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March 2023

Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B) - Soil Final

NJDEP Program Interest Numbers: 777089, 629388, 629345,
G000008753, G000005480, and 025695

**PPG Garfield Avenue Group
Hudson County Chromate Sites
Jersey City, New Jersey**

Regulatory Forms

Case Inventory Document (CID)

Cover/Certification Form

Receptor Evaluation Form

Public Notification Form

Full Laboratory Data Deliverables Form

Case Name:

Garfield Avenue Group Chrome Sites – Site 137 South

PI #:

G000008753

Activity #:

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Case Inventory Document Version 1.5.1 02/04/21

AOC ID	AOC Type	AOC Description	Confirmed Contamination	Exclude AOC from Billing	AOC Status Achieved	Status Achieved Date	Incident Communication Center #s Managed in Case	NJDEP ID	Contaminated Media	Contaminants of Concern	Additional Contaminants of Concern	Additional Contaminants of Concern	Applicable Remediation Standard	Exposure Route	Additional Exposure Route	RA Type	Additional RA Type	Was an Order of Magnitude Evaluation Conducted?	Activity
137-1B	Environmental media - Media Soil, including soil vapor pore spaces	Chromate Chemical Production Waste (CCPW)-impacted material likely used as fill	Yes		RA	03/10/2023			Soil	Metals			AOC Specific ARS and Remediation Standards	Ingestion/Dermal	Inhalation	Excavation			AOC 137-1B covers Site 137 South (the southern portion of Site 137B) located at 25 Halladay Street, Block 21510 Lot 4. This AOC covers the remainder of Site 137B not covered by AOC 137-1A. The New Jersey Department of Environmental Protection (NJDEP) Program Interest Number G000008753 applies to this AOC. Hexavalent chromium (Cr+6) and Chromate Chemical Production Waste (CCPW) metals (i.e., antimony, chromium, nickel, thallium, and vanadium) are the primary Contaminants of Concern (COCs) in this AOC. Remedial investigation of Site 137 and adjacent properties was documented in the 2012 remedial investigation report (RIR). Delineation is complete for Cr+6 and CCPW metals. For the Garfield Avenue (GA) Group Sites (including AOC 137-1B), the NJDEP has approved an Alternative Remedial Standard (ARS) for vanadium (V) of 390 milligram per kilogram (mg/kg) for use in place of the Residential Direct Contact Soil Remediation Standard (RDCSRS). Synthetic Precipitation Leaching Procedure (SPLP) was used to calculate site-specific Impact to Groundwater Soil Remediation Standards (IGW SRS) for antimony (Sb) and nickel (Ni). The site-specific IGW SRS for Sb and Ni are 62.7 mg/kg and 170 mg/kg, respectively. The April 2012 Draft Remedial Action Work Plan (RAWP), Revision 2, for the GA Group, presented the plan for excavation and disposal of accessible source material and impacted soil in accordance with the Chromium Policy as the selected Remedial Action (RA). The Draft RAWP was conditionally approved by the NJDEP. The Final RAWP (Soil) Rev. 4 was submitted in September 2018 and approved by NJDEP on November 9, 2018. Within this AOC, target excavation elevations for the removal of CCPW and COCs in soil were presented in Memoranda from PPG to NJDEP between August 2013 and April 2014. The RA implemented for this AOC includes excavation and disposal of CCPW-impacted soil. Due to access and logistical issues, the remedial excavation activities were conducted in multiple stages between August 2018 and November 2021. Excavation activities at Site 137 were initially conducted between August 2018 and April 2019, and remaining excavations were postponed until access to the Former Ten West Apparel Property was obtained. The remaining portions of AOC 137-1B were excavated and backfilled during Phase 3B South remediation activities, which began in April 2021 and were completed in November 2021. Restoration of AOC 133E-1B was completed in February 2022. The Remedial Action Report – Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B) documents the excavation remedial activities pertaining to this AOC. The soil RA of AOC 137-1B is effective in protecting public health and safety and the environment, and no further soil remediation is warranted at this AOC.
137-1A	Environmental media - Media Soil, including soil vapor pore spaces	Chromate Chemical Production Waste (CCPW)-impacted material likely used as fill	Yes		NFA-AOC DEP Issued (Unrestricted Use)	06/26/2020			Soil	Metals			AOC Specific ARS and Remediation Standards	Ingestion/Dermal	Inhalation	Excavation			AOC 137-1A covers Site 137 North (comprised of Site 137A and the northern portion of Site 137B), where remediation was completed in 2015. Hexavalent chromium (Cr+6) and Chromate Chemical Production Waste (CCPW) metals (antimony, chromium, nickel, thallium, and vanadium) are the primary constituents of concern (COCs) in the area. Remedial investigation of Site 137 and adjacent properties was documented in the 2012 Remedial Investigation Report (RIR). Delineation is complete for Cr+6 and CCPW metals. For the Garfield Avenue (GA) Group sites and adjacent areas (including Site 137), the New Jersey Department of Environmental Protection (NJDEP) approved an Alternative Remedial Standard (ARS) for vanadium (V) of 390 milligrams per kilogram (mg/kg) for use in place of the Residential Direct Contact Soil Remediation Standard (RDCSRS). The April 2012 Draft Remedial Action Work Plan (RAWP) (Soil), Revision 2, for the GA Group, presented the plan for excavation and disposal of accessible source material and impacted soil, in accordance with the Chromium Policy, as the selected remedial action. The Draft RAWP was conditionally approved by the NJDEP. The Final RAWP (Soil) Rev. 4 was submitted in September 2018 and approved by NJDEP on November 9, 2018. Within this AOC, target excavation elevations for the removal of CCPW and COCs in soil were presented in memoranda from PPG to NJDEP between August 2013 and April 2014. The excavation of chromium-impacted soil and the placement of clean backfill in AOC 137-1A began in July 2014 and was completed in August 2015. Clean fill for a majority of the site was amended with FerroBlack-H. Restoration of AOC 137-1A was completed in January 2018. Compliance with the antimony Soil Remediation Standard (SRS) was demonstrated through compliance averaging. The NJDEP issued a Consent Judgement Compliance Letter for Unrestricted Use - Soil for AOC 137-1A, which serves as the equivalent of a No Further Action Letter, on June 26, 2020.
137-2A	Environmental media - Media Soil, including soil vapor pore spaces	Soil impacted from Manufactured Gas Plant (MGP)-constituents emanating from Site 114	Yes		RA	07/23/2019			Soil	VO + PAHs			Remediation Standards	Ingestion/Dermal	Inhalation	Excavation			This AOC covers Manufactured Gas Plant (MGP)-related impacts in Site 137 North (comprised of Site 137A and the northern portion of Site 137B) where remediation was conducted in 2015. PPG and PSEG are jointly responsible for remediation of MGP parameters associated with the former Halladay Street Gas Works MGP. PSEG is taking the lead on closing out MGP-related impacts in accordance with the Licensed Site Remediation Professional (LSRP) Program per the July 2019 agreement between PPG and PSEG. The MGP Area of Concern (AOC) identified herein is superseded by MGP AOCs established by PSEG and is no longer relevant. Information required to document remediation of MGP-related impacts will be presented by PSEG in their forthcoming RAR.

