards (see Technical Memorandum *PPG Site 137N, Compliance Averaging for Benzene in Soil*, AECOM, March 2018). Per the ACO and JCO, PPG and/or PSEG are jointly responsible for remediation of the MGP impacts emanating from Site 114.

Appendix D-4

Site 143 Analytical Results Tables

Table 5-1
Cr⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criteria
Site 143, Garfield Avenue Group
PPG, Jersey City, New Jersey

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7, G8)	Sample ID (G9)	Depth Interval (ft bgs) (G10)	Sample Start Elevation (ft NAVD88) (G4, G7, G8, G11)	Sample End Elevation (ft NAVD88) (G4, G12)	Lab ID (G13)	Lab SDG (G13)	Date Collected (G14)	Sample Status (G15)	Sample Type (G16)	Validated (Y/N) (G17)	Matrix (G18)	Analyte CAS RN Units CrSCC		Specific Notes
															Result (G19, G20)	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20 Qualifier (G21, G22)	
C'16A	EF-36	14.0	NE	EF-B36-0.5	0.5 - 1.0 ft	13.5	13.0	460-25705-20	460257051	04/22/2011	remaining	N	Y		< 0.58	UJ	S1
C'16A	EF-36	14.0	NE	EF-B36-2.0	2.0 - 2.5 ft	12.0	11.5	460-25705-21	460257051	04/22/2011	remaining	N	Y		< 0.57	UJ	S1
C'16A	EF-36	14.0	NE	EF-B36-4.0	4.0 - 4.5 ft	10.0	9.5	460-25705-23	460257051	04/22/2011	remaining	N	Y		< 0.60	UJ	S1
C'16A	EF-36	14.0	NE	EF-B36-6.0	6.0 - 6.5 ft	8.0	7.5	460-25760-21	460257601	04/25/2011	remaining	N	Y		< 0.60	U	S1
C'16A	EF-36	14.0	NE	EF-B36-12.0	12.0 - 12.5 ft	2.0	1.5	460-25760-24	460257601	04/25/2011	remaining	N	Y		< 0.57	U	S1
C'16A	EF-36	14.0	NE	EF-B36-15.5	15.5 - 16.0 ft	-1.5	-2.0	460-25760-25	460257601	04/25/2011	remaining	N	Y		< 0.57	U	S1
C'16A	EF-36	14.0	NE	EF-B36-20.0	20.0 - 20.5 ft	-6.0	-6.5	460-25760-26	460257601	04/25/2011	remaining	N	Y		< 0.57	U	S1
A'15A	143-A'15A-SW	12.4	8.8	143-A'15A-SW-0.4-0.9	0.4 - 0.9 ft	12.0	11.5	JB73945-3	JB73945	08/13/2014	remaining	N	Y		2.9		S1, S2, S3
A'15A	143-A'15A-SW	12.4	8.8	143-A'15A-SW-2.4-2.9	2.4 - 2.9 ft	10.0	9.5	JB73945-4	JB73945	08/13/2014	remaining	N	Y		5.9		S1, S2, S3
A'15A	EF-35	12.1	NE	EF-B35-0.5	0.5 - 1.0 ft	11.6	11.1	460-25657-33	460256571	04/21/2011	remaining	N	Y		< 0.53	U	S1, S2, S3
A'15A	EF-35	12.1	NE	EF-B35-2.0	2.0 - 2.5 ft	10.1	9.6	460-25657-34	460256571	04/21/2011	remaining	N	Y		1.8	J	S1, S2, S3
A'15A	EF-35	12.1	NE	EF-B35-4.0	4.0 - 4.5 ft	8.1	7.6	460-25657-36	460256571	04/21/2011	remaining	N	Y		< 0.57	U	S1, S2, S3
A'15A	EF-35	12.1	NE	EF-B35-10.0	10.0 - 10.5 ft	2.1	1.6	460-25705-13	460257051	04/22/2011	remaining	N	Y		< 0.64	UJ	S1, S2, S3
A'15A	EF-35	12.1	NE	EF-B35-12.0	12.0 - 12.5 ft	0.1	-0.4	460-25705-14	460257051	04/22/2011	remaining	N	Y		< 0.59	U	S1, S2, S3
A'15A	EF-35	12.1	NE	EF-B35-16.0	16.0 - 16.5 ft	-3.9	-4.4	460-25705-17	460257051	04/22/2011	remaining	N	Y		< 0.58	UJ	S1, S2, S3
A'15A	EF-35	12.1	NE	EF-B35-20.0	20.0 - 20.5 ft	-7.9	-8.4	460-25705-18	460257051	04/22/2011	remaining	N	Y		0.63	J	S1, S2, S3
A'16A	143-A'16A-SW	12.6	9.0	143-A'16A-SW-0.6-1.1	0.6 - 1.1 ft	12.0	11.5	JB73945-1	JB73945	08/13/2014	remaining	N	Y		7.7		S1
A'16A	143-A'16A-SW	12.6	9.0	143-A'16A-SW-3.1-3.6	3.1 - 3.6 ft	9.5	9.0	JB73945-2	JB73945	08/13/2014	remaining	N	Y		5.6		S1
A'16A	143-P3A-A'16A	12.6	9.0	143-P3A-A'16A-2.5-3.0	2.5 - 3.0 ft	10.1	9.6	JB34655-2	JB34655	04/18/2013	removed	N	Y		0.64	J	S3
A'16A	143-P3A-A'16A	12.6	9.0	143-P3A-A'16A-2.5-3.0X	2.5 - 3.0 ft	10.1	9.6	JB34655-3	JB34655	04/18/2013	removed	FD	Y		0.48	J	S3
A'16A	143-P3A-A'16A	12.6	9.0	143-P3A-A'16A-4.5-5.0	4.5 - 5.0 ft	8.1	7.6	JB34655-4	JB34655	04/18/2013	remaining	N	Y		1.1	J	S3
A'16A	143-P3A-A'16A	12.6	9.0	143-P3A-A'16A-6.5-7.0	6.5 - 7.0 ft	6.1	5.6	JB34655-5	JB34655	04/18/2013	remaining	N	Y		0.81	J	
A'16A	143-P3A-A'16A	12.6	9.0	143-P3A-A'16A-8.5-9.0	8.5 - 9.0 ft	4.1	3.6	JB34655-6	JB34655	04/18/2013	remaining	N	Y		0.47	J	
A'16A	143-P3A-A'16A	12.6	9.0	143-P3A-A'16A-10.5-11.0	10.5 - 11.0 ft	2.1	1.6	JB34655-7	JB34655	04/18/2013	remaining	N	Y		0.43	J	
A'16A	143-P3A-A'16A	12.6	9.0	143-P3A-A'16A-12.5-13.0	12.5 - 13.0 ft	0.1	-0.4	JB34655-8	JB34655	04/18/2013	remaining	N	Y		0.28	J	
A'16A	143-P3A-A'16A	12.6	9.0	143-P3A-A'16A-14.5-15.0	14.5 - 15.0 ft	-1.9	-2.4	JB34655-9	JB34655	04/18/2013	remaining	N	Y		0.22	J	
A'16A	143-P3A-A'16A	12.6	9.0	143-P3A-A'16A-16.3-16.8	16.3 - 16.8 ft	-3.7	-4.2	JB34655-10	JB34655	04/18/2013	remaining	N	Y		0.26	J	
A'16A	143-P3A-A'16A	12.6	9.0	143-P3A-A'16A-16.8-17.3	16.8 - 17.3 ft	-4.2	-4.7	JB34655-11	JB34655	04/18/2013	remaining	N	Y		0.30	J	
A'17A	132-A'17A-SW	12.6	8.6	132-A'17-1.3-1.8-E	1.3 - 1.8 ft	11.3	10.8	JB72482-1R	JB72482R	07/24/2014	remaining	N	Y		8.1		S1
A'17A	143-A'17A-PB2	12.6	8.6	143-A'17A-PB-4.0-4.5	4.0 - 4.5 ft	8.6	8.1	JB63495-2	JB63495	04/01/2014	remaining	N	Y		1.3		
A'17A	143-A'17A-PB2	12.6	8.6	143-A'17A-PB-7.0-7.5	7.0 - 7.5 ft	5.6	5.1	JB63495-3	JB63495	04/01/2014	remaining	N	Y		3.7		
A'17A	143-A'17A-SW	12.6	8.6	143-A'17A-SW-3.3-3.8	3.3 - 3.8 ft	9.3	8.8	JB71369-4	JB71369	07/10/2014	remaining	N	Y		10		S1
A'17A	143-B1	12.6	8.6	PPG-143-B1C_5.0-5.5_798759	5.0 - 5.5 ft	7.6	7.1	798759	B748	01/10/2007	remaining	N	Y		< 2.59	UJ	
A'17A	143-B1	12.6	8.6	PPG-143-B1D_8.6-9.1_798760	8.6 - 9.1 ft	4.0	3.5	798760	B748	01/10/2007	remaining	N	Y		< 2.6	UJ	
A'17A	143-B1	12.6	8.6	PPG-143-B1E_9.1-10.6_798761	9.1 - 10.6 ft	3.5	2.0	798761	B748	01/10/2007	remaining	N	Y		< 2.56	UJ	
A'17A	143-B1	12.6	8.6	PPG-143-B1ED_9.1-10.6_798762	9.1 - 10.6 ft	3.5	2.0	798762	B748	01/10/2007	remaining	FD	Y		< 2.51	UJ	
A'17A	143-P3A-A'17A	12.6	8.6	143-P3A-A'17A-12.5-13.0	12.5 - 13.0 ft	0.1	-0.4	JB34893-12R	JB34893R	04/19/2013	remaining	N	Y		0.30	J	S1
A'17A	143-P3A-A'17A	12.6	8.6	143-P3A-A'17A-14.0-14.5	14.0 - 14.5 ft	-1.4	-1.9	JB34893-13R	JB34893R	04/19/2013	remaining	N	Y		0.74	J	S1
A'17A	143-P3A-A'17A	12.6	8.6	143-P3A-A'17A-14.0-14.5X	14.0 - 14.5 ft	-1.4	-1.9	JB34893-14	JB34893	04/19/2013	remaining	FD	Y		0.83	J	S1
A'17A	143-P3A-A'17A	12.6	8.6	143-P3A-A'17A-14.5-15.0	14.5 - 15.0 ft	-1.9	-2.4	JB34893-15	JB34893	04/19/2013	remaining	N	Y		1.2	J	S1
A'18A	143-A'18A-PB	12.8	9.2	143-A'18A-PB-2.2-2.7	2.2 - 2.7 ft	10.6	10.1	JB62800-6	JB62800	03/24/2014	removed	N	Y		18.5		S4
A'18A	143-A'18A-SW	12.8	9.2	143-A'18A-SW-0.4-0.9	0.4 - 0.9 ft	12.4	11.9	JB71369-5R	JB71369R	07/10/2014	remaining	N	Y		13.5		S1
A'18A	143-A'18A-SW	12.8	9.2	143-A'18A-SW-2.4-2.9	2.4 - 2.9 ft	10.4	9.9	JB71369-6	JB71369	07/10/2014	remaining	N	Y		3.5		S1
A'18A	143-A'18A-SW	12.8	9.2	143-A'18A-SW-3.1-3.6	3.1 - 3.6 ft	9.7	9.2	JB71369-7R	JB71369R	07/10/2014	remaining	N	Y		3.8		S1

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criteria
Site 143, Garfield Avenue Group
PPG, Jersey City, New Jersey

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7, G8)	Sample ID (G9)	Depth Interval (ft bgs) (G10)	Sample Start Elevation (ft NAVD88) (G4, G7, G8, G11)	Sample End Elevation (ft NAVD88) (G4, G12)	Lab ID (G13)	Lab SDG (G13)	Date Collected (G14)	Sample Status (G15)	Sample Type (G16)	Validated (Y/N) (G17)	Matrix (G18)	Analyte CAS RN Units CrSCC CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20		Specific Notes
															Result (G19, G20)	Qualifier (G21, G22)	
A'18A	143-P3A-A`18A	12.8	9.2	143-P3A-A`18A-8.0-8.5	8.0 - 8.5 ft	4.8	4.3	JB34501-13R	JB34501R	04/17/2013	remaining	N	Y		1.3	J	S1, S4
A'18A	143-P3A-A`18A	12.8	9.2	143-P3A-A`18A-10.4-10.9	10.4 - 10.9 ft	2.4	1.9	JB34501-14	JB34501	04/17/2013	remaining	N	Y		1.3	J	S1
A'18A	143-P3A-A`18A	12.8	9.2	143-P3A-A`18A-10.9-11.4	10.9 - 11.4 ft	1.9	1.4	JB34501-15	JB34501	04/17/2013	remaining	N	Y		1.1	J	S1
A'18A	EF-34	12.4	NE	EF-B34-0.5	0.5 - 1.0 ft	11.9	11.4	460-25705-24	460257051	04/22/2011	remaining	N	Y		< 0.53	UJ	S1
A'18A	EF-34	12.4	NE	EF-B34-2.0	2.0 - 2.5 ft	10.4	9.9	460-25705-25	460257051	04/22/2011	remaining	N	Y		1.4	J	S1
A'18A	EF-34	12.4	NE	EF-B34-4.0	4.0 - 4.5 ft	8.4	7.9	460-25705-27	460257051	04/22/2011	remaining	N	Y		< 0.65	UJ	S1
A'18A	EF-34	12.4	NE	EF-B34-6.0	6.0 - 6.5 ft	6.4	5.9	460-25760-13	460257601	04/25/2011	remaining	N	Y		7.9		S1
A'18A	EF-34	12.4	NE	EF-B34-10.0	10.0 - 10.5 ft	2.4	1.9	460-25760-15	460257601	04/25/2011	remaining	N	Y		< 0.66	U	S1
A'18A	EF-34	12.4	NE	EF-B34-10.0X	10.0 - 10.5 ft	2.4	1.9	460-25760-16	460257601	04/25/2011	remaining	FD	Y		< 0.66	U	S1
A'18A	EF-34	12.4	NE	EF-B34-12.0	12.0 - 12.5 ft	0.4	-0.1	460-25760-17	460257601	04/25/2011	remaining	N	Y		< 0.64	U	S1
A'18A	EF-34	12.4	NE	EF-B34-15.0	15.0 - 15.5 ft	-2.6	-3.1	460-25760-18	460257601	04/25/2011	remaining	N	Y		< 0.62	U	S1
A'18A	EF-34	12.4	NE	EF-B34-16.5	16.5 - 17.0 ft	-4.1	-4.6	460-25760-19	460257601	04/25/2011	remaining	N	Y		< 0.62	U	S1
A'18A	EF-34	12.4	NE	EF-B34-22.5	22.5 - 23.0 ft	-10.1	-10.6	460-25760-20	460257601	04/25/2011	remaining	N	Y		13.3		S1
A'19A	143-A'19A-SW	12.5	7.3	143-A'19A-SW-0.5-1.0	0.5 - 1.0 ft	12.0	11.5	JB71369-8	JB71369	07/10/2014	remaining	N	Y		3.3		S1
A'19A	143-A'19A-SW	12.5	7.3	143-A'19A-SW-2.5-3.0	2.5 - 3.0 ft	10.0	9.5	JB71369-9	JB71369	07/10/2014	remaining	N	Y		1.5		S1
A'19A	143-A'19A-SW	12.5	7.3	143-A'19A-SW-4.5-5.0	4.5 - 5.0 ft	8.0	7.5	JB71369-10	JB71369	07/10/2014	remaining	N	Y		0.30	J	S1
A'19A	143-B2	12.7	7.3	PPG-143-B2E_5.0-5.5_798765	5.0 - 5.5 ft	7.7	7.2	798765	B748	01/10/2007	remaining	N	Y		19.5	J	S5
A'19A	143-B2	12.7	7.3	PPG-143-B2F_8.1-8.6_798766	8.1 - 8.6 ft	4.6	4.1	798766	B748	01/10/2007	remaining	N	Y		< 2.61	UJ	
A'19A	143-P3A-A`19A	8.7	7.3	143-P3A-A`19A-2.2-2.7	2.2 - 2.7 ft	6.5	6.0	JB63583-2	JB63583	04/02/2014	remaining	N	Y		4.1		
A'19A	143-P3A-A`19A	8.7	7.3	143-P3A-A`19A-4.2-4.7	4.2 - 4.7 ft	4.5	4.0	JB63583-3	JB63583	04/02/2014	remaining	N	Y		0.20	J	
A'19A	143-P3A-A`19A	8.7	7.3	143-P3A-A`19A-6.2-6.7	6.2 - 6.7 ft	2.5	2.0	JB63583-4	JB63583	04/02/2014	remaining	N	Y		0.26	J	
A'19A	143-P3A-A`19A	8.7	7.3	143-P3A-A`19A-7.8-8.3	7.8 - 8.3 ft	0.9	0.4	JB63583-11	JB63583	04/02/2014	remaining	N	Y		< 0.091	U	
A'19A	143-P3A-A`19A	8.7	7.3	143-P3A-A`19A-8.3-8.8	8.3 - 8.8 ft	0.4	-0.1	JB63583-5	JB63583	04/02/2014	remaining	N	Y		0.46	J	
A'19A	143-P3A-A`19A	8.7	7.3	143-P3A-A`19A-10.2-10.7	10.2 - 10.7 ft	-1.5	-2.0	JB63583-6	JB63583	04/02/2014	remaining	N	Y		0.81		
A'19A	143-P3A-A`19A	8.7	7.3	143-P3A-A`19A-12.2-12.7	12.2 - 12.7 ft	-3.5	-4.0	JB63583-7	JB63583	04/02/2014	remaining	N	Y		0.18	J	
A'19A	143-P3A-A`19A	8.7	7.3	143-P3A-A`19A-14.2-14.7	14.2 - 14.7 ft	-5.5	-6.0	JB63583-8	JB63583	04/02/2014	remaining	N	Y		6.3		
A'19A	143-P3A-A`19A	8.7	7.3	143-P3A-A`19A-14.2-14.7X	14.2 - 14.7 ft	-5.5	-6.0	JB63583-9	JB63583	04/02/2014	remaining	FD	Y		5.7		
A'19A	143-P3A-A`19A	8.7	7.3	143-P3A-A`19A-16.2-16.7	16.2 - 16.7 ft	-7.5	-8.0	JB63583-10	JB63583	04/02/2014	remaining	N	Y		19.3		
A'19A	EF-120	12.5	NE	EF-B120-0.5-1.0	0.5 - 1.0 ft	12.0	11.5	JB15252-9	JB15252	08/31/2012	remaining	N	Y		1.3	J	S1
A'19A	EF-120	12.5	NE	EF-B120-0.5-1.0X	0.5 - 1.0 ft	12.0	11.5	JB15252-8	JB15252	08/31/2012	remaining	FD	Y		1.7	J	S1
A'20A	143-A'20A-SW	12.3	7.3	143-A'20A-SW-0.5-1.0	0.5 - 1.0 ft	11.8	11.3	JB71369-11R	JB71369R	07/10/2014	remaining	N	Y		4.3		S1, S5
A'20A	143-A'20A-SW	12.3	7.3	143-A'20A-SW-2.5-3.0	2.5 - 3.0 ft	9.8	9.3	JB71369-12	JB71369	07/10/2014	remaining	N	Y		0.71		S1, S5
A'20A	143-A'20A-SW	12.3	7.3	143-A'20A-SW-3.5-4.0	3.5 - 4.0 ft	8.8	8.3	JB71369-13	JB71369	07/10/2014	remaining	N	Y		1.4		S1, S5
A15A	143-A15A-PB	12.8	6.2	143-A15A-PB2-6.6-7.1	6.6 - 7.1 ft	6.2	5.7	JC54900-1	JC54900	11/07/2017	remaining	N	Y		1.3		S2
A16A	143-P3A-A16A	14.5	7.5	143-P3A-A16A-6.0-6.5	6.0 - 6.5 ft	8.4	7.9	JB45921-9	JB45921	08/28/2013	removed	N	Y		0.14	J	S2, S6
A16A	143-P3A-A16A	14.5	7.5	143-P3A-A16A-8.0-8.5	8.0 - 8.5 ft	6.4	5.9	JB45921-10	JB45921	08/28/2013	remaining	N	Y		0.69		S2, S6
A16A	143-P3A-A16A	14.5	7.5	143-P3A-A16A-10.0-10.5	10.0 - 10.5 ft	4.4	3.9	JB45921-11	JB45921	08/28/2013	remaining	N	Y		1.6		S2
A16A	143-P3A-A16A	14.5	7.5	143-P3A-A16A-12.0-12.5	12.0 - 12.5 ft	2.4	1.9	JB45921-12	JB45921	08/28/2013	remaining	N	Y		1.0		S2
A16A	143-P3A-A16A	14.5	7.5	143-P3A-A16A-14.0-14.5	14.0 - 14.5 ft	0.4	-0.1	JB45921-13	JB45921	08/28/2013	remaining	N	Y		0.83		S2
A16A	143-P3A-A16A	14.5	7.5	143-P3A-A16A-16.0-16.5	16.0 - 16.5 ft	-1.6	-2.1	JB45921-14	JB45921	08/28/2013	remaining	N	Y		0.53		S2
A16A	143-P3A-A16A	14.5	7.5	143-P3A-A16A-17.5-18.0	17.5 - 18.0 ft	-3.1	-3.6	JB45921-15	JB45921	08/28/2013	remaining	N	Y		0.083	J	S2
A16A	143-P3A-A16A	14.5	7.5	143-P3A-A16A-18.0-18.5	18.0 - 18.5 ft	-3.6	-4.1	JB45921-16	JB45921	08/28/2013	remaining	N	Y		0.41	J	S2
A17A	143-P3A-A17A	12.9	6.4	143-P3A-A17A-6.5-7.0	6.5 - 7.0 ft	6.4	5.9	JB34501-8R	JB34501R	04/17/2013	remaining	N	Y		< 0.18	UJ	
A17A	143-P3A-A17A	12.9	6.4	143-P3A-A17A-8.5-9.0	8.5 - 9.0 ft	4.4	3.9	JB34501-9	JB34501	04/17/2013	remaining	N	Y		0.44	J	