Case Name

Garfield Avenue Group Chrome Sites – Site 133

PI #:

025695

Activity #:

Case Inventory Document Version 1.5.1 02/04/21

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AOC ID	AOC Type	AOC Description	Confirmed Contamination	Exclude AOC from Billing	AOC Status Achieved	Status Achieved Date	Incident Communication Center #s Managed in	NJDEP ID	Contaminated Media	Contaminants of Concern	Additional Contaminants of Concern	Additional Contaminants of Concern	Applicable Remediation Standard	Exposure Route	Additional Exposure Route	RA Type	Additional RA Type	Was an Order of Magnitude Evaluation Conducted?	Activity
133E-1B	Environmental media - Media Soil, including soil vapor pore spaces	Chromate Chemical Production Waste (CCPW)-impacted material likely used as fill	Yes		RA	03/10/2023			Soil	Metals			AOC Specific ARS and Remediation Standards	Ingestion/Dermal	Inhalation	Excavation		AOC 133E-1B covers the southern portion of Site 133 East located at 22 Halladay Street, Block 21509 Lot 1. This AOC covers the remainder of Site 133 East not covered by AOC 133E-1A. The New Jersey Department of Environmental Protection (NJDEP) Program Interest Number 025695 applies to this AOC. Hexavalent chromium (Cr+6) and Chromate Chemical Production Waste (CCPW) metals (i.e., antimony, chromium, nickel, thallium, and vanadium) are the primary Contaminants of Concern (COCs) in AOC 133E-1B. Remedial investigation of Site 133E and adjacent properties was documented in the 2012 remedial investigation report (RIR). Delineation is complete for Cr+6 and CCPW metals. For the Garfield Avenue (GA) Group Sites (including AOC 133E-1B), the NJDEP has approved an Alternative Remedial Standard (ARS) for vanadium (V) of 390 milligram per kilogram (mg/kg) for use in place of the Residential Direct Contact Soil Remediation Standard (RDCSRS). Synthetic Precipitation Leaching Procedure (SPLP) was used to calculate site-specific Impact to Groundwater Soil Remediation Standards (IGW SRS) for antimony (Sb) and nickel (Ni). The site-specific IGW SRS for Sb and Ni are 62.7 mg/kg and 170 mg/kg, respectively. The April 2012 Draft Remedial Action Work Plan (RAWP), Revision 2, for the GA Group, presented the plan for excavation and disposal of accessible source material and impacted soil in accordance with the Chromium Policy as the selected Remedial Action (RA). The Draft RAWP was conditionally approved by the NJDEP. The Final RAWP (Soil) Rev. 4 was submitted in September 2018 and approved by NJDEP on November 9, 2018. Within this AOC, target excavation elevations for the removal of CCPW and COCs in soil were presented in Memoranda from PPG to NJDEP between August 2013 and October 2015. The RA implemented for this AOC includes excavation and disposal of CCPW-impacted soil. Due to access and logistical issues, the remedial excavation activities were conducted in multiple stages between April 2015 and November 2021. The northern portion of AOC 133E-1B was previously excavated during the Site 133 East RA, which was completed between April 2015 and October 2015. Additional excavation was required for the southern portion of AOC 133E-1B, which was subsequently implemented along with the Phase 3B South RA between April 2021 and November 2021. Restoration of the southern portion of AOC 133E-1B was completed in February 2022. The Remedial Action Report – Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B) documents the excavation remedial activities pertaining to this AOC. The soil RA of AOC 133E-1B is effective in protecting public health and safety and the environment, and no further soil remediation is warranted at this AOC.	