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criteria
Site 143, Garfield Avenue Group
PPG, Jersey City, New Jersey

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7, G8)	Sample ID (G9)	Depth Interval (ft bgs) (G10)	Sample Start Elevation (ft NAVD88) (G4, G7, G8, G11)	Sample End Elevation (ft NAVD88) (G4, G12)	Lab ID (G13)	Lab SDG (G13)	Date Collected (G14)	Sample Status (G15)	Sample Type (G16)	Validated (Y/N) (G17)	Matrix (G18)	Analyte CAS RN Units CrSCC		Specific Notes
															Result (G19, G20)	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20 Qualifier (G21, G22)	
A17A	143-P3A-A17A	12.9	6.4	143-P3A-A17A-10.5-11.0	10.5 - 11.0 ft	2.4	1.9	JB34501-10R	JB34501R	04/17/2013	remaining	N	Y		0.64	J	
A17A	143-P3A-A17A	12.9	6.4	143-P3A-A17A-12.0-12.5	12.0 - 12.5 ft	0.9	0.4	JB34501-11R	JB34501R	04/17/2013	remaining	N	Y		0.25	J	
A17A	143-P3A-A17A	12.9	6.4	143-P3A-A17A-12.5-13.0	12.5 - 13.0 ft	0.4	-0.1	JB34501-12	JB34501	04/17/2013	remaining	N	Y		0.87	J	
A18A	143-A18A-PB	12.9	7.7	143-A18A-PB-5.2-5.7	5.2 - 5.7 ft	7.7	7.2	JB63762-1R	JB63762R	04/03/2014	remaining	N	Y		14.2	J	
A18A	143-P3A-A18A	12.9	7.7	143-P3A-A18A-8.0-8.5	8.0 - 8.5 ft	4.9	4.4	JB34383-2R	JB34383R	04/16/2013	remaining	N	Y		0.19	J	
A18A	143-P3A-A18A	12.9	7.7	143-P3A-A18A-10.0-10.5	10.0 - 10.5 ft	2.9	2.4	JB34501-1R	JB34501R	04/17/2013	remaining	N	Y		0.38	J	
A18A	143-P3A-A18A	12.9	7.7	143-P3A-A18A-12.0-12.5	12.0 - 12.5 ft	0.9	0.4	JB34501-2	JB34501	04/17/2013	remaining	N	Y		0.87	J	
A18A	143-P3A-A18A	12.9	7.7	143-P3A-A18A-12.0-12.5X	12.0 - 12.5 ft	0.9	0.4	JB34501-3	JB34501	04/17/2013	remaining	FD	Y		0.33	J	
A18A	143-P3A-A18A	12.9	7.7	143-P3A-A18A-12.5-13.0	12.5 - 13.0 ft	0.4	-0.1	JB34501-4	JB34501	04/17/2013	remaining	N	Y		0.69	J	
A18A	143-P3A-A18A	12.9	7.7	143-P3A-A18A-13.0-13.5	13.0 - 13.5 ft	-0.1	-0.6	JB34501-5R	JB34501R	04/17/2013	remaining	N	Y		7.7	J	
A18A	EF-33	12.8	7.7	EF-B33-6.0	6.0 - 6.5 ft	6.8	6.3	460-25657-15	460256571	04/21/2011	remaining	N	Y		< 0.63	UJ	
A18A	EF-33	12.8	7.7	EF-B33-10.0	10.0 - 10.5 ft	2.8	2.3	460-25657-16	460256571	04/21/2011	remaining	N	Y		< 0.60	UJ	
A18A	EF-33	12.8	7.7	EF-B33-12.0	12.0 - 12.5 ft	0.8	0.3	460-25657-17	460256571	04/21/2011	remaining	N	Y		< 0.68	UJ	
A19A	143-A19A-PB	12.9	8.3	143-A19A-PB-4.5-5.0	4.5 - 5.0 ft	8.4	7.9	JB63123-2R	JB63123R	03/27/2014	remaining	N	Y		0.97	J	
A19A	143-P3A-A19A	12.9	8.3	143-P3A-A19A-4.5-5.0	4.5 - 5.0 ft	8.4	7.9	JB34283-2	JB34283	04/15/2013	remaining	N	Y		0.83	J	
A19A	143-P3A-A19A	12.9	8.3	143-P3A-A19A-6.5-7.0	6.5 - 7.0 ft	6.4	5.9	JB34283-3R	JB34283R	04/15/2013	remaining	N	Y		0.29	J	
A19A	143-P3A-A19A	12.9	8.3	143-P3A-A19A-8.5-9.0	8.5 - 9.0 ft	4.4	3.9	JB34383-14	JB34383	04/16/2013	remaining	N	Y		< 0.15	UJ	
A19A	143-P3A-A19A	12.9	8.3	143-P3A-A19A-10.5-11.0	10.5 - 11.0 ft	2.4	1.9	JB34383-13	JB34383	04/16/2013	remaining	N	Y		0.22	J	
A19A	143-P3A-A19A	12.9	8.3	143-P3A-A19A-10.5-11.0X	10.5 - 11.0 ft	2.4	1.9	JB34383-12	JB34383	04/16/2013	remaining	FD	Y		< 0.16	UJ	
A19A	143-P3A-A19A	12.9	8.3	143-P3A-A19A-12.8-13.3	12.8 - 13.3 ft	0.1	-0.4	JB34383-11	JB34383	04/16/2013	remaining	N	Y		2.5	J	
A19A	143-P3A-A19A	12.9	8.3	143-P3A-A19A-13.3-13.8	13.3 - 13.8 ft	-0.4	-0.9	JB34383-10	JB34383	04/16/2013	remaining	N	Y		1.9	J	
A20A	143-P3A-A20A	12.9	8.3	143-P3A-A20A-4.5-5.0	4.5 - 5.0 ft	8.4	7.9	JB34283-6R	JB34283R	04/15/2013	remaining	N	Y		0.55	J	S7
A20A	143-P3A-A20A	12.9	8.3	143-P3A-A20A-4.5-5.0X	4.5 - 5.0 ft	8.4	7.9	JB34283-7R	JB34283R	04/15/2013	remaining	FD	Y		0.51	J	S7
A20A	143-P3A-A20A	12.9	8.3	143-P3A-A20A-6.5-7.0	6.5 - 7.0 ft	6.4	5.9	JB34283-8	JB34283	04/15/2013	remaining	N	Y		0.37	J	S7
A20A	143-P3A-A20A	12.9	8.3	143-P3A-A20A-8.5-9.0	8.5 - 9.0 ft	4.4	3.9	JB34283-10R	JB34283R	04/15/2013	remaining	N	Y		< 0.28	UJ	S7
A20A	143-P3A-A20A	12.9	8.3	143-P3A-A20A-10.5-11.0	10.5 - 11.0 ft	2.4	1.9	JB34283-11	JB34283	04/15/2013	remaining	N	Y		0.30	J	S7
A20A	143-P3A-A20A	12.9	8.3	143-P3A-A20A-12.5-13.0	12.5 - 13.0 ft	0.4	-0.1	JB34283-9	JB34283	04/15/2013	remaining	N	Y		0.91	J	S7
A20A	143-P3A-A20A	12.9	8.3	143-P3A-A20A-14.5-15.0	14.5 - 15.0 ft	-1.6	-2.1	JB34283-12	JB34283	04/15/2013	remaining	N	Y		< 0.14	UJ	S7
A20A	143-P3A-A20A	12.9	8.3	143-P3A-A20A-16.5-17.0	16.5 - 17.0 ft	-3.6	-4.1	JB34283-13R	JB34283R	04/15/2013	remaining	N	Y		0.64	J	S7
A20A	143-P3A-A20A	12.9	8.3	143-P3A-A20A-18.5-19.0	18.5 - 19.0 ft	-5.6	-6.1	JB34283-14R	JB34283R	04/15/2013	remaining	N	Y		0.77	J	S7
A20A	143-P3A-A20A	12.9	8.3	143-P3A-A20A-19.0-19.5	19.0 - 19.5 ft	-6.1	-6.6	JB34283-15R	JB34283R	04/15/2013	remaining	N	Y		0.46	J	S7
A20A	143-P3A-A20A	12.9	8.3	143-P3A-A20A-20.0-20.5	20.0 - 20.5 ft	-7.1	-7.6	JB34283-16	JB34283	04/15/2013	remaining	N	Y		15.2	J	S7
B15A	143-B15A-PB	12.8	6.1	143-B15A-PB2-6.7-7.2	6.7 - 7.2 ft	6.1	5.6	JC54900-2	JC54900	11/07/2017	remaining	N	Y		< 0.64	U	S2
B16A	143-P3A-B16A	13.3	7.7	143-P3A-B16A-4.5-5.0	4.5 - 5.0 ft	8.8	8.3	JB45800-7R	JB45800R	08/27/2013	removed	N	Y		0.41	RA	S2, S8
B16A	143-P3A-B16A	13.3	7.7	143-P3A-B16A-6.5-7.0	6.5 - 7.0 ft	6.8	6.3	JB45800-6R	JB45800R	08/27/2013	remaining	N	Y		0.54	RA	S2, S8
B16A	143-P3A-B16A	13.3	7.7	143-P3A-B16A-8.5-9.0	8.5 - 9.0 ft	4.8	4.3	JB45800-5	JB45800	08/27/2013	remaining	N	Y		0.29	RA	S2
B16A	143-P3A-B16A	13.3	7.7	143-P3A-B16A-10.5-11.0	10.5 - 11.0 ft	2.8	2.3	JB45800-4	JB45800	08/27/2013	remaining	N	Y		0.22	RA	S2
B16A	143-P3A-B16A	13.3	7.7	143-P3A-B16A-12.3-12.8	12.3 - 12.8 ft	1.0	0.5	JB45800-3	JB45800	08/27/2013	remaining	N	Y		0.93	RA	S2
B16A	143-P3A-B16A	13.3	7.7	143-P3A-B16A-12.8-13.3	12.8 - 13.3 ft	0.5	0.0	JB45800-2R	JB45800R	08/27/2013	remaining	N	Y		1.7	RA	S2
B16A	143-P3A-MW1011	10.9	7.7	143-P3A-MW1011-25.0-25.5	25.0 - 25.5 ft	-14.1	-14.6	JC3896-1R	JC3896R	09/01/2015	remaining	N	Y	UNDno (SM)	83.7	J	S2, S9
B17A	143-P3A-B17A	13.3	7.4	143-P3A-B17A-4.0-4.5	4.0 - 4.5 ft	9.3	8.8	JB45800-15R	JB45800R	08/27/2013	removed	N	Y		7.3	RA	S2, S10
B17A	143-P3A-B17A	13.3	7.4	143-P3A-B17A-6.0-6.5	6.0 - 6.5 ft	7.3	6.8	JB45800-14R	JB45800R	08/27/2013	remaining	N	Y		0.16	RA	S2
B17A	143-P3A-B17A	13.3	7.4	143-P3A-B17A-8.0-8.5	8.0 - 8.5 ft	5.3	4.8	JB45800-13R	JB45800R	08/27/2013	remaining	N	Y		0.21	RA	S2
B17A	143-P3A-B17A	13.3	7.4	143-P3A-B17A-10.0-10.5	10.0 - 10.5 ft	3.3	2.8	JB45800-12R	JB45800R	08/27/2013	remaining	N	Y		0.33	RA	S2

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criteria
Site 143, Garfield Avenue Group
PPG, Jersey City, New Jersey