133E-1A	Environmental media - Media Soil, including soil vapor pore spaces	Chromate Chemical Production Waste (CCPW)-impacted material likely used as fill	Yes		NFA-AOC DEP Issued (Unrestricted Use)	03/24/2020			Soil	Metals			AOC Specific ARS and Remediation Standards	Ingestion/Dermal	Inhalation	Excavation		AOC 133E-1A covers the northern portion of Site 133 East located at 22 Halladay Street where remediation was completed in April 2015 through January 2018. Hexavalent chromium (Cr+6) and CCPW metals (antimony, chromium, nickel, thallium, and vanadium) are the primary constituents of concern (COCs) in the area. Remedial investigation of Site 133 East and adjacent properties was documented in the 2012 Remedial Investigation Report and the 2018 Supplemental Soil Remedial Investigation Report. Delineation is complete for Cr+6 and CCPW metals. For the Garfield Avenue (GA) Group Sites and adjacent areas (including Site 133 East), the New Jersey Department of Environmental Protection (NJDEP) has approved an Alternative Remedial Standard (ARS) for vanadium (V) of 390 milligrams per kilogram (mg/kg) for use in place of the Residential Direct Contact Soil Remediation Standard (RDCSRS). Synthetic Precipitation Leaching Procedure (SPLP) was used to calculate site-specific Impact to Groundwater Soil Remediation Standards (IGW SRS) for antimony (Sb) and nickel (Ni). The site-specific IGW SRS for Sb and Ni are 62.7 mg/kg and 170 mg/kg, respectively. The April 2012 Draft Remedial Action Work Plan (RAWP) (Soil), Revision 2, for the GA Group, presented the plan for excavation and disposal of accessible source material and impacted soil in accordance with the Chromium Policy as the selected remedial action. The Draft RAWP was conditionally approved by the NJDEP. The Final RAWP (Soil) Rev. 4 was submitted in September 2018 and approved by NJDEP on November 9, 2018. Within this AOC, target excavation elevations for the removal of CCPW and COCs in soil were presented in memoranda from PPG to NJDEP between August 2013 and October 2015. The August 2019 Remedial Action Report for Site 133E (AOC 133E-1A and AOC 133E-2A) and Site 135 (AOC 135-1) Soil, PPG Garfield Avenue Group, Hudson County Chromate Sites, Jersey City, New Jersey documented the excavation of chromium-impacted soil and the placement of clean backfill in 133E-1A, which were completed in multiple mobilizations between April 2015 and January 2018. Compliance with the antimony Soil Remediation Standard (SRS) and the thallium Default Impact to Groundwater Soil Screening Level (DIGWSSL) was demonstrated through compliance averaging. Clean fill for a majority of the site was amended with FerroBlack-H. Restoration of the remediated portion of Site 133 East was completed in February 2018. The NJDEP issued a Consent Judgment Compliance letter for Unrestricted Use - Soil for AOC 133E-1A, which serves as the equivalent of a No Further Action Letter, on March 24, 2020.	
133E-2A	Environmental media - Media Soil, including soil vapor pore spaces	Soil impacted from Manufactured Gas Plant (MGP) constituents	Yes		RA	08/22/2019			Soil	PAHs			Remediation Standards	Ingestion/Dermal	Inhalation	Excavation	Capping	This AOC covers Manufactured Gas Plant (MGP)-related impacts in the northern portion of Site 133 East located at 22 Halladay Street where remediation was conducted between April 2015 and January 2018. PPG and PSEG are jointly responsible for remediation of MGP parameters associated with the former Halladay Street Gas Works MGP. PSEG is taking the lead on closing out MGP-related impacts in accordance with the Licensed Site Remediation Professional (LSRP) Program per the July 2019 agreement between PPG and PSEG. The MGP Area of Concern (AOC) identified herein is superseded by MGP AOCs established by PSEG and is no longer relevant. Information required to document remediation of MGP-related impacts will be presented by PSEG in their forthcoming RAR.	

Case Name:

Garfield Avenue Group Chrome Sites – Site 133 West

PI #:

629345

Activity #:

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P3B-1A	Environmental media - Media Soil, including soil vapor pore spaces	Chromate Chemical Production Waste (CCPW)-impacted material likely used as fill	Yes		RA	03/10/2023			Soil	Metals			AOC Specific ARS and Remediation Standards	Ingestion/Dermal	Inhalation	Excavation			AOC P3B-1A covers Site 133 West located at 15 Halladay Street, Block 21510 Lot 5, with the New Jersey Department of Environmental Protection (NJDEP) Program Interest (PI) Number 629345. AOC P3B-1A also covers the Former Fishbein Property (PI Number 629388) and the Former Ten West Apparel Property (PI Number 777089). Hexavalent chromium (Cr+6) and Chromate Chemical Production Waste (CCPW) metals (i.e., antimony, chromium, nickel, thallium, and vanadium) are the primary Contaminants of Concern (COCs) in this AOC. Remedial Investigation of Site 133 West and adjacent properties was documented in the 2012 Remedial Investigation Report (RIR). Delineation is complete for Cr+6 hexavalent chromium Cr (VI) and CCPW metals. For the Garfield Avenue (GA) Group Sites (including AOC P3B-1A), the NJDEP has approved an Alternative Remedial Standard (ARS) for vanadium (V) of 390 milligram per kilogram (mg/kg) for use in place of the Residential Direct Contact Soil Remediation Standard (RDCSRS). Synthetic Precipitation Leaching Procedure (SPLP) was used to calculate site-specific Impact to Groundwater Soil Remediation Standards (IGW SRS) for antimony (Sb) and nickel (Ni). The site-specific IGW SRS for Sb and Ni are 62.7 mg/kg and 170 mg/kg, respectively. The April 2012 Draft Remedial Action Work Plan (RAWP), Revision 2, for the GA Group, presented the plan for excavation and disposal of accessible source material and impacted soil in accordance with the Chromium Policy as the selected Remedial Action (RA). The Draft RAWP was conditionally approved by the NJDEP. The Final RAWP (Soil) Rev. 4 was submitted in September 2018 and approved by NJDEP on November 9, 2018. The RA implemented for this AOC includes excavation and disposal of CCPW-impacted soil. Due to access and logistical issues, the remedial excavation activities were conducted in multiple stages between August 2018 and November 2021. Excavation activities at Site 133 West (AOC P3B-1A) were initially conducted between August 2018 and April 2019, and remaining excavations were postponed until access to the Former Ten West Apparel Property was obtained. The remaining portions of AOC P3B-1A within Site 133 West were excavated and backfilled during Phase 3B South remediation activities, which began in April 2021 and were completed in November 2021. Restoration of AOC P3B-1A (Site 133 West) was completed in February 2022. The Remedial Action Report – Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC 133S-1B, and AOC 137-1B) documents the excavation remedial activities pertaining to this AOC. The soil RA of AOC P3B-1A (Site 133W) is effective in protecting public health and safety and the environment, and no further soil remediation is warranted at this AOC.