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7, G8)	Sample ID (G9)	Depth Interval (ft bgs) (G10)	Sample Start Elevation (ft NAVD88) (G4, G7, G8, G11)	Sample End Elevation (ft NAVD88) (G4, G12)	Lab ID (G13)	Lab SDG (G13)	Date Collected (G14)	Sample Status (G15)	Sample Type (G16)	Validated (Y/N) (G17)	Matrix (G18)	Analyte CAS RN Units CrSCC		Specific Notes
															Result (G19, G20)	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20 Qualifier (G21, G22)	
B17A	143-P3A-B17A	13.3	7.4	143-P3A-B17A-12.0-12.5	12.0 - 12.5 ft	1.3	0.8	JB45800-11R	JB45800R	08/27/2013	remaining	N	Y		1.4	RA	S2
B17A	143-P3A-B17A	13.3	7.4	143-P3A-B17A-12.5-13.0	12.5 - 13.0 ft	0.8	0.3	JB45800-10	JB45800	08/27/2013	remaining	N	Y		2.0	RA	S2
B18A	143-B18A-PB	12.8	6.7	143-B18A-PB-6.1-6.6	6.1 - 6.6 ft	6.7	6.2	JB63123-3R	JB63123R	03/27/2014	remaining	N	Y		0.37	J	
B18A	143-B18A-PB2	12.8	6.7	143-B18A-PB-6.1-6.6R	6.1 - 6.6 ft	6.7	6.2	JB63277-2R	JB63277R	03/28/2014	remaining	N	Y		0.71	J	
B18A	143-P3A-B18A	12.9	6.7	143-P3A-B18A-6.5-7.0	6.5 - 7.0 ft	6.4	5.9	JB38459-2	JB38459	05/31/2013	remaining	N	Y		0.22	J	
B18A	143-P3A-B18A	12.9	6.7	143-P3A-B18A-8.5-9.0	8.5 - 9.0 ft	4.4	3.9	JB38459-3	JB38459	05/31/2013	remaining	N	Y		0.17	J	
B18A	143-P3A-B18A	12.9	6.7	143-P3A-B18A-8.5-9.0X	8.5 - 9.0 ft	4.4	3.9	JB38459-4R	JB38459R	05/31/2013	remaining	FD	Y		< 0.084	UJ	
B18A	143-P3A-B18A	12.9	6.7	143-P3A-B18A-10.5-11.0	10.5 - 11.0 ft	2.4	1.9	JB38459-5R	JB38459R	05/31/2013	remaining	N	Y		0.36	J	
B18A	143-P3A-B18A	12.9	6.7	143-P3A-B18A-12.0-12.5	12.0 - 12.5 ft	0.9	0.4	JB38459-6	JB38459	05/31/2013	remaining	N	Y		0.46	J	
B18A	143-P3A-B18A	12.9	6.7	143-P3A-B18A-12.8-13.3	12.8 - 13.3 ft	0.1	-0.4	JB38459-7	JB38459	05/31/2013	remaining	N	Y		0.53	J	
B18A	143-P3A-B18A	12.9	6.7	143-P3A-B18A-13.3-13.8	13.3 - 13.8 ft	-0.4	-0.9	JB38459-8	JB38459	05/31/2013	remaining	N	Y		2.6	J	
B19A	143-DD1-TW2	12.7	7.8	DD1-TW2-5.0	5.0 - 5.5 ft	7.7	7.2	460-34353-7	460343531	12/05/2011	remaining	N	Y		< 1.1	UJ	
B19A	143-P3A-B19A	12.8	7.8	143-P3A-B19A-6.5-7.0	6.5 - 7.0 ft	6.3	5.8	JB38397-3	JB38397	05/30/2013	remaining	N	Y		0.83	J	
B19A	143-P3A-B19A	12.8	7.8	143-P3A-B19A-8.5-9.0	8.5 - 9.0 ft	4.3	3.8	JB38397-4R	JB38397R	05/30/2013	remaining	N	Y		0.15	J	
B19A	143-P3A-B19A	12.8	7.8	143-P3A-B19A-10.5-11.0	10.5 - 11.0 ft	2.3	1.8	JB38397-5R	JB38397R	05/30/2013	remaining	N	Y		0.20	J	
B19A	143-P3A-B19A	12.8	7.8	143-P3A-B19A-12.5-13.0	12.5 - 13.0 ft	0.3	-0.2	JB38397-6	JB38397	05/30/2013	remaining	N	Y		0.17	J	
B19A	143-P3A-B19A	12.8	7.8	143-P3A-B19A-13.0-13.5	13.0 - 13.5 ft	-0.2	-0.7	JB38397-7R	JB38397R	05/30/2013	remaining	N	Y		0.56	J	
B19A	143-P3A-B19A	12.8	7.8	143-P3A-B19A-13.5-14.0	13.5 - 14.0 ft	-0.7	-1.2	JB38397-8R	JB38397R	05/30/2013	remaining	N	Y		2.8	J	
B20A	143-P3A-B20A	12.9	9.0	143-P3A-B20A-2.5-3.0	2.5 - 3.0 ft	10.4	9.9	JB34383-9	JB34383	04/16/2013	removed	N	Y		0.60	J	S11
B20A	143-P3A-B20A	12.9	9.0	143-P3A-B20A-4.5-5.0	4.5 - 5.0 ft	8.4	7.9	JB34383-8R	JB34383R	04/16/2013	remaining	N	Y		4.6	J	S11
B20A	143-P3A-B20A	12.9	9.0	143-P3A-B20A-6.5-7.0	6.5 - 7.0 ft	6.4	5.9	JB34383-7R	JB34383R	04/16/2013	remaining	N	Y		1.7	J	
B20A	143-P3A-B20A	12.9	9.0	143-P3A-B20A-8.5-9.0	8.5 - 9.0 ft	4.4	3.9	JB34383-6	JB34383	04/16/2013	remaining	N	Y		< 0.17	UJ	
B20A	143-P3A-B20A	12.9	9.0	143-P3A-B20A-10.5-11.0	10.5 - 11.0 ft	2.4	1.9	JB34383-5R	JB34383R	04/16/2013	remaining	N	Y		0.32	J	
B20A	143-P3A-B20A	12.9	9.0	143-P3A-B20A-12.6-13.1	12.6 - 13.1 ft	0.3	-0.2	JB34383-4R	JB34383R	04/16/2013	remaining	N	Y		1.2	J	
B20A	143-P3A-B20A	12.9	9.0	143-P3A-B20A-13.1-13.6	13.1 - 13.6 ft	-0.2	-0.7	JB34383-3R	JB34383R	04/16/2013	remaining	N	Y		0.25	J	
C15A	143-C15A-PB	12.7	6.0	143-C15A-PB2-6.7-7.2	6.7 - 7.2 ft	6.0	5.5	JC54900-3	JC54900	11/07/2017	remaining	N	Y		< 0.54	U	S2
C16A	143-P3A-C16A	13.0	7.8	143-P3A-C16A-4.0-4.5	4.0 - 4.5 ft	9.0	8.5	JB46027-2	JB46027	08/29/2013	removed	N	Y		1.5	J	S2, S12
C16A	143-P3A-C16A	13.0	7.8	143-P3A-C16A-4.0-4.5X	4.0 - 4.5 ft	9.0	8.5	JB46027-3R	JB46027R	08/29/2013	removed	FD	Y		1.1	J	S2, S12
C16A	143-P3A-C16A	13.0	7.8	143-P3A-C16A-6.0-6.5	6.0 - 6.5 ft	7.0	6.5	JB46027-4	JB46027	08/29/2013	remaining	N	Y		< 0.095	UJ	S2, S12
C16A	143-P3A-C16A	13.0	7.8	143-P3A-C16A-8.0-8.5	8.0 - 8.5 ft	5.0	4.5	JB46027-5	JB46027	08/29/2013	remaining	N	Y		1.4	J	S2
C16A	143-P3A-C16A	13.0	7.8	143-P3A-C16A-10.0-10.5	10.0 - 10.5 ft	3.0	2.5	JB46027-6R	JB46027R	08/29/2013	remaining	N	Y		0.087	J	S2
C16A	143-P3A-C16A	13.0	7.8	143-P3A-C16A-12.0-12.5	12.0 - 12.5 ft	1.0	0.5	JB46027-7R	JB46027R	08/29/2013	remaining	N	Y		0.20	J	S2
C16A	143-P3A-C16A	13.0	7.8	143-P3A-C16A-12.7-13.2	12.7 - 13.2 ft	0.3	-0.2	JB46027-8	JB46027	08/29/2013	remaining	N	Y		0.71	J	S2
C16A	143-P3A-C16A	13.0	7.8	143-P3A-C16A-13.2-13.7	13.2 - 13.7 ft	-0.2	-0.7	JB46027-9R	JB46027R	08/29/2013	remaining	N	Y		1.7	J	S2
C17A	143-C17A-PB	13.0	8.6	143-C17A-PB-4.3-4.8	4.3 - 4.8 ft	8.7	8.2	JB62890-2RT	JB62890RT	03/25/2014	remaining	N	Y		0.39	J	S2, S13
C17A	143-P3A-C17A	13.0	8.6	143-P3A-C17A-5.0-5.5	5.0 - 5.5 ft	8.0	7.5	JB46027-12	JB46027	08/29/2013	remaining	N	Y		0.34	J	S2
C17A	143-P3A-C17A	13.0	8.6	143-P3A-C17A-7.0-7.5	7.0 - 7.5 ft	6.0	5.5	JB46027-13	JB46027	08/29/2013	remaining	N	Y		3.6	J	S2
C17A	143-P3A-C17A	13.0	8.6	143-P3A-C17A-9.0-9.5	9.0 - 9.5 ft	4.0	3.5	JB46027-14	JB46027	08/29/2013	remaining	N	Y		1.0	J	S2
C17A	143-P3A-C17A	13.0	8.6	143-P3A-C17A-11.0-11.5	11.0 - 11.5 ft	2.0	1.5	JB46027-15	JB46027	08/29/2013	remaining	N	Y		0.40	J	S2
C17A	143-P3A-C17A	13.0	8.6	143-P3A-C17A-13.0-13.5	13.0 - 13.5 ft	0.0	-0.5	JB46027-16R	JB46027R	08/29/2013	remaining	N	Y		0.60	J	S2
C17A	143-P3A-C17A	13.0	8.6	143-P3A-C17A-13.5-14.0	13.5 - 14.0 ft	-0.5	-1.0	JB46027-17R	JB46027R	08/29/2013	remaining	N	Y		1.6	J	S2
C18A	143-P3A-C18A	13.1	6.0	143-P3A-C18A-7.0-7.5	7.0 - 7.5 ft	6.1	5.6	JB45621-6T	JB45621T	08/23/2013	remaining	N	Y		0.57	J	
C18A	143-P3A-C18A	13.1	6.0	143-P3A-C18A-9.0-9.5	9.0 - 9.5 ft	4.1	3.6	JB45621-5	JB45621	08/23/2013	remaining	N	Y		0.24	J	
C18A	143-P3A-C18A	13.1	6.0	143-P3A-C18A-11.0-11.5	11.0 - 11.5 ft	2.1	1.6	JB45621-4	JB45621	08/23/2013	remaining	N	Y		0.22	J	

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criteria
Site 143, Garfield Avenue Group
PPG, Jersey City, New Jersey

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7, G8)	Sample ID (G9)	Depth Interval (ft bgs) (G10)	Sample Start Elevation (ft NAVD88) (G4, G7, G8, G11)	Sample End Elevation (ft NAVD88) (G4, G12)	Lab ID (G13)	Lab SDG (G13)	Date Collected (G14)	Sample Status (G15)	Sample Type (G16)	Validated (Y/N) (G17)	Matrix (G18)	Analyte CAS RN Units CrSCC		Specific Notes
															Result (G19, G20)	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20 Qualifier (G21, G22)	
C18A	143-P3A-C18A	13.1	6.0	143-P3A-C18A-13.0-13.5	13.0 - 13.5 ft	0.1	-0.4	JB45621-3	JB45621	08/23/2013	remaining	N	Y		0.98	J	
C18A	143-P3A-C18A	13.1	6.0	143-P3A-C18A-13.5-14.0	13.5 - 14.0 ft	-0.4	-0.9	JB45621-2T	JB45621T	08/23/2013	remaining	N	Y		4.1	J	
C19A	143-P3A-C19A	13.0	6.4	143-P3A-C19A-6.0-6.3	6.0 - 6.3 ft	7.0	6.7	JB38397-11R	JB38397R	05/30/2013	removed	N	Y		0.38	J	S14
C19A	143-P3A-C19A	13.0	6.4	143-P3A-C19A-8.0-8.5	8.0 - 8.5 ft	5.0	4.5	JB38397-12R	JB38397R	05/30/2013	remaining	N	Y		0.15	J	S14
C19A	143-P3A-C19A	13.0	6.4	143-P3A-C19A-10.0-10.5	10.0 - 10.5 ft	3.0	2.5	JB38397-13	JB38397	05/30/2013	remaining	N	Y		0.24	J	
C19A	143-P3A-C19A	13.0	6.4	143-P3A-C19A-10.0-10.5X	10.0 - 10.5 ft	3.0	2.5	JB38397-14R	JB38397R	05/30/2013	remaining	FD	Y		0.63	J	
C19A	143-P3A-C19A	13.0	6.4	143-P3A-C19A-12.0-12.5	12.0 - 12.5 ft	1.0	0.5	JB38397-15R	JB38397R	05/30/2013	remaining	N	Y		0.25	J	
C19A	143-P3A-C19A	13.0	6.4	143-P3A-C19A-12.5-13.0	12.5 - 13.0 ft	0.5	0.0	JB38397-16R	JB38397R	05/30/2013	remaining	N	Y		0.42	J	
C19A	143-P3A-C19A	13.0	6.4	143-P3A-C19A-13.0-13.5	13.0 - 13.5 ft	0.0	-0.5	JB38397-17	JB38397	05/30/2013	remaining	N	Y		0.44	J	
C20A	143-P3A-C20A	12.7	6.1	143-P3A-C20A-6.5-7.0	6.5 - 7.0 ft	6.2	5.7	JB34285-5	JB34285	04/15/2013	remaining	N	Y		0.33	J	
C20A	143-P3A-C20A	12.7	6.1	143-P3A-C20A-8.5-9.0	8.5 - 9.0 ft	4.2	3.7	JB34285-4	JB34285	04/15/2013	remaining	N	Y		0.73	J	
C20A	143-P3A-C20A	12.7	6.1	143-P3A-C20A-10.5-11.0	10.5 - 11.0 ft	2.2	1.7	JB34285-3	JB34285	04/15/2013	remaining	N	Y		< 0.17	UJ	
C20A	143-P3A-C20A	12.7	6.1	143-P3A-C20A-12.0-12.5	12.0 - 12.5 ft	0.7	0.2	JB34285-2	JB34285	04/15/2013	remaining	N	Y		0.24	J	
C20A	143-P3A-C20A	12.7	6.1	143-P3A-C20A-12.5-13.0	12.5 - 13.0 ft	0.2	-0.3	JB34285-1R	JB34285R	04/15/2013	remaining	N	Y		0.26	J	
D15A	143-B5	12.9	6.5	PPG-143-B5E_6.5-7.0_799362	6.5 - 7.0 ft	6.4	5.9	799362	B818	01/11/2007	remaining	N	Y		< 2.32	UJ	S2, S15
D15A	143-B5	12.9	6.5	PPG-143-B5F_8.8-9.5_799363	8.8 - 9.5 ft	4.1	3.4	799363	B818	01/11/2007	remaining	N	Y		< 2.61	UJ	S2, S15
D15A	143-B5	12.9	6.5	PPG-143-B5G_9.5-9.9_799364	9.5 - 9.9 ft	3.4	3.0	799364	B818	01/11/2007	remaining	N	Y		< 2.42	UJ	S2, S15
D15A	143-B5	12.9	6.5	PPG-143-B5H_9.9-10.6_799365	9.9 - 10.6 ft	3.0	2.3	799365	B818	01/11/2007	remaining	N	Y		< 2.53	UJ	S2, S15
D15A	143-B5	12.9	6.5	PPG-143-B5HDUP_9.9-10.6_799366	9.9 - 10.6 ft	3.0	2.3	799366	B818	01/11/2007	remaining	FD	Y		< 2.48	UJ	S2, S15
D15A	143-B5	12.9	6.5	PPG-143-B5I_12.6-13.1_799367	12.6 - 13.1 ft	0.3	-0.2	799367	B818	01/11/2007	remaining	N	Y		< 3.14	UJ	S2, S15
D15A	143-B5	12.9	6.5	PPG-143-B5J_13.1-13.9_799368	13.1 - 13.9 ft	-0.2	-1.0	799368	B818	01/11/2007	remaining	N	Y		< 3.41	UJ	S2, S15
D15A	143-B5	12.9	6.5	PPG-143-B5K_17.1-17.6_799369	17.1 - 17.6 ft	-4.2	-4.7	799369	B818	01/11/2007	remaining	N	Y		< 2.39	UJ	S2, S15
D16A	143-D16A-PB	13.1	8.5	143-D16A-PB-4.7-5.2	4.7 - 5.2 ft	8.4	7.9	JB63762-2R	JB63762R	04/03/2014	remaining	N	Y		1.9	J	S2
D16A	143-D16A-PB	13.1	8.5	143-D16A-PB-4.7-5.2X	4.7 - 5.2 ft	8.4	7.9	JB63762-3R	JB63762R	04/03/2014	remaining	FD	Y		3.8	J	S2
D16A	143-P3A-D16A	13.1	8.5	143-P3A-D16A-5.5-6.0	5.5 - 6.0 ft	7.6	7.1	JB45621-22	JB45621	08/23/2013	remaining	N	Y		0.86	J	S2
D16A	143-P3A-D16A	13.1	8.5	143-P3A-D16A-7.0-7.5	7.0 - 7.5 ft	6.1	5.6	JB45621-21	JB45621	08/23/2013	remaining	N	Y		1.0	J	S2
D16A	143-P3A-D16A	13.1	8.5	143-P3A-D16A-9.0-9.5	9.0 - 9.5 ft	4.1	3.6	JB45621-20	JB45621	08/23/2013	remaining	N	Y		0.59	J	S2
D16A	143-P3A-D16A	13.1	8.5	143-P3A-D16A-11.0-11.5	11.0 - 11.5 ft	2.1	1.6	JB45621-19	JB45621	08/23/2013	remaining	N	Y		0.67	J	S2
D16A	143-P3A-D16A	13.1	8.5	143-P3A-D16A-13.0-13.5	13.0 - 13.5 ft	0.1	-0.4	JB45621-18R	JB45621R	08/23/2013	remaining	N	Y		0.55	J	S2
D16A	143-P3A-D16A	13.1	8.5	143-P3A-D16A-14.5-15.0	14.5 - 15.0 ft	-1.4	-1.9	JB45621-17	JB45621	08/23/2013	remaining	N	Y		0.99	J	S2
D16A	143-P3A-D16A	13.1	8.5	143-P3A-D16A-15.0-15.5	15.0 - 15.5 ft	-1.9	-2.4	JB45621-16R	JB45621R	08/23/2013	remaining	N	Y		2.8	J	S2
D17A	143-B4	12.7	6.1	143B4D_8.0-8.5_806769	8.0 - 8.5 ft	4.7	4.2	806769	C844	02/09/2007	remaining	N	Y		< 2.8	UJ	S2
D17A	143-B4	12.7	6.1	143B4E_12.0-12.5_806770	12.0 - 12.5 ft	0.7	0.2	806770	C844	02/09/2007	remaining	N	Y		< 2.92	UJ	S2
D17A	143-B4	12.7	6.1	143B4F_13.6-14.1_806771	13.6 - 14.1 ft	-0.9	-1.4	806771	C844	02/09/2007	remaining	N	Y		< 3.01	UJ	S2
D17A	143-B4	12.7	6.1	143B4G_16.0-16.5_806772	16.0 - 16.5 ft	-3.3	-3.8	806772	C844	02/09/2007	remaining	N	Y		< 2.56	UJ	S2
D17A	143-P3A-D17A	13.1	6.1	143-P3A-D17A-7.0-7.5	7.0 - 7.5 ft	6.1	5.6	JB45621-13	JB45621	08/23/2013	remaining	N	Y		0.69	J	S2
D17A	143-P3A-D17A	13.1	6.1	143-P3A-D17A-9.0-9.5	9.0 - 9.5 ft	4.1	3.6	JB45621-12	JB45621	08/23/2013	remaining	N	Y		0.47	J	S2
D17A	143-P3A-D17A	13.1	6.1	143-P3A-D17A-11.0-11.5	11.0 - 11.5 ft	2.1	1.6	JB45621-11	JB45621	08/23/2013	remaining	N	Y		0.33	J	S2
D17A	143-P3A-D17A	13.1	6.1	143-P3A-D17A-13.0-13.5	13.0 - 13.5 ft	0.1	-0.4	JB45621-10T	JB45621T	08/23/2013	remaining	N	Y		0.14	J	S2
D17A	143-P3A-D17A	13.1	6.1	143-P3A-D17A-14.5-15.0	14.5 - 15.0 ft	-1.4	-1.9	JB45621-9T	JB45621T	08/23/2013	remaining	N	Y		0.93	J	S2
D17A	143-P3A-D17A	13.1	6.1	143-P3A-D17A-15.0-15.5	15.0 - 15.5 ft	-1.9	-2.4	JB45621-8	JB45621	08/23/2013	remaining	N	Y		5.6	J	S2
D18A	143-P3A-D18A	13.2	6.6	143-P3A-D18A-6.5-7.0	6.5 - 7.0 ft	6.7	6.2	JB38459-11R	JB38459R	05/31/2013	remaining	N	Y		0.33	J	
D18A	143-P3A-D18A	13.2	6.6	143-P3A-D18A-8.5-9.0	8.5 - 9.0 ft	4.7	4.2	JB38459-12R	JB38459R	05/31/2013	remaining	N	Y		0.26	J	
D18A	143-P3A-D18A	13.2	6.6	143-P3A-D18A-10.5-11.0	10.5 - 11.0 ft	2.7	2.2	JB38459-13R	JB38459R	05/31/2013	remaining	N	Y		0.54	J	

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criteria
Site 143, Garfield Avenue Group
PPG, Jersey City, New Jersey

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7, G8)	Sample ID (G9)	Depth Interval (ft bgs) (G10)	Sample Start Elevation (ft NAVD88) (G4, G7, G8, G11)	Sample End Elevation (ft NAVD88) (G4, G12)	Lab ID (G13)	Lab SDG (G13)	Date Collected (G14)	Sample Status (G15)	Sample Type (G16)	Validated (Y/N) (G17)	Matrix (G18)	Analyte CAS RN Units CrSCC		Specific Notes
															Result (G19, G20)	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20 Qualifier (G21, G22)	
D18A	143-P3A-D18A	13.2	6.6	143-P3A-D18A-12.0-12.5	12.0 - 12.5 ft	1.2	0.7	JB38459-14R	JB38459R	05/31/2013	remaining	N	Y		0.27	J	
D18A	143-P3A-D18A	13.2	6.6	143-P3A-D18A-14.5-15.0	14.5 - 15.0 ft	-1.3	-1.8	JB38459-15	JB38459	05/31/2013	remaining	N	Y		0.63	J	
D18A	143-P3A-D18A	13.2	6.6	143-P3A-D18A-15.0-15.5	15.0 - 15.5 ft	-1.8	-2.3	JB38459-16R	JB38459R	05/31/2013	remaining	N	Y		1.1	J	
D19A	143-D19A-PB	13.3	5.4	143-D19A-PB-7.8-8.3	7.9 - 8.4 ft	5.4	4.9	JB64766-2	JB64766	04/15/2014	remaining	N	Y		0.44	J	
D19A	143-P3A-D19A	13.3	5.4	143-P3A-D19A-8.5-9.0	8.5 - 9.0 ft	4.8	4.3	JB45240-6R	JB45240R	08/20/2013	remaining	N	Y		1.0	J	
D19A	143-P3A-D19A	13.3	5.4	143-P3A-D19A-10.0-11.5	10.5 - 11.0 ft	2.8	2.3	JB45240-5R	JB45240R	08/20/2013	remaining	N	Y		1.2	J	
D19A	143-P3A-D19A	13.3	5.4	143-P3A-D19A-12.5-13.0	12.5 - 13.0 ft	0.8	0.3	JB45240-4	JB45240	08/20/2013	remaining	N	Y		0.98	J	
D19A	143-P3A-D19A	13.3	5.4	143-P3A-D19A-14.5-15.0	14.5 - 15.0 ft	-1.2	-1.7	JB45240-3	JB45240	08/20/2013	remaining	N	Y		1.2	J	
D19A	143-P3A-D19A	13.3	5.4	143-P3A-D19A-15.0-15.5	15.0 - 15.5 ft	-1.7	-2.2	JB45240-2	JB45240	08/20/2013	remaining	N	Y		1.9	J	
D20A	143-B3	12.9	5.0	PPG-143-B3F_9.3-10.1_799377	9.3 - 10.1 ft	3.6	2.8	799377	B818	01/11/2007	remaining	N	Y		< 3.2	UJ	
D20A	143-B3	12.9	5.0	PPG-143-B3G_12.8-13.4_799360	12.8 - 13.4 ft	0.1	-0.5	799360	B818	01/11/2007	remaining	N	Y		< 2.89	UJ	
D20A	143-B3	12.9	5.0	PPG-143-B3H_13.9-14.5_799361	13.9 - 14.5 ft	-1.0	-1.6	799361	B818	01/11/2007	remaining	N	Y		< 8.2	UJ	
D20A	143-B3	12.9	5.0	PPG-143-B3I_17.0-17.5_799372	17.0 - 17.5 ft	-4.1	-4.6	799372	B818	01/11/2007	remaining	N	Y		< 6.51	UJ	
D20A	143-B3	12.9	5.0	PPG-143-B3J_18.2-18.8_799373	18.2 - 18.8 ft	-5.3	-5.9	799373	B818	01/11/2007	remaining	N	Y		< 2.41	UJ	
D20A	143-B3	12.9	5.0	PPG-143-B3JD_18.2-18.8_799374	18.2 - 18.8 ft	-5.3	-5.9	799374	B818	01/11/2007	remaining	FD	Y		< 2.44	UJ	
D20A	143-D20A-PB	12.9	5.0	143-D20A-PB-7.9-8.4	7.9 - 8.4 ft	5.0	4.5	JB64647-1	JB64647	04/14/2014	remaining	N	Y		0.28	RA	
D20A	143-P3A-D20A	12.9	5.0	143-P3A-D20A-8.5-9.0	8.5 - 9.0 ft	4.4	3.9	JB34285-11	JB34285	04/15/2013	remaining	N	Y		1.6	J	
D20A	143-P3A-D20A	12.9	5.0	143-P3A-D20A-10.5-11.0	10.5 - 11.0 ft	2.4	1.9	JB34285-10	JB34285	04/15/2013	remaining	N	Y		< 0.18	UJ	
D20A	143-P3A-D20A	12.9	5.0	143-P3A-D20A-12.3-12.8	12.3 - 12.8 ft	0.6	0.1	JB34285-9	JB34285	04/15/2013	remaining	N	Y		< 0.19	UJ	
D20A	143-P3A-D20A	12.9	5.0	143-P3A-D20A-12.8-13.3	12.8 - 13.3 ft	0.1	-0.4	JB34285-8R	JB34285R	04/15/2013	remaining	N	Y		0.61	J	
E16A	143-P3A-E16A	12.6	7.5	143-P3A-E16A-5.0-5.5	5.0 - 5.5 ft	7.6	7.1	JB38249-8	JB38249	05/29/2013	remaining	N	Y		0.15	J	S16
E16A	143-P3A-E16A	12.6	7.5	143-P3A-E16A-6.5-7.0	6.5 - 7.0 ft	6.1	5.6	JB38249-7	JB38249	05/29/2013	remaining	N	Y		0.089	J	
E16A	143-P3A-E16A	12.6	7.5	143-P3A-E16A-8.5-9.0	8.5 - 9.0 ft	4.1	3.6	JB38249-6	JB38249	05/29/2013	remaining	N	Y		0.13	J	
E16A	143-P3A-E16A	12.6	7.5	143-P3A-E16A-10.5-11.0	10.5 - 11.0 ft	2.1	1.6	JB38249-5	JB38249	05/29/2013	remaining	N	Y		< 0.10	U	
E16A	143-P3A-E16A	12.6	7.5	143-P3A-E16A-12.5-13.0	12.5 - 13.0 ft	0.1	-0.4	JB38249-4	JB38249	05/29/2013	remaining	N	Y		0.38	J	
E16A	143-P3A-E16A	12.6	7.5	143-P3A-E16A-14.2-14.7	14.2 - 14.7 ft	-1.6	-2.1	JB38249-3	JB38249	05/29/2013	remaining	N	Y		0.22	J	
E16A	143-P3A-E16A	12.6	7.5	143-P3A-E16A-14.7-15.2	14.7 - 15.2 ft	-2.1	-2.6	JB38249-2	JB38249	05/29/2013	remaining	N	Y		0.34	J	
E17A	143-B6	12.6	7.8	PPG-143-B6D_4.4-4.9_798406	4.4 - 4.9 ft	8.2	7.7	798406	B693	01/09/2007	remaining	N	Y		< 2.36	UJ	
E17A	143-B6	12.6	7.8	PPG-143-B6E_5.5-6.0_799825	5.5 - 6.0 ft	7.1	6.6	799825	B882	01/12/2007	remaining	N	Y		< 2.4	UJ	
E17A	143-B6	12.6	7.8	PPG-143-B6F_6.5-6.9_799826	6.5 - 6.9 ft	6.1	5.7	799826	B882	01/12/2007	remaining	N	Y		< 2.36	UJ	
E17A	143-B6	12.6	7.8	PPG-143-B6G_7.4-7.7_799827	7.4 - 7.7 ft	5.2	4.9	799827	B882	01/12/2007	remaining	N	Y		< 3.03	UJ	
E17A	143-B6	12.6	7.8	PPG-143-B6H_8.5-9.1_799828	8.5 - 9.1 ft	4.1	3.5	799828	B882	01/12/2007	remaining	N	Y		< 2.95	UJ	
E17A	143-B6	12.6	7.8	PPG-143-B6HD_8.5-9.1_799829	8.5 - 9.1 ft	4.1	3.5	799829	B882	01/12/2007	remaining	FD	Y		< 3.28	UJ	
E17A	143-B6	12.6	7.8	PPG-143-B6I_13.7-14.4_799830	13.7 - 14.4 ft	-1.1	-1.8	799830	B882	01/12/2007	remaining	N	Y		< 2.61	UJ	
E17A	143-B6	12.6	7.8	PPG-143-B6J_17.5-18.0_799831	17.5 - 18.0 ft	-4.9	-5.4	799831	B882	01/12/2007	remaining	N	Y		< 9.85	UJ	
E17A	143-B6	12.6	7.8	PPG-143-B6K_18.7-19.3_799832	18.7 - 19.3 ft	-6.1	-6.7	799832	B882	01/12/2007	remaining	N	Y		< 2.56	UJ	
E17A	143-P3A-E17A	12.8	7.8	143-P3A-E17A-10.0-10.5	10.0 - 10.5 ft	2.8	2.3	JB38249-12	JB38249	05/29/2013	remaining	N	Y		< 0.11	U	
E17A	143-P3A-E17A	12.8	7.8	143-P3A-E17A-12.0-12.5	12.0 - 12.5 ft	0.8	0.3	JB38249-11	JB38249	05/29/2013	remaining	N	Y		0.36	J	
E17A	143-P3A-E17A	12.8	7.8	143-P3A-E17A-14.2-14.7	14.2 - 14.7 ft	-1.4	-1.9	JB38249-10	JB38249	05/29/2013	remaining	N	Y		0.21	J	
E17A	143-P3A-E17A	12.8	7.8	143-P3A-E17A-14.7-15.2	14.7 - 15.2 ft	-1.9	-2.4	JB38249-9	JB38249	05/29/2013	remaining	N	Y		0.33	J	
E18A	143-P3A-E18A	12.9	8.8	143-P3A-E18A-4.5-5.0	4.5 - 5.0 ft	8.4	7.9	JB38247-10R	JB38247R	05/29/2013	remaining	N	Y		0.83	RA	
E18A	143-P3A-E18A	12.9	8.8	143-P3A-E18A-6.5-7.0	6.5 - 7.0 ft	6.4	5.9	JB38247-11R	JB38247R	05/29/2013	remaining	N	Y		< 0.098	RA	
E18A	143-P3A-E18A	12.9	8.8	143-P3A-E18A-8.5-9.0	8.5 - 9.0 ft	4.4	3.9	JB38397-18	JB38397	05/30/2013	remaining	N	Y		0.21	J	
E18A	143-P3A-E18A	12.9	8.8	143-P3A-E18A-10.5-11.0	10.5 - 11.0 ft	2.4	1.9	JB38397-19	JB38397	05/30/2013	remaining	N	Y		0.14	J	

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criteria
Site 143, Garfield Avenue Group
PPG, Jersey City, New Jersey

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7, G8)	Sample ID (G9)	Depth Interval (ft bgs) (G10)	Sample Start Elevation (ft NAVD88) (G4, G7, G8, G11)	Sample End Elevation (ft NAVD88) (G4, G12)	Lab ID (G13)	Lab SDG (G13)	Date Collected (G14)	Sample Status (G15)	Sample Type (G16)	Validated (Y/N) (G17)	Matrix (G18)	Analyte CAS RN Units CrSCC CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20		Specific Notes
															Result (G19, G20)	Qualifier (G21, G22)	
E18A	143-P3A-E18A	12.9	8.8	143-P3A-E18A-12.5-13.0	12.5 - 13.0 ft	0.4	-0.1	JB38397-20R	JB38397R	05/30/2013	remaining	N	Y		0.37	J	
E18A	143-P3A-E18A	12.9	8.8	143-P3A-E18A-12.5-13.0X	12.5 - 13.0 ft	0.4	-0.1	JB38397-21R	JB38397R	05/30/2013	remaining	FD	Y		0.67	J	
E18A	143-P3A-E18A	12.9	8.8	143-P3A-E18A-14.5-15.0	14.5 - 15.0 ft	-1.6	-2.1	JB38397-22	JB38397	05/30/2013	remaining	N	Y		0.71	J	
E18A	143-P3A-E18A	12.9	8.8	143-P3A-E18A-15.0-15.5	15.0 - 15.5 ft	-2.1	-2.6	JB38397-23R	JB38397R	05/30/2013	remaining	N	Y		1.2	J	
E19A	143-P3A-E19A	12.9	5.5	143-P3A-E19A-7.0-7.5	7.0 - 7.5 ft	5.9	5.4	JB38247-3	JB38247	05/29/2013	remaining	N	Y		0.19	RA	
E19A	143-P3A-E19A	12.9	5.5	143-P3A-E19A-9.0-9.5	9.0 - 9.5 ft	3.9	3.4	JB38247-4R	JB38247R	05/29/2013	remaining	N	Y		0.90	RA	
E19A	143-P3A-E19A	12.9	5.5	143-P3A-E19A-11.0-11.5	11.0 - 11.5 ft	1.9	1.4	JB38247-5	JB38247	05/29/2013	remaining	N	Y		0.32	RA	
E19A	143-P3A-E19A	12.9	5.5	143-P3A-E19A-13.0-13.5	13.0 - 13.5 ft	-0.1	-0.6	JB38247-6	JB38247	05/29/2013	remaining	N	Y		< 0.12	RA	
E19A	143-P3A-E19A	12.9	5.5	143-P3A-E19A-14.7-15.2	14.7 - 15.2 ft	-1.8	-2.3	JB38247-7	JB38247	05/29/2013	remaining	N	Y		0.20	RA	
E19A	143-P3A-E19A	12.9	5.5	143-P3A-E19A-15.2-15.7	15.2 - 15.7 ft	-2.3	-2.8	JB38247-8	JB38247	05/29/2013	remaining	N	Y		< 0.14	RA	
E20A	143-P3A-E20A	13.3	4.8	143-P3A-E20A-8.5-9.0	8.5 - 9.0 ft	4.8	4.3	JB32034-5R	JB32034R	03/21/2013	remaining	N	Y		6.8	J	
E20A	143-P3A-E20A	13.3	4.8	143-P3A-E20A-10.5-11.0	10.5 - 11.0 ft	2.8	2.3	JB32201-10	JB32201	03/22/2013	remaining	N	Y		0.28	RA	
E20A	143-P3A-E20A	13.3	4.8	143-P3A-E20A-12.5-13.0	12.5 - 13.0 ft	0.8	0.3	JB32034-4R	JB32034R	03/21/2013	remaining	N	Y		< 0.19	UJ	
E20A	143-P3A-E20A	13.3	4.8	143-P3A-E20A-13.8-14.3	13.8 - 14.3 ft	-0.6	-1.1	JB32034-3R	JB32034R	03/21/2013	remaining	N	Y		< 0.18	UJ	
E20A	143-P3A-E20A	13.3	4.8	143-P3A-E20A-14.3-14.8	14.3 - 14.8 ft	-1.1	-1.6	JB32034-2R	JB32034R	03/21/2013	remaining	N	Y		0.36	J	
F15A	143-P3A-F15A	12.8	7.8	143-P3A-F15A-5.0-5.5	5.0 - 5.5 ft	7.8	7.3	JB34017-4	JB34017	04/11/2013	remaining	N	Y		< 0.14	UJ	S2, S17
F15A	143-P3A-F15A	12.8	7.8	143-P3A-F15A-7.0-7.5	7.0 - 7.5 ft	5.8	5.3	JB34017-5	JB34017	04/11/2013	remaining	N	Y		< 0.18	UJ	S2, S17
F15A	143-P3A-F15A	12.8	7.8	143-P3A-F15A-7.0-7.5X	7.0 - 7.5 ft	5.8	5.3	JB34017-7	JB34017	04/11/2013	remaining	FD	Y		< 0.16	UJ	S2, S17
F15A	143-P3A-F15A	12.8	7.8	143-P3A-F15A-9.0-9.5	9.0 - 9.5 ft	3.8	3.3	JB34017-6	JB34017	04/11/2013	remaining	N	Y		0.47	J	S2, S17
F15A	143-P3A-F15A	12.8	7.8	143-P3A-F15A-11.0-11.5	11.0 - 11.5 ft	1.8	1.3	JB34017-8	JB34017	04/11/2013	remaining	N	Y		< 0.34	UJ	S2, S17
F15A	143-P3A-F15A	12.8	7.8	143-P3A-F15A-11.5-12.0	11.5 - 12.0 ft	1.3	0.8	JB34017-9R	JB34017R	04/11/2013	remaining	N	Y		0.24	J	S2, S17
F16A	143-P3A-F16A	12.6	7.6	143-P3A-F16A-5.0-5.5	5.0 - 5.5 ft	7.6	7.1	JB37963-18R	JB37963R	05/24/2013	remaining	N	Y		0.50	RA	
F16A	143-P3A-F16A	12.6	7.6	143-P3A-F16A-6.7-7.2	6.7 - 7.2 ft	5.9	5.4	JB37963-1	JB37963	05/24/2013	remaining	N	Y		0.16	RA	
F16A	143-P3A-F16A	12.6	7.6	143-P3A-F16A-8.7-9.2	8.7 - 9.2 ft	3.9	3.4	JB37963-2	JB37963	05/24/2013	remaining	N	Y		0.18	RA	
F16A	143-P3A-F16A	12.6	7.6	143-P3A-F16A-10.7-11.2	10.7 - 11.2 ft	1.9	1.4	JB37963-3	JB37963	05/24/2013	remaining	N	Y		0.15	RA	
F16A	143-P3A-F16A	12.6	7.6	143-P3A-F16A-12.7-13.2	12.7 - 13.2 ft	-0.1	-0.6	JB37963-4	JB37963	05/24/2013	remaining	N	Y		0.12	RA	
F16A	143-P3A-F16A	12.6	7.6	143-P3A-F16A-13.5-14.0	13.5 - 14.0 ft	-0.9	-1.4	JB37963-5	JB37963	05/24/2013	remaining	N	Y		< 0.12	RA	
F16A	143-P3A-F16A	12.6	7.6	143-P3A-F16A-14.0-14.5	14.0 - 14.5 ft	-1.4	-1.9	JB37963-6	JB37963	05/24/2013	remaining	N	Y		< 0.14	RA	
F17A	143-F17A-PB	12.3	7.4	143-F17A-PB-4.9-5.4	4.9 - 5.4 ft	7.4	6.9	JB72243-2	JB72243	07/22/2014	remaining	N	Y		< 0.26	UJ	
F17A	143-P3A-F17A	12.3	7.4	143-P3A-F17A-6.8-7.3	6.8 - 7.3 ft	5.5	5.0	JB37963-7R	JB37963R	05/24/2013	remaining	N	Y		0.84	RA	
F17A	143-P3A-F17A	12.3	7.4	143-P3A-F17A-8.8-9.3	8.8 - 9.3 ft	3.5	3.0	JB37963-8	JB37963	05/24/2013	remaining	N	Y		0.46	RA	
F17A	143-P3A-F17A	12.3	7.4	143-P3A-F17A-10.8-11.3	10.8 - 11.3 ft	1.5	1.0	JB37963-9	JB37963	05/24/2013	remaining	N	Y		< 0.12	RA	
F17A	143-P3A-F17A	12.3	7.4	143-P3A-F17A-12.0-12.5	12.0 - 12.5 ft	0.3	-0.2	JB37963-10	JB37963	05/24/2013	remaining	N	Y		0.11	RA	
F17A	143-P3A-F17A	12.3	7.4	143-P3A-F17A-14.0-14.5	14.0 - 14.5 ft	-1.7	-2.2	JB37963-11	JB37963	05/24/2013	remaining	N	Y		0.50	RA	
F17A	143-P3A-F17A	12.3	7.4	143-P3A-F17A-14.5-15.0	14.5 - 15.0 ft	-2.2	-2.7	JB37963-12	JB37963	05/24/2013	remaining	N	Y		< 0.16	RA	
F17A	EF-32	12.3	7.4	EF-B32-6.0	6.0 - 6.5 ft	6.3	5.8	460-25657-20	460256571	04/21/2011	remaining	N	Y		< 0.63	UJ	
F17A	EF-32	12.3	7.4	EF-B32-10.5	10.5 - 11.0 ft	1.8	1.3	460-25657-21	460256571	04/21/2011	remaining	N	Y		< 0.75	UJ	
F18A	143-F18A-PB	12.4	6.5	143-F18A-PB-5.9-6.4	5.9 - 6.4 ft	6.5	6.0	JB72243-3R	JB72243R	07/22/2014	remaining	N	Y		3.8	J	
F18A	143-P3A-F18A	12.4	6.5	143-P3A-F18A-6.5-7.0	6.5 - 7.0 ft	5.9	5.4	JB38022-2	JB38022	05/24/2013	remaining	N	Y		0.79	RA	
F18A	143-P3A-F18A	12.4	6.5	143-P3A-F18A-6.5-7.0X	6.5 - 7.0 ft	5.9	5.4	JB38022-3	JB38022	05/24/2013	remaining	FD	Y		1.5	RA	
F18A	143-P3A-F18A	12.4	6.5	143-P3A-F18A-8.5-9.0	8.5 - 9.0 ft	3.9	3.4	JB38022-4	JB38022	05/24/2013	remaining	N	Y		0.35	RA	
F18A	143-P3A-F18A	12.4	6.5	143-P3A-F18A-10.5-11.0	10.5 - 11.0 ft	1.9	1.4	JB38022-5	JB38022	05/24/2013	remaining	N	Y		0.10	RA	
F18A	143-P3A-F18A	12.4	6.5	143-P3A-F18A-12.5-13.0	12.5 - 13.0 ft	-0.1	-0.6	JB38022-6	JB38022	05/24/2013	remaining	N	Y		0.20	RA	
F18A	143-P3A-F18A	12.4	6.5	143-P3A-F18A-14.4-14.9	14.4 - 14.9 ft	-2.0	-2.5	JB38022-7	JB38022	05/24/2013	remaining	N	Y		0.13	RA	