Case Name:

Garfield Avenue Group Chrome Sites – Former Fishbein Property

PI #:

629388

Activity #:

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P3B-1A	Environmental media - Media Soil, including soil vapor pore spaces	Chromate Chemical Production Waste (CCPW)-impacted material likely used as fill	Yes		RA	03/10/2023			Soil	Metals			AOC Specific ARS and Remediation Standards	Ingestion/Dermal	Inhalation	Excavation			AOC P3B-1A covers the Former Fishbein Property located at 816 Garfield Avenue, Block 21510 Lot 11, with the New Jersey Department of Environmental Protection (NJDEP) Program Interest (PI) Number 629388. AOC P3B-1A also covers Site 133 West (PI Number 629345) and the Former Test West Apparel Property (PI Number 777089). Hexavalent chromium and Chromate Chemical Production Waste (CCPW) metals (i.e., antimony, chromium, nickel, thallium, and vanadium) are the primary Contaminants of Concern (COCs) in this AOC. Remedial investigation of the Former Fishbein Property and adjacent properties was documented in the 2012 and 2018 Remedial Investigation Reports (RIR). Delineation is complete for hexavalent chromium Cr (VI) and CCPW metals. For the Garfield Avenue (GA) Group Sites (including AOC P3B-1A), the NJDEP has approved an Alternative Remedial Standard (ARS) for vanadium (V) of 390 milligram per kilogram (mg/kg) for use in place of the Residential Direct Contact Soil Remediation Standard (RDCSRS). Synthetic Precipitation Leaching Procedure (SPLP) was used to calculate site-specific Impact to Groundwater Soil Remediation Standards (IGW SRS) for antimony (Sb) and nickel (Ni). The site-specific IGW SRS for Sb and Ni are 62.7 mg/kg and 170 mg/kg, respectively. The April 2012 Draft Remedial Action Work Plan (RAWP), Revision 2, for the GA Group, presented the plan for excavation and disposal of accessible source material and impacted soil in accordance with the Chromium Policy as the selected Remedial Action (RA). The Draft RAWP was conditionally approved by the NJDEP. The Final RAWP (Soil) Rev. 4 was submitted in September 2018 and approved by NJDEP on November 9, 2018. The RA implemented for this AOC includes excavation and disposal of CCPW-impacted soil, which were completed during Phase 3B South remedial activities occurring from April 2021 to November 2021. Restoration of AOC P3B-1A (Former Fishbein Property) was completed in February 2022. The Remedial Action Report – Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B) documents the excavation remedial activities pertaining to this AOC. The soil RA of AOC P3B-1A (Former Fishbein Property) is effective in protecting public health and safety and the environment, and no further soil remediation is warranted at this AOC.