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criteria
Site 143, Garfield Avenue Group
PPG, Jersey City, New Jersey

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7, G8)	Sample ID (G9)	Depth Interval (ft bgs) (G10)	Sample Start Elevation (ft NAVD88) (G4, G7, G8, G11)	Sample End Elevation (ft NAVD88) (G4, G12)	Lab ID (G13)	Lab SDG (G13)	Date Collected (G14)	Sample Status (G15)	Sample Type (G16)	Validated (Y/N) (G17)	Matrix (G18)	Analyte CAS RN Units CrSCC		Specific Notes
															CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20	Result (G19, G20) Qualifier (G21, G22)	
F18A	143-P3A-F18A	12.4	6.5	143-P3A-F18A-14.9-15.4	14.9 - 15.4 ft	-2.5	-3.0	JB38022-8	JB38022	05/24/2013	remaining	N	Y		0.19	RA	
F19A	143-B7	12.4	6.3	PPG-143-B7E_5.9-6.6_799371	5.9 - 6.6 ft	6.5	5.8	799371	B818	01/11/2007	remaining	N	Y		2.9	J	S18
F19A	143-B7	12.4	6.3	PPG-143-B7F_6.9-9.4_799353	6.9 - 9.4 ft	5.5	3.0	799353	B818	01/11/2007	remaining	N	Y		< 2.39	UJ	S18
F19A	143-B7	12.4	6.3	PPG-143-B7G_8.5-10.3_799354	8.5 - 10.3 ft	3.9	2.1	799354	B818	01/11/2007	remaining	N	Y		< 3.15	UJ	S18
F19A	143-B7	12.4	6.3	PPG-143-B7H_13.1-13.7_799355	13.1 - 13.7 ft	-0.7	-1.3	799355	B818	01/11/2007	remaining	N	Y		< 4.63	UJ	S18
F19A	143-B7	12.4	6.3	PPG-143-B7I_18.0-18.9_799356	18.0 - 18.9 ft	-5.6	-6.5	799356	B818	01/11/2007	remaining	N	Y		< 2.53	UJ	S18
F19A	143-P3A-F19A	12.3	6.3	143-P3A-F19A-16.0-16.5	16.0 - 16.5 ft	-3.7	-4.2	JB38022-9	JB38022	05/24/2013	remaining	N	Y		0.25	RA	S18
F19A	143-P3A-F19A	12.3	6.3	143-P3A-F19A-16.5-17.0	16.5 - 17.0 ft	-4.2	-4.7	JB38022-10R	JB38022R	05/24/2013	remaining	N	Y		5.5	RA	S18
F20A	143-F20A-PB	12.6	6.2	143-F20A-PB-6.6-7.1	6.6 - 7.1 ft	6.0	5.5	JB72763-2	JB72763	07/28/2014	remaining	N	Y		2.0	J	S19
F20A	143-P3A-F20A	12.6	6.2	143-P3A-F20A-6.5-7.0	6.5 - 7.0 ft	6.1	5.6	JB32034-14R	JB32034R	03/21/2013	remaining	N	Y		0.17	J	S19
F20A	143-P3A-F20A	12.6	6.2	143-P3A-F20A-8.5-9.0	8.5 - 9.0 ft	4.1	3.6	JB32034-12R	JB32034R	03/21/2013	remaining	N	Y		0.20	J	S19
F20A	143-P3A-F20A	12.6	6.2	143-P3A-F20A-10.5-11.0	10.5 - 11.0 ft	2.1	1.6	JB32034-13R	JB32034R	03/21/2013	remaining	N	Y		0.20	J	S19
F20A	143-P3A-F20A	12.6	6.2	143-P3A-F20A-12.5-13.0	12.5 - 13.0 ft	0.1	-0.4	JB32034-11R	JB32034R	03/21/2013	remaining	N	Y		0.33	J	S19
F20A	143-P3A-F20A	12.6	6.2	143-P3A-F20A-14.5-15.0	14.5 - 15.0 ft	-1.9	-2.4	JB32034-10R	JB32034R	03/21/2013	remaining	N	Y		0.26	J	S19
F20A	143-P3A-F20A	12.6	6.2	143-P3A-F20A-15.0-15.5	15.0 - 15.5 ft	-2.4	-2.9	JB32034-9R	JB32034R	03/21/2013	remaining	N	Y		1.0	J	S19

Table 5-1
Cr⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criteria
Site 143, Garfield Avenue Group
PPG, Jersey City, New Jersey

ABBREVIATIONS:

bgs - below ground surface
CAS RN - Chemical Abstracts Service Registry Number
CCPW - Chromate Chemical Production Waste
Chromium Policy - Memorandum from NJDEP Commissioner Lisa P. Jackson to Irene Kropp, Subject: Chromium Moratorium (Chromium Policy), dated February 8, 2007
COPR - Chromite Ore Processing Residue
Cr - chromium
Cr⁶ - hexavalent chromium
CrSCC - Chromium Soil Cleanup Criteria
El. - elevation
FD - field duplicate sample type
ft - feet
LSRP - Licensed Site Remediation Professional
Method to Determine Compliance - Letter from Mr. Thomas Cozzi to W. Michael McCabe, Subject: Re: Updated Method to Determine Compliance with the Department's Chromium Policy, Garfield Avenue – Sites 114, 132, 133, 135, 137, and 143, Jersey City, NJ. August 13, 2013
mg/kg - milligrams per kilogram
N - normal sample type
NAVD88 - North American Vertical Datum of 1988
NE - not excavated
NJDEP - New Jersey Department of Environmental Protection
PDI - Pre-Design Investigation
SDG - sample delivery group
TEE - terminal excavation elevation
USCS - Unified Soil Classification System

MATRICES:

FILL - fill
MM - meadow mat
UND - undisturbed native deposit
UNDno - non-organic undisturbed native deposit
UNDorg - organic undisturbed native deposit

USCS Classifications:

SM - silty sand

QUALIFIERS:

J - The result was an estimated value; the associated numerical value was an approximate concentration of the analyte in the sample.
RA - The result was rejected due to deficiencies but is considered usable for decision making-purposes.
U - The analyte was not detected above the sample reporting limit shown.
UJ - The analyte was not detected above the sample reporting limit shown and the reporting limit was approximate.

GENERAL NOTES:

G1. "Grid ID" refers to an area, typically 30 ft by 30 ft, identified as Grid Rows A' through F (extending west to east) and Grid Columns 20A through 15A (extending from south to north).
G2. "Location ID" refers to the location name where samples were collected.
G3. "Location Elevation" refers to the pre-remediation surface elevation for samples collected from the pit bottom, and the surface elevation of the sample location when the sample was collected via boring or test pit.
G4. Elevation vertical datum is NAVD88, in U.S. survey ft.
G5. For some borings, the Location Elevations presented in this table were revised compared to the Location Elevations used in the proposed TEE Technical Memoranda. The revisions were based on a review of available survey data for individual locations, site-wide topographical surveys, and field notes to provide the most accurate and representative ground surface elevations. In addition, ground surface elevations for borings advanced prior to 2011 were reviewed and, if necessary, converted from the site-specific vertical datum used prior to 2011 into NAVD88.
G6. "As-built TEE" refers to the pit bottom elevation of the grid. However, a grid may be split and have two as-built TEEs. For grids affected by the 2017 re-excavation activities, the as-built TEE presented was interpolated from the 2017 post-excavation survey points and 1-ft post-excavation contours representing the as-built TEEs.
G7. In some grids, the sample start elevation of the clean confirmation pit bottom sample (typically designated by "PB" in the Location ID) and the as-built TEE are slightly different (typically 0.5 ft or less) because separate elevation measurements were taken for the pit bottom sample and the as-built TEE.
G8. In some grids, the clean confirmation sample was collected prior to excavation and, therefore, a pit bottom sample was not collected. As a result, the clean confirmation sample elevation may vary from the as-built TEE. In addition, sometimes the clean confirmation sample was removed during excavation.
G9. "Sample ID" refers to the name of a sample collected at a given location and is unique to the depth of the sample collected. The depth listed in the Sample ID may not necessarily correspond to the actual sample depth interval due to corrections made as a result of post-field work review of surveyed surface elevations and/or boring logs.
G10. "Depth Interval" is based on the "Location Elevation."
G11. "Sample Start Elevation" refers to the start of the sample interval. There may be up to 0.1 ft variation between the listed Sample Start Elevation and the elevation calculated using the Location Elevation and Depth Interval due to rounding of the numbers.
G12. "Sample End Elevation" refers to the end of the sample interval. There may be up to 0.1 ft variation between the listed Sample End Elevation and the elevation calculated using the Location Elevation and Depth Interval due to rounding of the numbers.
G13. "Lab ID" refers to the identification number assigned to the sample by the analytical laboratory performing the sample analysis. "Lab SDG" refers to the delivery group number assigned to the sample by the analytical laboratory.
G14. "Date Collected" refers to the date the soil sample was collected.

Table 5-1
Cr⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criteria
Site 143, Garfield Avenue Group
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G15. "Sample Status" indicates whether a sample is remaining or removed:

- "Remaining" indicates the soil in that interval is outside the excavation footprint, and remains in-place at that location; and
- "Removed" indicates the sample was removed during excavation.

G16. "Sample Type" indicates whether the sample type is normal (N) or a field duplicate (FD).

G17. "Y" indicates that a sample underwent data validation and "N" indicates that data validation was not conducted.

G18. For samples with Cr⁶ CrSCC exceedances, the USCS Classification is provided. Where the sample was collected above 20 ft bgs, the unit (e.g., MM, UND, UNDno, UNDorg, or FILL) is also specified.

G19. "Result" refers to the analytical result which is reported in mg/kg.

G20. Bold text indicates that the result exceeds the CrSCC. Non-bold text indicates that the result does not exceed the CrSCC.

G21. "Qualifier" refers to the data qualifier assigned by the data validation team reviewing the data from the laboratory for validated data. For unvalidated data, it refers to the qualifier assigned by the laboratory.

G22. Non-detect results are shown on this table using the Method Detection Limit, if available; otherwise they are shown at the Reporting Limit.

SPECIFIC NOTES:

S1. In Grids A'15A, A'16A, A'17A, A'18A, A'19A, and A'20A, boring and/or sidewall samples collected from the Clean Corridor excavation along the Garfield Avenue right-of-way were used in the evaluation of compliance for the portions of these grids located within Site 143. The sidewall samples (designated by "SW" in the Location ID) have a Sample Status of "remaining" because these samples were collected post-excavation. Additional samples west of the Clean Corridor, within the Garfield Avenue right-of-way, were included to further document compliance.

S2. Within Site 143, Grids A'15A, A15A, A16A, B15A, B16A, B17A, C15A, C16A, C17A, D15A, D16A, D17A, and portions of Grids E15A and F15A were re-excavated in 2017. Figure 5-1 shows the post-excavation pit bottom survey points and 1-ft post-excavation contours representing the 2017 as-built pit bottom elevations. As shown on Figure 5-1:

- Excavation in Grid A'15A was extended to the Site 143 northern property line and to the proposed TEE.
- Excavation in Grids A15A, B15A, C15A, and D15A was extended to the Site 143 northern property line and to sufficient depths to remove observed CCPW material.
- Excavation in Grids E15A and F15A was extended to the Site 143 northern property line at their original as-built TEEs.
- Excavation was extended into Grids A16A, B16A, B17A, C16A, C17A, D16A, and D17A to determine the limits of, and remove, the former building footer.
- Portions of Grids B17A and C17A were not re-excavated below the original as-built TEEs from 2014, and the re-excavated portions of Grids D16A and D17A did not extend below the original as-built TEEs.

For sample locations within the portions of the 2017 excavation that extended deeper than the original 2014 excavation, the as-built TEEs presented on this table were updated to reflect the 2017 as-built pit bottom elevations at the specific sample locations, as shown on Figure 5-1.

S3. Partial Grid A'15A was excavated to an as-built TEE of El. 8.8 ft NAVD88. Sample 143-P3A-A'16A-2.5-3.0 (El. 10.1 to 9.6 ft NAVD88) and its field duplicate sample from adjacent Grid A'16A serve as the confirmation pit bottom sample for the portion of Grid A'15A that was excavated as part of Site 143. In addition, samples from location EF-35 in Grid A'15A in the Garfield Avenue right-of-way were used in the evaluation of compliance for the portion of this grid located within Site 143. Sample EF-B35-4.0 (El. 8.1 to 7.6 ft NAVD88) is the closest sample below the Grid A'15A as-built TEE. Excavation was conducted based the clean confirmation sample elevation to the TEE originally proposed in *PPG Sites 132 and 143, Excavation Depths in Phase 3A, Priority Grids; Rows A'-M, Columns 15A-30A* (AECOM, 06/19/2013) and *Response to Weston's 7/10/13 Comments on "PPG Sites 132 and 143, Excavation Depths in Phase 3A, Priority Grids; Rows A'-M, Columns 15A-30A"* (AECOM 09/06/2013). For partial Grid A'16A, the Cr⁶ clean confirmation sample 143-P3A-A'16A-2.5-3.0 (El. 10.1 to 9.6 ft NAVD88) and its field duplicate sample were taken above the visually clean as-built pit bottom at El. 9.0 ft NAVD88. This grid was excavated deeper than the clean confirmation sample to accommodate the placement of a clean fill cap (engineering control) for non-Cr⁶ parameters under the LSRP program. The closest sample below the as-built TEE is sample 143-P3A-A'16A-4.5-5.0 (El. 8.1 to 7.6 ft NAVD88) and its Cr⁶ concentration was less than the CrSCC.

S4. In partial Grid A'18A, the Cr⁶ clean confirmation pit bottom sample 143-A'18A-PB-2.2-2.7 (El. 10.6 to 10.1 ft NAVD88) was taken above the visually clean as-built pit bottom at El. 9.2 ft NAVD88. This grid was excavated deeper than the clean confirmation sample to accommodate the placement of a clean fill cap (engineering control) for non-Cr⁶ parameters under the LSRP program. The next closest sample to the as-built TEE is PDI sample 143-P3A-A'18A-8.0-8.5 (El. 4.8 to 4.3 ft NAVD88) and its Cr⁶ concentration was less than the CrSCC.

S5. Partial Grid A'20A was excavated to the same elevation as adjacent Grid A'19A. Sample PPG-143-B2E_5.0-5.5_798765 (El. 7.7 to 7.2 ft NAVD88) from Grid A'19A serves as the confirmation pit bottom sample for the portion of Grid A'20A that was excavated in Site 143.

S6. For Grid A16A, the Cr⁶ clean confirmation sample 143-P3A-A16A-6.0-6.5 (El. 8.4 to 7.9 ft NAVD88) was taken above the visually clean as-built pit bottom at El. 7.5 ft NAVD88. This grid was excavated in 2017 deeper than the clean confirmation sample to remove the former building footer. The closest sample below the as-built TEE is sample 143-P3A-A16A-8.0-8.5 (El. 6.4 to 5.9 ft NAVD88) and its Cr⁶ concentration was less than the CrSCC.

S7. Grid A20A was excavated as a split grid with two distinct as-built TEEs.

S8. For Grid B16A, the Cr⁶ clean confirmation sample 143-P3A-B16A-4.5-5.0 (El. 8.8 to 8.3 ft NAVD88) was taken above the visually clean as-built pit bottom at El. 7.7 ft NAVD88. This grid was excavated in 2017 deeper than the clean confirmation sample to remove the former building footer. The closest sample below the as-built TEE is sample 143-P3A-B16A-6.5-7.0 (El. 6.8 to 6.3 ft NAVD88) and its Cr⁶ concentration was less than the CrSCC.

S9. In Grid B16A, the Cr⁶ result for sample 143-P3A-MW1011-25.0-25.5 (El. -14.1 to -14.6 ft NAVD88) was 83.7 J mg/kg which is greater than 20 mg/kg but in compliance with the Chromium Policy per the Method to Determine Compliance because the sample is: 1) in UNDno with no CCPW observed, 2) greater than 20 ft deep, 3) fine grained (SM), and 4) less than 1,000 mg/kg.

S10. In Grid B17A, as discussed in Specific Note S2 and shown on Figure 5-1, the northeastern portion of this grid was not re-excavated in 2017 below the original as-built TEE of El. 9.0 ft NAVD88. Therefore, removed sample 143-P3A-B17A-4.0-4.5 (El. 9.3 to 8.8 ft NAVD88) serves as the clean confirmation sample for the northeastern portion of Grid B17A.

S11. For Grid B20A, the Cr⁶ clean confirmation sample 143-P3A-B20A-2.5-3.0 (El. 10.4 to 9.9 ft NAVD88) was taken above the visually clean as-built pit bottom at El. 9.0 ft NAVD88. This grid was excavated deeper than the clean confirmation sample to accommodate the placement of a clean fill cap (engineering control) for non-Cr⁶ parameters under the LSRP program. The closest sample below the as-built TEE is sample 143-P3A-B20A-4.5-5.0 (El. 8.4 to 7.9 ft NAVD88) and its Cr⁶ concentration was less than the CrSCC.

S12. For Grid C16A, the Cr⁶ clean confirmation sample 143-P3A-C16A-4.0-4.5 (El. 9.0 to 8.5 ft NAVD88) and its field duplicate sample were taken above the visually clean as-built pit bottom at El. 7.8 ft NAVD88. This grid was excavated in 2017 deeper than the clean confirmation sample to remove the former building footer. The closest sample below the as-built TEE is sample 143-P3A-C16A-6.0-6.5 (El. 7.0 to 6.5 ft NAVD88) and its Cr⁶ concentration was less than the CrSCC.

Table 5-1
Cr⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criteria
Site 143, Garfield Avenue Group
PPG, Jersey City, New Jersey

- S13. In Grid C17A, as discussed in Specific Note S2 and shown on Figure 5-1, the northern portion of this grid was not re-excavated in 2017 below the original as-built TEE of El. 9.1 ft NAVD88. Therefore, post-excavation pit bottom sample 143-C17A-PB-4.3-4.8 (El. 8.7 to 8.2 ft NAVD88) serves as the clean confirmation sample for the northern portion of Grid C17A.
- S14. For Grid C19A, the Cr⁶ clean confirmation sample 143-P3A-C19A-6.0-6.3 (El. 7.0 to 6.7 ft NAVD88) was taken above the visually clean as-built pit bottom at El. 6.4 ft NAVD88. The field notes identified this sample as the compliance sample for this grid; however, the Location Elevation of this PDI boring was revised based on recently identified survey data (see General Note G5) resulting in a change in the sample's elevation. The closest sample below the as-built TEE is 143-P3A-C19A-8.0-8.5 (El. 5.0 to 4.5 ft NAVD88). The Cr⁶ sample results from this boring were less than the CrSCC.
- S15. In partial Grid D15A, samples collected from the Carteret Avenue right-of-way were used in the evaluation of compliance for the portion of this grid located within Site 143 that was excavated to an as-built TEE of El. 6.5 ft NAVD88. Samples above this elevation from Grid D15A outside of Site 143 are not included on this table. Sample PPG-143-B5E_6.5-7.0_799362 (El. 6.4 to 5.9 ft NAVD88) serves as the clean confirmation sample for the portion of Grid D15A in Site 143.
- S16. Partial Grid E15A was excavated to the same elevation as adjacent Grid E16A. Sample 143-P3A-E16A-5.0-5.5 (El. 7.6 to 7.1 ft NAVD88) from Grid E16A serves as the confirmation pit bottom sample for the portion of Grid E15A that was excavated as part of Site 143.
- S17. In partial Grid F15A, samples collected from the Carteret Avenue right-of-way were used in the evaluation of compliance for the portion of this grid located within Site 143 that was excavated to an as-built TEE of El. 7.8 ft NAVD88. Samples above this elevation from Grid F15A outside of Site 143 are not included on this table. Sample 143-P3A-F15A-5.0-5.5 (El. 7.8 to 7.3 ft NAVD88) serves as the clean confirmation sample for the portion of Grid F15A in Site 143.
- S18. In partial Grid F19A, samples collected from Site 132 were used in the evaluation of compliance for the portion of this grid located within Site 143 that was excavated to an as-built TEE of El. 6.3 ft NAVD88. Sample PPG-143-B7E_5.9-6.6_799371 (El. 6.5 to 5.8 ft NAVD88) serves as the clean confirmation sample for the portion of Grid F19A in Site 143.
- S19. In partial Grid F20A, samples collected from Site 132 were used in the evaluation of compliance for the portion of this grid located within Site 143. The whole grid was excavated to an as-built TEE of El. 6.2 ft NAVD88 and post-excavation pit bottom sample 143-F20A-PB-6.6-7.1 (El. 6.0 to 5.5 ft NAVD88), located on the Site 132 portion of the grid, serves as the clean confirmation sample for the whole grid.

Table 5-2
CCPW Metals Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Site 143, Garfield Avenue Group
PPG, Jersey City, New Jersey

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7)	Sample ID (G8)	Depth Interval (ft bgs) (G9)	Sample Start Elevation (ft NAVD88) (G4, G7, G10)	Sample End Elevation (ft NAVD88) (G4, G11)	Lab ID (G12)	Lab SDG (G12)	Date Collected (G13)	Sample Status (G14)	Sample Type (G15)	Validated (Y/N) (G16)	Analyte CAS RN Units RDCSRS-GAG NRDCSRS		ANTIMONY 7440-36-0 mg/kg 31 N/A 450		CHROMIUM 7440-47-3 mg/kg 120000 N/A N/A		NICKEL 7440-02-0 mg/kg 1600 N/A 23000		THALLIUM 7440-28-0 mg/kg N/A N/A N/A		VANADIUM 7440-62-2 mg/kg N/A 390 1100		Specific Notes
														Result (G17, G18)	Qualifier (G19, G20)	Result (G17, G21)	Qualifier (G19, G20)	Result (G17, G18)	Qualifier (G19, G20)	Result (G17, G18)	Qualifier (G19, G20)	Result (G17, G18)	Qualifier (G19, G20)	Result (G17, G18)	Qualifier (G19, G20)	
C'16A	EF-36	14.0	NE	EF-B36-2.5	2.5 - 3.0 ft	11.5	11.0	460-25705-22	460257051	04/22/2011	remaining	N	Y	< 1.1	U	12.3		8.8	J	< 1.2	U	17.7	J			
C'16A	EF-36	14.0	NE	EF-B36-7.5	7.5 - 8.0 ft	6.5	6.0	460-25760-22	460257601	04/25/2011	remaining	N	Y	< 0.99	UJ	12.4		8.9	J	< 1.1	U	18.8			S1	
C'16A	EF-36	14.0	NE	EF-B36-7.5X	7.5 - 8.0 ft	6.5	6.0	460-25760-23	460257601	04/25/2011	remaining	FD	Y	< 1.0	UJ	13.5		9.7		< 1.1	U	20.4			S1	
C'16A	EF-36	14.0	NE	EF-B36-12.0	12.0 - 12.5 ft	2.0	1.5	460-25760-24	460257601	04/25/2011	remaining	N	Y	< 1.0	UJ	14.9		11.0		< 1.1	U	23.1			S1	
C'16A	EF-36	14.0	NE	EF-B36-15.5	15.5 - 16.0 ft	-1.5	-2.0	460-25760-25	460257601	04/25/2011	remaining	N	Y	< 0.92	UJ	17.2		11.5		< 1.0	U	25.7			S1	
C'16A	EF-36	14.0	NE	EF-B36-20.0	20.0 - 20.5 ft	-6.0	-6.5	460-25760-26	460257601	04/25/2011	remaining	N	Y	< 0.93	UJ	14.4		7.6	J	< 1.0	U	18.5			S1	
A'15A	143-A'15A-SW	12.4	8.8	143-A'15A-SW-0.4-0.9	0.4 - 0.9 ft	12.0	11.5	JB73945-3A	JB73945A	08/13/2014	remaining	N	Y	0.30	J	30.7		15.2		< 0.44	U	26.2			S1, S2	
A'15A	143-A'15A-SW	12.4	8.8	143-A'15A-SW-2.4-2.9	2.4 - 2.9 ft	10.0	9.5	JB73945-4A	JB73945A	08/13/2014	remaining	N	Y	0.37	J	37.2		14.7		< 0.45	U	29.6			S1, S2	
A'15A	EF-35	12.1	NE	EF-B35-2.5	2.5 - 3.0 ft	9.6	9.1	460-25657-35	460256571	04/21/2011	remaining	N	Y	< 1.0	U	18.4		11.9		< 1.1	U	28.9	J		S1, S2	
A'15A	EF-35	12.1	NE	EF-B35-13.0	13.0 - 13.5 ft	-0.9	-1.4	460-25705-15	460257051	04/22/2011	remaining	N	Y	< 0.95	U	19.4		15.6		< 1.0	U	28.1	J		S1, S2	
A'15A	EF-35	12.1	NE	EF-B35-13.0X	13.0 - 13.5 ft	-0.9	-1.4	460-25705-16	460257051	04/22/2011	remaining	FD	Y	< 0.98	U	24.4		18.4		< 1.1	U	35.5	J		S1, S2	
A'15A	EF-35	12.1	NE	EF-B35-16.0	16.0 - 16.5 ft	-3.9	-4.4	460-25705-17	460257051	04/22/2011	remaining	N	Y	< 1.1	U	9.3		8.1	J	< 1.2	U	17.1	J		S1, S2	
A'15A	EF-35	12.1	NE	EF-B35-20.0	20.0 - 20.5 ft	-7.9	-8.4	460-25705-18	460257051	04/22/2011	remaining	N	Y	< 0.97	U	18.6		8.5	J	< 1.1	U	30.2	J		S1, S2	
A'16A	143-A'16A-SW	12.6	9.0	143-A'16A-SW-0.6-1.1	0.6 - 1.1 ft	12.0	11.5	JB73945-1A	JB73945A	08/13/2014	remaining	N	Y	0.43	J	76.1		19.5		< 0.48	U	41.0			S1	
A'16A	143-A'16A-SW	12.6	9.0	143-A'16A-SW-3.1-3.6	3.1 - 3.6 ft	9.5	9.0	JB73945-2A	JB73945A	08/13/2014	remaining	N	Y	0.47	J	76.0		18.2		< 0.46	U	32.5			S1	
A'17A	143-A'17A-PB2	12.6	8.6	143-A'17A-PB-7.0-7.5	7.0 - 7.5 ft	5.6	5.1	JB64091-1	JB64091	04/01/2014	remaining	N	Y	133		78.6		24.0		< 0.37	U	26.5			S3	
A'17A	143-A'17A-SW1	12.6	8.6	143-A'17A-SW1-0.1-0.6	0.1 - 0.6 ft	12.5	12.0	JB74945-1	JB74945	08/25/2014	remaining	N	Y	< 0.28	U	23.7		17.0		< 0.42	U	31.1			S1	
A'17A	143-A'17A-SW1	12.6	8.6	143-A'17A-SW1-1.3-1.8	1.3 - 1.8 ft	11.3	10.8	JB74945-2	JB74945	08/25/2014	remaining	N	Y	< 0.29	U	36.5		13.5		< 0.44	U	22.7			S1	
A'17A	143-A'17A-SW1	12.6	8.6	143-A'17A-SW1-3.3-3.8	3.3 - 3.8 ft	9.3	8.8	JB74945-3	JB74945	08/25/2014	remaining	N	Y	< 0.31	U	39.2		15.2		< 0.47	U	27.5			S1	
A'17A	143-B1	12.6	8.6	PPG-143-B1C_5.0-5.5_798759	5.0 - 5.5 ft	7.6	7.1	798759	B748	01/10/2007	remaining	N	Y	< 1.3	UJ	39.4	J	8.8	J	< 1.2	U	18.4	J			
A'17A	143-B1	12.6	8.6	PPG-143-B1D_8.6-9.1_798760	8.6 - 9.1 ft	4.0	3.5	798760	B748	01/10/2007	remaining	N	Y	< 1.3	UJ	24.7	J	16.2	J	< 1.2	U	17.8	J			
A'17A	143-B1	12.6	8.6	PPG-143-B1E_9.1-10.6_798761	9.1 - 10.6 ft	3.5	2.0	798761	B748	01/10/2007	remaining	N	Y	< 1.3	UJ	14.5	J	12.7	J	< 1.2	U	20.4	J			
A'17A	143-B1	12.6	8.6	PPG-143-B1ED_9.1-10.6_798762	9.1 - 10.6 ft	3.5	2.0	798762	B748	01/10/2007	remaining	FD	Y	< 1.2	UJ	12.3	J	8.9	J	< 1.2	U	19.3	J			
A'18A	143-A'18A-SW1	12.8	9.2	143-A'18A-SW1-0.4-0.9	0.4 - 0.9 ft	12.4	11.9	JB74945-4	JB74945	08/25/2014	remaining	N	Y	< 0.29	U	45.9		56.3		< 0.44	U	35.1			S1	
A'18A	143-A'18A-SW1	12.8	9.2	143-A'18A-SW1-2.4-2.9	2.4 - 2.9 ft	10.4	9.9	JB74945-5	JB74945	08/25/2014	remaining	N	Y	< 0.31	U	39.9		14.5		< 0.47	U	29.4			S1	
A'18A	143-A'18A-SW1	12.8	9.2	143-A'18A-SW1-3.1-3.6	3.1 - 3.6 ft	9.7	9.2	JB74945-6	JB74945	08/25/2014	remaining	N	Y	< 0.28	U	28.6		12.1		< 0.42	U	22.5			S1	
A'18A	EF-34	12.4	NE	EF-B34-2.5	2.5 - 3.0 ft	9.9	9.4	460-25705-26	460257051	04/22/2011	remaining	N	Y	< 1.0	U	38.9		15.5		< 1.1	U	30.6	J		S1	
A'18A	EF-34	12.4	NE	EF-B34-7.5	7.5 - 8.0 ft	4.9	4.4	460-25760-14	460257601	04/25/2011	remaining	N	Y	< 1.1	UJ	13.0		9.3	J	< 1.2	U	20.9			S1	
A'18A	EF-34	12.4	NE	EF-B34-12.0	12.0 - 12.5 ft	0.4	-0.1	460-25760-17	460257601	04/25/2011	remaining	N	Y	< 1.1	UJ	11.5		7.8	J	< 1.2	U	16.0			S1	
A'18A	EF-34	12.4	NE	EF-B34-16.5	16.5 - 17.0 ft	-4.1	-4.6	460-25760-19	460257601	04/25/2011	remaining	N	Y	< 0.99	UJ	15.5		11.6		< 1.1	U	20.2			S1	
A'18A	EF-34	12.4	NE	EF-B34-22.5	22.5 - 23.0 ft	-10.1	-10.6	460-25760-20	460257601	04/25/2011	remaining	N	Y	< 0.97	UJ	38.9		14.6		< 1.1	U	14.4			S1	
A'19A	143-A'19A-SW1	12.5	7.3	143-A'19A-SW1-0.5-1.0	0.5 - 1.0 ft	12.0	11.5	JB74996-1	JB74996	08/26/2014	remaining	N	Y	0.66	J	22.5		28.7		< 0.45	U	20.1			S1	
A'19A	143-A'19A-SW1	12.5	7.3	143-A'19A-SW1-2.5-3.0	2.5 - 3.0 ft	10.0	9.5	JB74996-2	JB74996	08/26/2014	remaining	N	Y	0.52	J	20.2		12.1		< 0.49	U	28.4			S1	
A'19A	143-A'19A-SW1	12.5	7.3	143-A'19A-SW1-4.5-5.0	4.5 - 5.0 ft	8.0	7.5	JB74996-3	JB74996	08/26/2014	remaining	N	Y	0.65	J	67.6		16.3		< 0.49	U	38.1			S1	
A'19A	143-B2	12.7	7.3	PPG-143-B2E_5.0-5.5_798765	5.0 - 5.5 ft	7.7	7.2	798765	B748	01/10/2007	remaining	N	Y	< 1.2	UJ	34.5	J	10.4	J	< 1.2	U	25.4	J			
A'19A	143-B2	12.7	7.3	PPG-143-B2F_8.1-8.6_798766	8.1 - 8.6 ft	4.6	4.1	798766	B748	01/10/2007	remaining	N	Y	< 1.3	UJ	14.6	J	9.8	J	< 1.3	U	21.1	J			
A'19A	EF-120	12.5	NE	EF-B120-0.5-1.0	0.5 - 1.0 ft	12.0	11.5	JB15252-9	JB15252	08/31/2012	remaining	N	Y					14.8				30.4			S1	
A'19A	EF-120	12.5	NE	EF-B120-0.5-1.0X	0.5 - 1.0 ft	12.0	11.5	JB15252-8	JB15252	08/31/2012	remaining	FD	Y					19.8				28.4			S1	
A'20A	143-A'20A-SW1	12.3	7.3	143-A'20A-SW1-0.5-1.0	0.5 - 1.0 ft	11.8	11.3	JB74996-4	JB74996	08/26/2014	remaining	N	Y	4.5		146		55.4		< 0.49	U	28.0			S1	
A'20A	143-A'20A-SW1	12.3	7.3	143-A'20A-SW1-2.5-3.0	2.5 - 3.0 ft	9.8	9.3	JB74996-5	JB74996	08/26/2014	remaining	N	Y	< 0.31	U	18.4		11.1		< 0.47	U	27.9			S1	
A'20A	143-A'20A-SW1	12.3	7.3	143-A'20A-SW1-3.5-4.0	3.5 - 4.0 ft	8.8	8.3	JB74996-6	JB74996	08/26/2014	remaining	N	Y	0.69	J	22.1		11.1		< 0.49	U	37.2			S1	
A'16A	143-P3A-A16A	14.5	7.5	143-P3A-A16A-6.0-6.5	6.0 - 6.5 ft	8.4	7.9	JB45921-9A	JB45921A	08/28/2013	removed	N	Y	2.9	J	16.2		10.1		< 0.33	U	17.1			S2, S4	
A'16A	143-P3A-A16A	14.5	7.5	143-P3A-A16A-8.0-8.5	8.0 - 8.5 ft	6.4	5.9	JB45921-10A	JB45921A	08/28/2013	remaining	N	Y	0.31	J	12.0		6.1		0.46	J	21.8			S2	
A'16A	143-P3A-A16A	14.5	7.5	143-P3A-A16A-10.0-10.5	10.0 - 10.5 ft	4.4	3.9	JB45921-11A	JB45921A	08/28/2013	remaining	N	Y	0.66	J	34.2		10.9		< 0.35	U	22.0			S2	
A'16A	143-P3A-A16A	14.5	7.5	143-P3A-A16A-12.0-12.5	12.0 - 12.5 ft	2.4	1.9	JB45921-12A	JB45921A	08/28/2013	remaining	N	Y	0.49	J	22.1		10		< 0.39	U	22.8			S2	
A'16A	143-P3A-A16A	14.5	7.5	143-P3A-A16A-14.0-14.5	14.0 - 14.5 ft	0.4	-0.1	JB45921-13A	JB45921A	08/28/2013	remaining	N	Y	< 0.29	UJ	15.5		10.4		0.48	J	25.5			S2	
A'16A	143-P3A-A16A	14.5	7.5	143-P3A-A16A-16.0-16.5	16.0 - 16.5 ft	-1.6	-2.1	JB45921-14A	JB45921A	08/28/2013	remaining	N	Y	< 0.29	UJ	15.2		11.2		< 0.36	U	22.2			S2	
A'16A	143-P3A-A16A	14.5	7.5	143-P3A-A16A-17.5-18.0	17.5 - 18.0 ft	-3.1	-3.6	JB45921-15A	JB45921A	08/28/2013	remaining	N	Y	< 0.27	UJ	14.1		11.9		< 0.33	U	20.9			S2	
A'16A	143-P3A-A16A	14.5	7.5	143-P3A-A16A-18.0-18.5	18.0 - 18.5 ft	-3.6	-4.1	JB45921-16A	JB45921A	08/28/2013	remaining	N	Y	0.42	J	14.8		11.7		0.43	J	22.6			S2	