Case Name:

Garfield Avenue Group Chrome Sites – Former Ten West Apparel Property

PI #:

777089

Activity #:

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P3B-1A	Environmental media - Media Soil, including soil vapor pore spaces	Chromate Chemical Production Waste (CCPW)-impacted material likely used as fill	Yes		RA	03/10/2023			Soil	Metals			AOC Specific ARS and Remediation Standards	Ingestion/Dermal	Inhalation	Excavation			AOC P3B-1A covers the Former Ten West Apparel Property located at 800 Garfield Avenue, Block 21510 Lot 39, with the New Jersey Department of Environmental Protection (NJDEP) Program Interest (PI) Number 777089. AOC P3B-1A also covers Site 133 West (PI Number 629345) and the Former Fishbein Property (PI Number 629388). Hexavalent chromium and Chromate Chemical Production Waste (CCPW) metals (i.e., antimony, chromium, nickel, thallium, and vanadium) are the primary Contaminants of Concern (COCs) in this AOC. Remedial investigation of the Former Ten West Apparel Property and adjacent properties was documented in the 2012 and 2018 Remedial Investigation Reports (RIRs). Delineation is complete for hexavalent chromium Cr (VI) and CCPW metals. For the Garfield Avenue (GA) Group Sites (including AOC P3B-1A), the NJDEP has approved an Alternative Remedial Standard (ARS) for vanadium (V) of 390 milligram per kilogram (mg/kg) for use in place of the Residential Direct Contact Soil Remediation Standard (RDCSRS). Synthetic Precipitation Leaching Procedure (SPLP) was used to calculate site-specific impact to Groundwater Soil Remediation Standards (IGW SRS) for antimony (Sb) and nickel (Ni). The site-specific IGW SRS for Sb and Ni are 62.7 mg/kg and 170 mg/kg, respectively. The April 2012 Draft Remedial Action Work Plan (RAWP), Revision 2, for the GA Group, presented the plan for excavation and disposal of accessible source material and impacted soil in accordance with the Chromium Policy as the selected Remedial Action (RA). The Draft RAWP was conditionally approved by the NJDEP. The Final RAWP (Soil) Rev. 4 was submitted in September 2018 and approved by NJDEP on November 9, 2018. The RA implemented for this AOC includes excavation and disposal of CCPW-impacted soil, which were completed during Phase 3B South remedial activities occurring from April 2021 to November 2021. Restoration of AOC P3B-1A (Former Ten West Apparel Property) was completed in February 2022. The Remedial Action Report – Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B) documents the excavation remedial activities pertaining to this AOC. The soil RA of AOC P3B-1A (Former Ten West Apparel Property) is effective in protecting public health and safety and the environment, and no further soil remediation is warranted at this AOC.

Case Name

Garfield Avenue Group Chrome Sites – Halladay Street South

PI #:

G000005480

Activity #:

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AOC ID	AOC Type	AOC Description	Confirmed Contamination	Exclude AOC from Billing	AOC Status Achieved	Status Achieved Date	Incident Communication Center #s Managed in Case	NJDEP ID	Contaminated Media	Contaminants of Concern	Additional Contaminants of Concern	Additional Contaminants of Concern	Applicable Remediation Standard	Exposure Route	Additional Exposure Route	RA Type	Additional RA Type	Was an Order of Magnitude Evaluation Conducted?	Activity
HSS-1B	Environmental media - Media Soil, including soil vapor pore spaces	Chromate Chemical Production Waste (CCPW)-impacted material likely used as fill	Yes		RA	03/10/2023			Soil	Metals			AOC Specific ARS and Remediation Standards	Ingestion/Dermal	Inhalation	Excavation			This AOC covers the southern portion of Halladay Street South (HSS), which is bordered by Site 133 West, Site 133 East, the Former Ten West Property, and Caven Point Avenue. This AOC covers the remainder of HSS not covered by HSS-1A. The New Jersey Department of Environmental Protection (NJDEP) Program Interest Number G000005480 applies to this AOC. Hexavalent chromium (Cr+6) and Chromate Chemical Production Waste (CCPW) metals (i.e., antimony, chromium, nickel, thallium, and vanadium) are the primary Contaminants of Concern (COCs) in AOC HSS-1B. Remedial investigation of HSS and adjacent properties was documented in the 2012 remedial investigation report (RIR). Delineation is complete for Cr+6 and CCPW metals. For the Garfield Avenue (GA) Group Sites (including HSS), the NJDEP has approved an Alternative Remedial Standard (ARS) for vanadium (V) of 390 milligram per kilogram (mg/kg) for use in place of the Residential Direct Contact Soil Remediation Standard (RDCSRS). Synthetic Precipitation Leaching Procedure (SPLP) was used to calculate site-specific Impact to Groundwater Soil Remediation Standards (IGW SRS) for antimony (Sb) and nickel (Ni). The site-specific IGW SRS for Sb and Ni are 62.7 mg/kg and 170 mg/kg, respectively. The April 2012 Draft Remedial Action Work Plan (RAWP) (Soil), Revision 2, for the GA Group, presented the plan for excavation and disposal of accessible source material and impacted soil in accordance with the Chromium Policy as the selected Remedial Action RA). The Draft RAWP was conditionally approved by the NJDEP. The Final RAWP (Soil) Rev. 4 was submitted in September 2018 and approved by NJDEP on November 9, 2018. Within this AOC, target excavation elevations for the removal of CCPW and COCs in soil were presented in Memoranda from PPG to NJDEP between August 2013 and April 2015. The RA implemented for this AOC includes excavation and disposal of CCPW-impacted soil. Due to access and logistical issues, the remedial excavation activities were conducted in multiple stages between April 2015 and November 2021. The northern portion of AOC HSS-1B was previously excavated during the Halladay Street South RA completed between May 2015 and October 2015. Additional excavation was required for the southern portion of AOC HSS-1B, which was subsequently implemented along with the Phase 3B South RA between April 2021 and November 2022. Restoration of the southern portion of AOC HSS-1B was completed in February 2022. The Remedial Action Report – Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B) documents the excavation remedial activities pertaining to this AOC. The soil RA of AOC HSS-1B is effective in protecting public health and safety and the environment, and no further soil remediation is warranted at this AOC.
HSS-1A	Environmental media - Media Soil, including soil vapor pore spaces	Chromate Chemical Production Waste (CCPW)-impacted material likely used as fill	Yes		NFA-AOC DEP Issued (Unrestricted Use)	06/30/2020			Soil	Metals			AOC Specific ARS and Remediation Standards	Ingestion/Dermal	Inhalation	Excavation			AOC HSS-1A covers the northern portion of Halladay Street South (HSS) where remediation was completed in 2015. Hexavalent chromium (Cr+6) and chromate chemical production waste (CCPW) metals (antimony, chromium, nickel, thallium, and vanadium) are the primary constituents of concern (COCs) in the area. Remedial investigation of HSS and adjacent properties was documented in the 2012 Remedial Investigation Report (RIR). Delineation is complete for Cr+6 and CCPW metals. For the Garfield Avenue (GA) Group Sites (including HSS), the New Jersey Department of Environmental Protection (NJDEP) has approved an Alternative Remedial Standard (ARS) for vanadium (V) of 390 milligram per kilogram (mg/kg) for use in place of the Residential Direct Contact Soil Remediation Standard (RDCSRS). The April 2012 Draft Remedial Action Work Plan (RAWP) (Soil), Revision 2, for the GA Group, presented the plan for excavation and disposal of accessible source material and impacted soil in accordance with the Chromium Policy as the selected remedial action. The Draft RAWP was conditionally approved by the NJDEP. The Final RAWP (Soil) Rev. 4 was submitted in September 2018 and approved by NJDEP on November 9, 2018. Within this AOC, target excavation elevations for the removal of CCPW and COCs in soil were presented in memoranda from PPG to NJDEP between August 2013 and October 2015. The October 2019 Remedial Action Report for Halladay Street South (AOC HSS-1A and AOC HSS-2A) Soil documented the excavation of chromium-impacted soil in AOC HSS-1A began in May 2015 and was completed in October 2015. Clean fill for a majority of the site was amended with FerroBlack-H. Restoration of the remediated portion of HSS was completed in January 2018. The NJDEP issued a Consent Judgement Compliance letter for Unrestricted Use - Soil for AOC HSS-1A, which serves as the equivalent of a No Further Action Letter, on June 30, 2020.
AOC HSS-2A	Environmental media - Media Soil, including soil vapor pore spaces	Soil impacted from Manufactured Gas Plant (MGP)-constituents emanating from Site 114	Yes		RA	10/07/2019			Soil	VO + PAHs			Remediation Standards	Ingestion/Dermal	Inhalation	Excavation	Capping		This AOC covers Manufactured Gas Plant (MGP)-related constituents the northern portion of HSS. PPG and PSEG are jointly responsible for remediation of MGP parameters associated with the former Halladay Street Gas Works MGP. PSEG is taking the lead on closing out MGP-related impacts in accordance with the Licensed Site Remediation Professional (LSRP) Program per the July 2019 agreement between PPG and PSEG. The MGP Area of Concern (AOC) identified herein is superseded by MGP AOCs established by PSEG and is no longer relevant. Information required to document remediation of MGP-related impacts will be presented by PSEG in their forthcoming RAR.