Table 5-2
CCPW Metals Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Site 143, Garfield Avenue Group
PPG, Jersey City, New Jersey

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6, G7)	Sample ID (G8)	Depth Interval (ft bgs) (G9)	Sample Start Elevation (ft NAVD88) (G4, G7, G10)	Sample End Elevation (ft NAVD88) (G4, G11)	Lab ID (G12)	Lab SDG (G12)	Date Collected (G13)	Sample Status (G14)	Sample Type (G15)	Validated (Y/N) (G16)	ANTIMONY 7440-36-0		CHROMIUM 7440-47-3		NICKEL 7440-02-0		THALLIUM 7440-28-0		VANADIUM 7440-62-2		Specific Notes
														Result (G17, G18)	Qualifier (G19, G20)	Result (G17, G21)	Qualifier (G19, G20)	Result (G17, G18)	Qualifier (G19, G20)	Result (G17, G18)	Qualifier (G19, G20)	Result (G17, G18)	Qualifier (G19, G20)	
B20A	143-P3A-B20A	12.9	9.0	143-P3A-B20A-10.5-11.0	10.5 - 11.0 ft	2.4	1.9	JB34383-5	JB34383	04/16/2013	remaining	N	Y	0.42	J	11.5	J	7.6		< 0.26	U	18.6		
B20A	143-P3A-B20A	12.9	9.0	143-P3A-B20A-12.6-13.1	12.6 - 13.1 ft	0.3	-0.2	JB34383-4	JB34383	04/16/2013	remaining	N	Y	0.27	J	18.3	J	12.4		< 0.28	U	27.2		
B20A	143-P3A-B20A	12.9	9.0	143-P3A-B20A-13.1-13.6	13.1 - 13.6 ft	-0.2	-0.7	JB34383-3	JB34383	04/16/2013	remaining	N	Y	0.26	J	16.6	J	10.4		< 0.30	U	24.1		
C17A	143-B105	10.8	9.1	143-B105-6.5-7.0	6.5 - 7.0 ft	4.3	3.8	JB81422-6R	JB81422R	11/10/2014	remaining	N	Y	0.56	J	17.0		11.5		0.60	J	28.6		S2
D16A	143-P3A-D16A	13.1	8.5	143-P3A-D16A-5.5-6.0	5.5 - 6.0 ft	7.6	7.1	JB45621-22A	JB45621A	08/23/2013	remaining	N	Y	0.60	J	18.6		15.6		< 0.34	U	24.5		S2
D16A	143-P3A-D16A	13.1	8.5	143-P3A-D16A-7.0-7.5	7.0 - 7.5 ft	6.1	5.6	JB45621-21A	JB45621A	08/23/2013	remaining	N	Y	< 0.27	U	22.4		13.6		< 0.34	U	34.4		S2
D16A	143-P3A-D16A	13.1	8.5	143-P3A-D16A-9.0-9.5	9.0 - 9.5 ft	4.1	3.6	JB45621-20A	JB45621A	08/23/2013	remaining	N	Y	< 0.28	U	16.0		11.5		0.43	J	22.0		S2
D16A	143-P3A-D16A	13.1	8.5	143-P3A-D16A-11.0-11.5	11.0 - 11.5 ft	2.1	1.6	JB45621-19A	JB45621A	08/23/2013	remaining	N	Y	0.76	J	13.5		6.5		0.50	J	19.4		S2
D16A	143-P3A-D16A	13.1	8.5	143-P3A-D16A-13.0-13.5	13.0 - 13.5 ft	0.1	-0.4	JB45621-18A	JB45621A	08/23/2013	remaining	N	Y	4.2		50.0		21.0		< 0.59	U	27.5		S2
D16A	143-P3A-D16A	13.1	8.5	143-P3A-D16A-14.5-15.0	14.5 - 15.0 ft	-1.4	-1.9	JB45621-17A	JB45621A	08/23/2013	remaining	N	Y	1.6	J	28.5		20.8		< 0.29	U	42.5		S2
D16A	143-P3A-D16A	13.1	8.5	143-P3A-D16A-15.0-15.5	15.0 - 15.5 ft	-1.9	-2.4	JB45621-16A	JB45621A	08/23/2013	remaining	N	Y	< 0.23	UJ	13.0	J	7.5	J	< 0.29	UJ	14.5	J	S2
D17A	143-B4	12.7	6.1	143B4D_8.0-8.5_806769	8.0 - 8.5 ft	4.7	4.2	806769	C844	02/09/2007	remaining	N	Y	< 1.6	UJ	91.2		12.2		< 1.3	U	24.9		S2
D17A	143-B4	12.7	6.1	143B4E_12.0-12.5_806770	12.0 - 12.5 ft	0.7	0.2	806770	C844	02/09/2007	remaining	N	Y	< 1.7	UJ	48.7		11.8		< 1.4	U	17		S2
D17A	143-B4	12.7	6.1	143B4F_13.6-14.1_806771	13.6 - 14.1 ft	-0.9	-1.4	806771	C844	02/09/2007	remaining	N	Y	< 1.7	UJ	20.2		15.5		< 1.4	U	32.4		S2
D17A	143-B4	12.7	6.1	143B4G_16.0-16.5_806772	16.0 - 16.5 ft	-3.3	-3.8	806772	C844	02/09/2007	remaining	N	Y	< 1.5	UJ	12.3		7.2		< 1.2	U	21.4		S2
D20A	143-B3	12.9	5.0	PPG-143-B3F_9.3-10.1_799377	9.3 - 10.1 ft	3.6	2.8	799377	B818	01/11/2007	remaining	N	Y	4.3	J	10.2	J	14.6	J	< 1.5	U	23.4		
D20A	143-B3	12.9	5.0	PPG-143-B3G_12.8-13.4_799360	12.8 - 13.4 ft	0.1	-0.5	799360	B818	01/11/2007	remaining	N	Y	< 1.7	UJ	23.5	J	15.9	J	< 1.4	U	34.9		
D20A	143-B3	12.9	5.0	PPG-143-B3H_13.9-14.5_799361	13.9 - 14.5 ft	-1.0	-1.6	799361	B818	01/11/2007	remaining	N	Y	< 4.8	UJ	18	J	13.1	J	< 1.9	U	18.4		
D20A	143-B3	12.9	5.0	PPG-143-B3I_17.0-17.5_799372	17.0 - 17.5 ft	-4.1	-4.6	799372	B818	01/11/2007	remaining	N	Y	< 3.8	UJ	39.7	J	11.7	J	< 1.5	U	20.8		
D20A	143-B3	12.9	5.0	PPG-143-B3J_18.2-18.8_799373	18.2 - 18.8 ft	-5.3	-5.9	799373	B818	01/11/2007	remaining	N	Y	< 1.4	UJ	16.7	J	10.6		< 1.1	U	20.8		
D20A	143-B3	12.9	5.0	PPG-143-B3JD_18.2-18.8_799374	18.2 - 18.8 ft	-5.3	-5.9	799374	B818	01/11/2007	remaining	FD	Y	< 1.4	UJ	17.5	J	9.6		< 1.1	U	21		
D20A	143-B3	12.9	5.0	PPG-143-B3K_21.1-21.7_799375	21.1 - 21.7 ft	-8.2	-8.8	799375	B818	01/11/2007	remaining	N	Y	< 1.5	UJ	88.2	J	13.6	J	< 1.2	U	24.5		
E17A	143-B6	12.6	7.8	PPG-143-B6D_4.4-4.9_798406	4.4 - 4.9 ft	8.2	7.7	798406	B693	01/09/2007	remaining	N	Y	< 1.2	UJ	19.7	J	9.8	J	< 1.1	U	21.1	J	
E17A	143-B6	12.6	7.8	PPG-143-B6E_5.5-6.0_799825	5.5 - 6.0 ft	7.1	6.6	799825	B882	01/12/2007	remaining	N	Y	< 1.4	UJ	13.3		9.6		< 1.1	U	21		
E17A	143-B6	12.6	7.8	PPG-143-B6F_6.5-6.9_799826	6.5 - 6.9 ft	6.1	5.7	799826	B882	01/12/2007	remaining	N	Y	< 1.4	UJ	11.2		6.5		< 1.1	U	16.3		
E17A	143-B6	12.6	7.8	PPG-143-B6G_7.4-7.7_799827	7.4 - 7.7 ft	5.2	4.9	799827	B882	01/12/2007	remaining	N	Y	< 1.8	UJ	13.9		11.2		< 1.4	U	22.7		
E17A	143-B6	12.6	7.8	PPG-143-B6H_8.5-9.1_799828	8.5 - 9.1 ft	4.1	3.5	799828	B882	01/12/2007	remaining	N	Y	< 1.7	UJ	5.0		9.7		< 1.4	U	17.2		
E17A	143-B6	12.6	7.8	PPG-143-B6HD_8.5-9.1_799829	8.5 - 9.1 ft	4.1	3.5	799829	B882	01/12/2007	remaining	FD	Y	< 1.9	UJ	6.7		14.1		< 1.5	U	27.6		
E17A	143-B6	12.6	7.8	PPG-143-B6I_13.7-14.4_799830	13.7 - 14.4 ft	-1.1	-1.8	799830	B882	01/12/2007	remaining	N	Y	< 1.5	UJ	22.5		15.9		< 1.2	U	29		
E17A	143-B6	12.6	7.8	PPG-143-B6J_17.5-18.0_799831	17.5 - 18.0 ft	-4.9	-5.4	799831	B882	01/12/2007	remaining	N	Y	< 5.7	UJ	18.2		10.3		< 2.3	U	19.2		
E17A	143-B6	12.6	7.8	PPG-143-B6K_18.7-19.3_799832	18.7 - 19.3 ft	-6.1	-6.7	799832	B882	01/12/2007	remaining	N	Y	< 1.5	UJ	17.8		10.2		< 1.2	U	22.3		
E19A	143-B109	10.8	5.5	143-B109-7.3-7.8	7.3 - 7.8 ft	3.5	3.0	JB81422-10R	JB81422R	11/10/2014	remaining	N	Y	< 0.33	U	18.1		22.4		< 0.50	U	27.5		
E19A	143-B114	10.8	5.5	143-B114-9.5-10.0	9.5 - 10.0 ft	1.3	0.8	JB81422-18R	JB81422R	11/10/2014	remaining	N	Y	0.36	J	20.0		15.0		< 0.47	U	29.4		
F19A	143-B7	12.4	6.3	PPG-143-B7E_5.9-6.6_799371	5.9 - 6.6 ft	6.5	5.8	799371	B818	01/11/2007	remaining	N	Y	< 1.4	UJ	108	J	22.8	J	< 1.1	U	18.5		S6
F19A	143-B7	12.4	6.3	PPG-143-B7F_6.9-9.4_799353	6.9 - 9.4 ft	5.5	3.0	799353	B818	01/11/2007	remaining	N	Y	< 1.4	UJ	12.9	J	11.5	J	< 1.1	U	25.4		S6
F19A	143-B7	12.4	6.3	PPG-143-B7G_8.5-10.3_799354	8.5 - 10.3 ft	3.9	2.1	799354	B818	01/11/2007	remaining	N	Y	< 1.8	UJ	14	J	14.6	J	< 1.5	U	28.1		S6
F19A	143-B7	12.4	6.3	PPG-143-B7H_13.1-13.7_799355	13.1 - 13.7 ft	-0.7	-1.3	799355	B818	01/11/2007	remaining	N	Y	< 2.7	UJ	29.4	J	17.8	J	< 1.1	U	40.3		S6
F19A	143-B7	12.4	6.3	PPG-143-B7I_18.0-18.9_799356	18.0 - 18.9 ft	-5.6	-6.5	799356	B818	01/11/2007	remaining	N	Y	< 1.5	UJ	18.1	J	15.5	J	< 1.2	U	23.7		S6

Table 5-2
CCPW Metals Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Site 143, Garfield Avenue Group
PPG, Jersey City, New Jersey

ABBREVIATIONS:

bgs - below ground surface
CAS RN - Chemical Abstracts Service Registry Number
CCPW - Chromate Chemical Production Waste
Cr - chromium
Cr⁺³ - trivalent chromium
Cr⁺⁶ - hexavalent chromium
FD - field duplicate sample type
ft - feet
LSRP - Licensed Site Remediation Professional
mg/kg - milligrams per kilogram
N - normal sample type
NAVD88 - North American Vertical Datum of 1988
NE - not excavated
NJDEP - New Jersey Department of Environmental Protection
NRDCSRS - Non-Residential Direct Contact Soil Remediation Standard
N/A - not applicable
RDCSRS - Residential Direct Contact Soil Remediation Standard
RDCSRS-GAG - Residential Direct Contact Soil Remediation Standard - Garfield Avenue Group (alternative remediation standard approved by the New Jersey Department of Environmental Protection on December 28, 2016)
SCC - Soil Cleanup Criteria
SDG - sample delivery group
SRS - Soil Remediation Standard
TEE - terminal excavation elevation

QUALIFIERS:

J - The result was an estimated value; the associated numerical value was an approximate concentration of the analyte in the sample.
U - The analyte was not detected above the sample reporting limit shown.
UJ - The analyte was not detected above the sample reporting limit shown and the reporting limit was approximate.

GENERAL NOTES:

G1. "Grid ID" refers to an area, typically 30 ft by 30 ft, identified as Grid Rows A' through F (extending west to east) and Grid Columns 20A through 15A (extending from south to north).
G2. "Location ID" refers to the location name where samples were collected.
G3. "Location Elevation" refers to the pre-remediation surface elevation for samples collected from the pit bottom, and the surface elevation of the sample location when the sample was collected via boring or test pit.
G4. Elevation vertical datum is NAVD88, in U.S. survey ft.
G5. For some borings, the Location Elevations presented in this table were revised compared to the Location Elevations used in the proposed TEE Technical Memoranda. The revisions were based on a review of available survey data for individual locations, site-wide topographical surveys, and field notes to provide the most accurate and representative ground surface elevations. In addition, ground surface elevations for borings advanced prior to 2011 were reviewed and, if necessary, converted from the site-specific vertical datum used prior to 2011 into NAVD88.
G6. "As-built TEE" refers to the pit bottom elevation of the grid. However, a grid may be split and have two as-built TEEs. For grids affected by the 2017 re-excavation activities, the as-built TEE presented was interpolated from the 2017 post-excavation survey points and 1-ft post-excavation contours representing the as-built TEEs.
G7. In some grids, the sample start elevation of the pit bottom sample (typically designated by "PB" in the Location ID) and the as-built TEE are slightly different (typically 0.5 ft or less) because separate elevation measurements were taken for the pit bottom sample and the as-built TEE.
G8. "Sample ID" refers to the name of a sample collected at a given location and is unique to the depth of the sample collected. The depth listed in the Sample ID may not necessarily correspond to the actual sample depth interval due to corrections made as a result of post-field work review of surveyed surface elevations and/or boring logs.
G9. "Depth Interval" is based on the "Location Elevation."
G10. "Sample Start Elevation" refers to the start of the sample interval. There may be up to 0.1 ft variation between the listed Sample Start Elevation and the elevation calculated using the Location Elevation and Depth Interval due to rounding of the numbers.
G11. "Sample End Elevation" refers to the end of the sample interval. There may be up to 0.1 ft variation between the listed Sample End Elevation and the elevation calculated using the Location Elevation and Depth Interval due to rounding of the numbers.
G12. "Lab ID" refers to the identification number assigned to the sample by the analytical laboratory performing the sample analysis. "Lab SDG" refers to the delivery group number assigned to the sample by the analytical laboratory.
G13. "Date Collected" refers to the date the soil sample was collected.
G14. "Sample Status" indicates whether a sample is remaining or removed:
- "Remaining" indicates the soil in that interval is outside the excavation footprint, and remains in-place at that location; and
- "Removed" indicates the sample was removed during excavation.
G15. "Sample Type" indicates whether the sample type is normal (N) or a field duplicate (FD).
G16. "Y" indicates that a sample underwent data validation and "N" indicates that data validation was not conducted.
G17. "Result" refers to the analytical result which is reported in mg/kg. A blank entry indicates that the sample was not tested for that analyte.
G18. Bold text indicates that the result exceeds the RDCSRS or RDCSRS-GAG. Bold and italicized text indicates that the result exceeds the NRDCSRS. Non-bold and non-italicized text indicates that the result does not exceed the most stringent SRS.
G19. "Qualifier" refers to the data qualifier assigned by the data validation team reviewing the data from the laboratory for validated data. For unvalidated data, it refers to the qualifier assigned by the laboratory.
G20. Non-detect results are shown on this table using the Method Detection Limit, if available; otherwise they are shown at the Reporting Limit.
G21. There is currently no NJDEP SRS and no NJDEP SCC for total Cr. Therefore, total Cr results are compared to the interim NJDEP Residential SCC for Cr⁺³ of 120,000 mg/kg as the cleanup criteria for soil at the Garfield Avenue Group Sites. There is no non-residential SCC for Cr⁺³. Bold values indicate a result that exceeds the interim NJDEP Residential SCC.

Table 5-2
CCPW Metals Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Site 143, Garfield Avenue Group
PPG, Jersey City, New Jersey

SPECIFIC NOTES:

S1. In Grids A'15A, A'16A, A'17A, A'18A, A'19A, and A'20A, boring and/or sidewall samples collected from the Clean Corridor excavation along the Garfield Avenue right-of-way were used in the evaluation of compliance for the portions of these grids located within Site 143. The sidewall samples (designated by "SW" in the Location ID) have a Sample Status of "remaining" because these samples were collected post-excavation. Additional samples west of the Clean Corridor, within the Garfield Avenue right-of-way, were included to further document compliance.

S2. Within Site 143, Grids A'15A, A15A, A16A, B15A, B16A, B17A, C15A, C16A, C17A, D15A, D16A, D17A, and portions of Grids E15A and F15A were re-excavated in 2017. Figure 5-2 shows the post-excavation pit bottom survey points and 1-ft post-excavation contours representing the 2017 as-built pit bottom elevations. As shown on Figure 5-2:

- Excavation in Grid A'15A was extended to the Site 143 northern property line and to the proposed TEE.
- Excavation in Grids A15A, B15A, C15A, and D15A was extended to the Site 143 northern property line and to sufficient depths to remove observed CCPW material.
- Excavation in Grids E15A and F15A was extended to the Site 143 northern property line at their original as-built TEEs.
- Excavation was extended into Grids A16A, B16A, B17A, C16A, C17A, D16A, and D17A to determine the limits of, and remove, the former building footer.
- Portions of Grids B17A and C17A were not re-excavated below the original as-built TEEs from 2014, and the re-excavated portions of Grids D16A and D17A did not extend below the original as-built TEEs.

For sample locations within the portions of the 2017 excavation that extended deeper than the original 2014 excavation, the as-built TEEs presented on this table were updated to reflect the 2017 as-built pit bottom elevations at the specific sample locations, as shown on Figure 5-2.

S3. In Grid A'17A, the antimony concentration in sample 143-A'17A-PB-7.0-7.5 is 133 mg/kg. This concentration is greater than the RDCSRS of 31 mg/kg and less than the NRDCSRS of 450 mg/kg. Compliance with the antimony RDCSRS is demonstrated through spatial averaging. The calculations are included in the Technical Memorandum *PPG Site 143, Compliance Averaging for Antimony in Soil (Revision 0)*, AECOM, February 2018. The spatially weighted average antimony concentration is 11 mg/kg, which is compliant with the 31 mg/kg RDCSRS.

S4. In Grid A16A, the removed confirmation sample 143-P3A-A16A-6.0-6.5 (El. 8.4 to 7.9 ft NAVD88) is included in this table to provide CCPW metals results for ten percent or more of the grids in Site 143. This grid was excavated in 2017 deeper than the confirmation sample to remove the former building footer. The final 2017 as-built TEE at location 143-P3A-A16A was El. 7.5 ft NAVD88.

S5. In Grid B20A, the removed confirmation sample 143-P3A-B20A-2.5-3.0 (El. 10.4 to 9.9 ft NAVD88) is included in this table to provide CCPW metals results for ten percent or more of the grids in Site 143. The as-built TEE for this grid was El. 9.0 ft NAVD88. This grid was excavated deeper than the clean confirmation sample to accommodate the placement of a clean fill cap (engineering control) for non-Cr⁺⁶ parameters under the LSRP program.

S6. In partial Grid F19A, samples collected from location 143-B7 on Site 132 were used in the evaluation of compliance for the portion of this grid location within Site 143 to provide CCPW metals results for ten percent or more of the grids in Site 143. Sample PPG-143-B7E_5.9-6.6_799371 (El. 6.5 to 5.8 ft NAVD88) is at the as-built TEE for Grid F19A (El. 6.3 ft NAVD88).

**Table 5-3
CCPW Metals Analytical Results in the Unsaturated Soil Zone Compared to IGW Soil Screening Level and Soil Remediation Standards
Site 143, Garfield Avenue Group
PPG, Jersey City, New Jersey**

Grid ID (G1)	Location ID (G2)	Location Elevation (ft NAVD88) (G3, G4, G5)	As-built TEE (ft NAVD88) (G4, G6)	Sample ID (G7, G8)	Depth Interval (ft bgs) (G9)	Sample Start Elevation (ft NAVD88) (G4, G7, G10)	Sample End Elevation (ft NAVD88) (G4, G11)	Lab ID (G12)	Lab SDG (G12)	Date Collected (G13)	Sample Status (G14)	Sample Type (G15)	Validated (Y/N) (G16)	Groundwater Elevation (ft NAVD88) (G8)	Analyte CAS-RN Units DIGWSSL IGWSRS-GAG		ANTIMONY 7440-36-0 mg/kg N/A 62.7		CHROMIUM 7440-47-3 mg/kg N/A N/A		NICKEL 7440-02-0 mg/kg N/A 170		THALLIUM 7440-28-0 mg/kg 3 N/A		VANADIUM 7440-62-2 mg/kg N/A N/A		Specific Notes
															Result (G17, G18)	Qualifier (G19, G20)	Result (G17, G18)	Qualifier (G19, G20)	Result (G17, G18)	Qualifier (G19, G20)	Result (G17, G18)	Qualifier (G19, G20)	Result (G17, G18)	Qualifier (G19, G20)			
C'16A	EF-36	14.0	NE	EF-B36-2.5	2.5 - 3.0 ft	11.5	11.0	460-25705-22	460257051	04/22/2011	remaining	N	Y	6.4	< 1.1	U	12.3		8.8	J	< 1.2	U	17.7	J	S1		
C'16A	EF-36	14.0	NE	EF-B36-7.5	7.5 - 8.0 ft	6.5	6.0	460-25760-22	460257601	04/25/2011	remaining	N	Y	6.4	< 0.99	UJ	12.4		8.9	J	< 1.1	U	18.8		S1		
C'16A	EF-36	14.0	NE	EF-B36-7.5X	7.5 - 8.0 ft	6.5	6.0	460-25760-23	460257601	04/25/2011	remaining	FD	Y	6.4	< 1.0	UJ	13.5		9.7		< 1.1	U	20.4		S1		
A'15A	143-A'15A-SW	12.4	8.8	143-A'15A-SW-0.4-0.9	0.4 - 0.9 ft	12.0	11.5	JB73945-3A	JB73945A	08/13/2014	remaining	N	Y	6.4	0.30	J	30.7		15.2		< 0.44	U	26.2		S1, S2		
A'15A	143-A'15A-SW	12.4	8.8	143-A'15A-SW-2.4-2.9	2.4 - 2.9 ft	10.0	9.5	JB73945-4A	JB73945A	08/13/2014	remaining	N	Y	6.4	0.37	J	37.2		14.7		< 0.45	U	29.6		S1, S2		
A'15A	EF-35	12.1	NE	EF-B35-2.5	2.5 - 3.0 ft	9.6	9.1	460-25657-35	460256571	04/21/2011	remaining	N	Y	6.4	< 1.0	U	18.4		11.9		< 1.1	U	28.9	J	S1, S2		
A'16A	143-A'16A-SW	12.6	9.0	143-A'16A-SW-0.6-1.1	0.6 - 1.1 ft	12.0	11.5	JB73945-1A	JB73945A	08/13/2014	remaining	N	Y	6.4	0.43	J	76.1		19.5		< 0.48	U	41.0		S1		
A'16A	143-A'16A-SW	12.6	9.0	143-A'16A-SW-3.1-3.6	3.1 - 3.6 ft	9.5	9.0	JB73945-2A	JB73945A	08/13/2014	remaining	N	Y	6.4	0.47	J	76.0		18.2		< 0.46	U	32.5		S1		
A'17A	143-A'17A-SW1	12.6	8.6	143-A'17A-SW1-0.1-0.6	0.1 - 0.6 ft	12.5	12.0	JB74945-1	JB74945	08/25/2014	remaining	N	Y	6.4	< 0.28	U	23.7		17.0		< 0.42	U	31.1		S1		
A'17A	143-A'17A-SW1	12.6	8.6	143-A'17A-SW1-1.3-1.8	1.3 - 1.8 ft	11.3	10.8	JB74945-2	JB74945	08/25/2014	remaining	N	Y	6.4	< 0.29	U	36.5		13.5		< 0.44	U	22.7		S1		
A'17A	143-A'17A-SW1	12.6	8.6	143-A'17A-SW1-3.3-3.8	3.3 - 3.8 ft	9.3	8.8	JB74945-3	JB74945	08/25/2014	remaining	N	Y	6.4	< 0.31	U	39.2		15.2		< 0.47	U	27.5		S1		
A'17A	143-B1	12.6	8.6	PPG-143-B1C_5.0-5.5_798759	5.0 - 5.5 ft	7.6	7.1	798759	B748	01/10/2007	remaining	N	Y	6.4	< 1.3	UJ	39.4	J	8.8	J	< 1.2	U	18.4	J			
A'18A	EF-34	12.4	NE	EF-B34-2.5	2.5 - 3.0 ft	9.9	9.4	460-25705-26	460257051	04/22/2011	remaining	N	Y	6.4	< 1.0	U	38.9		15.5		< 1.1	U	30.6	J	S1		
A'18A	143-A'18A-SW1	12.8	9.2	143-A'18A-SW1-0.4-0.9	0.4 - 0.9 ft	12.4	11.9	JB74945-4	JB74945	08/25/2014	remaining	N	Y	6.4	< 0.29	U	45.9		56.3		< 0.44	U	35.1		S1		
A'18A	143-A'18A-SW1	12.8	9.2	143-A'18A-SW1-2.4-2.9	2.4 - 2.9 ft	10.4	9.9	JB74945-5	JB74945	08/25/2014	remaining	N	Y	6.4	< 0.31	U	39.9		14.5		< 0.47	U	29.4		S1		
A'18A	143-A'18A-SW1	12.8	9.2	143-A'18A-SW1-3.1-3.6	3.1 - 3.6 ft	9.7	9.2	JB74945-6	JB74945	08/25/2014	remaining	N	Y	6.4	< 0.28	U	28.6		12.1		< 0.42	U	22.5		S1		
A'19A	143-A'19A-SW1	12.5	7.3	143-A'19A-SW1-0.5-1.0	0.5 - 1.0 ft	12.0	11.5	JB74996-1	JB74996	08/26/2014	remaining	N	Y	6.4	0.66	J	22.5		28.7		< 0.45	U	20.1		S1		
A'19A	143-A'19A-SW1	12.5	7.3	143-A'19A-SW1-2.5-3.0	2.5 - 3.0 ft	10.0	9.5	JB74996-2	JB74996	08/26/2014	remaining	N	Y	6.4	0.52	J	20.2		12.1		< 0.49	U	28.4		S1		
A'19A	143-A'19A-SW1	12.5	7.3	143-A'19A-SW1-4.5-5.0	4.5 - 5.0 ft	8.0	7.5	JB74996-3	JB74996	08/26/2014	remaining	N	Y	6.4	0.65	J	67.6		16.3		< 0.49	U	38.1		S1		
A'19A	143-B2	12.7	7.3	PPG-143-B2E_5.0-5.5_798765	5.0 - 5.5 ft	7.7	7.2	798765	B748	01/10/2007	remaining	N	Y	6.4	< 1.2	UJ	345	J	10.4	J	< 1.2	U	25.4	J			
A'19A	EF-120	12.5	NE	EF-B120-0.5-1.0	0.5 - 1.0 ft	12.0	11.5	JB15252-9	JB15252	08/31/2012	remaining	N	Y	6.4					14.8				30.4		S1		
A'19A	EF-120	12.5	NE	EF-B120-0.5-1.0X	0.5 - 1.0 ft	12.0	11.5	JB15252-8	JB15252	08/31/2012	remaining	FD	Y	6.4					19.8				28.4		S1		
A'20A	143-A'20A-SW1	12.3	7.3	143-A'20A-SW1-0.5-1.0	0.5 - 1.0 ft	11.8	11.3	JB74996-4	JB74996	08/26/2014	remaining	N	Y	6.4	4.5		146		55.4		< 0.49	U	28.0		S1		
A'20A	143-A'20A-SW1	12.3	7.3	143-A'20A-SW1-2.5-3.0	2.5 - 3.0 ft	9.8	9.3	JB74996-5	JB74996	08/26/2014	remaining	N	Y	6.4	< 0.31	U	18.4		11.1		< 0.47	U	27.9		S1		
A'20A	143-A'20A-SW1	12.3	7.3	143-A'20A-SW1-3.5-4.0	3.5 - 4.0 ft	8.8	8.3	JB74996-6	JB74996	08/26/2014	remaining	N	Y	6.4	0.69	J	22.1		11.1		< 0.49	U	37.2		S1		
B19A	143-DD1-TW2	12.7	7.8	DD1-TW2-5.0	5.0 - 5.5 ft	7.7	7.2	460-34353-7	460343531	12/05/2011	remaining	N	Y	6.4	0.69	J	35.7		14.6		< 0.26	U	35.4				
B20A	143-P3A-B20A	12.9	9.0	143-P3A-B20A-4.5-5.0	4.5 - 5.0 ft	8.4	7.9	JB34383-8	JB34383	04/16/2013	remaining	N	Y	6.4	1.1	J	44.1		15.8		< 0.26	U	23.3				
D16A	143-P3A-D16A	13.1	8.5	143-P3A-D16A-5.5-6.0	5.5 - 6.0 ft	7.6	7.1	JB45621-22A	JB45621A	08/23/2013	remaining	N	Y	6.4	0.60	J	18.6		15.6		< 0.34	U	24.5		S2		
E17A	143-B6	12.6	7.8	PPG-143-B6D_4.4-4.9_798406	4.4 - 4.9 ft	8.2	7.7	798406	B693	01/09/2007	remaining	N	Y	6.4	< 1.2	UJ	19.7	J	9.8	J	< 1.1	U	21.1	J			
E17A	143-B6	12.6	7.8	PPG-143-B6E_5.5-6.0_799825	5.5 - 6.0 ft	7.1	6.6	799825	B882	01/12/2007	remaining	N	Y	6.4	< 1.4	UJ	13.3		9.6		< 1.1	U	21				

Table 5-3
CCPW Metals Analytical Results in the Unsaturated Soil Zone Compared to IGW Soil Screening Level and Soil Remediation Standards
Site 143, Garfield Avenue Group
PPG, Jersey City, New Jersey

ABBREVIATIONS:

bgs - below ground surface
CAS RN - Chemical Abstracts Service Registry Number
CCPW - Chromate Chemical Production Waste
DIGWSSL - Default Impact to Groundwater Soil Screening Level
El. - elevation
FD - field duplicate sample type
ft - feet
IGW - Impact to Groundwater
IGWSRS-GAG - Impact to Groundwater Soil Remediation Standard - Garfield Avenue Group (alternative remediation standard as proposed in the *Supplemental Soil Remedial Investigation Report, Final (Revision 1)*, dated August 30, 2018 and approved by the New Jersey Department of Environmental Protection on October 22, 2018)
mg/kg - milligrams per kilogram
N - normal sample type
NAVD88 - North American Vertical Datum of 1988
NE - not excavated
N/A - not applicable
SDG - sample delivery group
TEE - terminal excavation elevation

QUALIFIERS:

J - The result was an estimated value; the associated numerical value was an approximate concentration of the analyte in the sample.
U - The analyte was not detected above the sample reporting limit shown.
UJ - The analyte was not detected above the sample reporting limit shown and the reporting limit was approximate.

GENERAL NOTES:

G1. "Grid ID" refers to an area, typically 30 ft by 30 ft, identified as Grid Rows A' through F (extending west to east) and Grid Columns 20A through 15A (extending from south to north).
G2. "Location ID" refers to the location name where samples were collected.
G3. "Location Elevation" refers to the pre-remediation surface elevation for samples collected from the pit bottom, and the surface elevation of the sample location when the sample was collected via boring or test pit.
G4. Elevation vertical datum is NAVD88, in U.S. survey ft.
G5. For some borings, the Location Elevations presented in this table were revised compared to the Location Elevations used in the proposed TEE Technical Memoranda. The revisions were based on a review of available survey data for individual locations, site-wide topographical surveys, and field notes to provide the most accurate and representative ground surface elevations. In addition, ground surface elevations for borings advanced prior to 2011 were reviewed and, if necessary, converted from the site-specific vertical datum used prior to 2011 into NAVD88.
G6. "As-built TEE" refers to the pit bottom elevation of the grid. However, a grid may be split and have two as-built TEEs. For grids affected by the 2017 re-excavation activities, the as-built TEE presented was interpolated from the 2017 post-excavation survey points and 1-ft post-excavation contours representing the as-built TEEs.
G7. "Sample ID" refers to the name of a sample collected at a given location and is unique to the depth of the sample collected. The depth listed in the Sample ID may not necessarily correspond to the actual sample depth interval due to corrections made as a result of post-field work review of surveyed surface elevations and/or boring logs.
G8. This table compares sample results from the unsaturated zone to the DIGWSSL and IGWSRS-GAGs. The groundwater elevation (above which is the unsaturated zone) on this Site was estimated as the 50th percentile groundwater elevation from five monitoring wells located on or adjacent to Site 143, gauged between February 2007 and December 2016. The monitoring well locations and data are included in Appendix A. The estimated groundwater elevation for this Site is El. 6.4 ft NAVD88.
G9. "Depth Interval" is based on the "Location Elevation."
G10. "Sample Start Elevation" refers to the start of the sample interval. There may be up to 0.1 ft variation between the listed Sample Start Elevation and the elevation calculated using the Location Elevation and Depth Interval due to rounding of the numbers.
G11. "Sample End Elevation" refers to the end of the sample interval. There may be up to 0.1 ft variation between the listed Sample End Elevation and the elevation calculated using the Location Elevation and Depth Interval due to rounding of the numbers.
G12. "Lab ID" refers to the identification number assigned to the sample by the analytical laboratory performing the sample analysis. "Lab SDG" refers to the delivery group number assigned to the sample by the analytical laboratory.
G13. "Date Collected" refers to the date the soil sample was collected.
G14. "Status" of "remaining" indicates the soil in that interval is outside the excavation footprint, and remains in-place at that location.
G15. "Sample Type" indicates whether the sample type is normal (N) or a field duplicate (FD).
G16. "Y" indicates that a sample underwent data validation and "N" indicates that data validation was not conducted.
G17. "Result" refers to the analytical result which is reported in mg/kg. A blank entry indicates that the sample was not tested for that analyte.
G18. Bold text indicates that the result exceeds the DIGWSSL or IGWSRS-GAG. Non-bold text indicates that the result does not exceed the DIGWSSL or IGWSRS-GAG.
G19. "Qualifier" refers to the data qualifier assigned by the data validation team reviewing the data from the laboratory for validated data. For unvalidated data, it refers to the qualifier assigned by the laboratory.
G20. Non-detect results are shown on this table using the Method Detection Limit, if available; otherwise they are shown at the Reporting Limit.

SPECIFIC NOTES:

S1. In Grids A'15A, A'16A, A'17A, A'18A, A'19A, and A'20A, boring and/or sidewall samples collected from the Clean Corridor excavation along the Garfield Avenue right-of-way were used in the evaluation of compliance for the portions of these grids located within Site 143. The sidewall samples (designated by "SW" in the Location ID) have a Sample Status of "remaining" because these samples were collected post-excavation. Additional samples west of the Clean Corridor, within the Garfield Avenue right-of-way, were included to further document compliance.

S2. Within Site 143, Grids A'15A, A15A, A16A, B15A, B16A, B17A, C15A, C16A, C17A, D15A, D16A, D17A, and portions of Grids E15A and F15A were re-excavated in 2017. Figure 5-3 shows the post-excavation pit bottom survey points and 1-ft post-excavation contours representing the 2017 as-built pit bottom elevations. As shown on Figure 5-3:

- Excavation in Grid A'15A was extended to the Site 143 northern property line and to the proposed TEE.
- Excavation in Grids A15A, B15A, C15A, and D15A was extended to the Site 143 northern property line and to sufficient depths to remove observed CCPW material.

Table 5-3
CCPW Metals Analytical Results in the Unsaturated Soil Zone Compared to IGW Soil Screening Level and Soil Remediation Standards
Site 143, Garfield Avenue Group
PPG, Jersey City, New Jersey

- Excavation in Grids E15A and F15A was extended to the Site 143 northern property line at their original as-built TEEs.
- Excavation was extended into Grids A16A, B16A, B17A, C16A, C17A, D16A, and D17A to determine the limits of, and remove, the former building footer.
- Portions of Grids B17A and C17A were not re-excavated below the original as-built TEEs from 2014, and the re-excavated portions of Grids D16A and D17A did not extend below the original as-built TEEs.

For sample locations within the portions of the 2017 excavation that extended deeper than the original 2014 excavation, the as-built TEEs presented on this table were updated to reflect the 2017 as-built pit bottom elevations at the specific sample locations, as shown on Figure 5-3.