New Jersey Department of Environmental Protection
Site Remediation and Waste Management Program

COVER/CERTIFICATION FORM

(Submit with Remedial Phase Report, Receptor Evaluation, and CEA Forms)

Date Stamp
(For Department use only)

SECTION A. SITE INFORMATION

Site Name: Phase 3B South and Portions of Site 133 East and Halladay Street South

AKAs: Former Fishbein Property, Former Ten West Apparel Property

Street Address: 15, 22, 25 Halladay Street, 800 and 816 Garfield Avenue and Halladay Street South

Municipality: Jersey City (Township, Borough or City)

County: Hudson Zip Code: 07035

Program Interest (PI) Number(s): 777089, 629388, 629345, G000008753, G000005480, and 025695

Case Tracking Number(s) for this submission: _____

Date Remediation Initiated Pursuant to N.J.A.C. 7:26C-2: 07/19/1990

State Plane Coordinates for a central location at the site: Easting: 610707 Northing: 682487

List current Municipal Block and Lot Numbers of the Site:

Site includes AOC HSS-1B, which is a municipal roadway and does not have a block and lot.

Block # 21510 Lot #(s) 11

Block # 21509 Lot #(s) 1

Block # 21510 Lot #(s) 39

Block # _____ Lot #(s) _____

Block # 21510 Lot #(s) 4

Block # _____ Lot #(s) _____

Block # 21510 Lot #(s) 5

Block # _____ Lot #(s) _____

SECTION B. SUBMISSION STATUS

1. Indicate how the Electronic Data Deliverable (EDD) for this submission is being provided to the NJDEP:

☒ Via Email at srpedd@dep.nj.gov (attach NJDEP confirmation email); or

☐ CD (attach to this submission)

☐ Not Applicable – No EDD

2. Complete the following Submission and Permit Status Table:

Remedial Phase Documents	N/A	Included in this Submission	Previously Submitted	Date of Submission	Date of Revised Submission	Date of Previous NJDEP Approval	Date of Document Withdrawal
Preliminary Assessment Report	☒	☐	☐				
Site Investigation Report	☒	☐	☐				
Remedial Investigation Report	☐	☐	☒	02/27/2012	08/30/2018	10/22/2018	
Remedial Action Work Plan (GA Group)	☐	☐	☒	12/05/2014	09/27/2018	11/09/2018	
Remedial Action Report	☐	☒	☐				
Response Action Outcome	☒	☐	☐				
Other Submissions							
Alternative Soil Remediation Standard and/or Screening level Application Form	☐	☐	☒	12/06/2016		12/28/2016	
Case Inventory Document		☒					
Classification Exception Area / Well Restriction Area (CEA/WRA)	☐	☐	☒	04/18/2018	05/30/2018	06/11/2018	
Discharge to Ground Water Permit by Rule Authorization Request	☐	☐	☒	08/30/2012	07/13/2017	10/11/2017	

IEC Engineered System Response Action Report	☒	☐	☐				
Immediate Environmental Concern Report	☒	☐	☐				
LNAPL Interim Remedial Measure Report	☒	☐	☐				
Public Notification	☐	☐	☒	08/25/2021			
Receptor Evaluation	☐	☒	☐				
Technical Impracticability Determination	☒	☐	☐				
Vapor Concern Mitigation Report	☒	☐	☐				
Permit Application – list:	☐						
Water Use Registration		☐	☒	05/12/2010		06/30/2010	
		☐	☐				
		☐	☐				
		☐	☐				
Radionuclide Remedial Action Report	☒	☐	☐				
Radionuclide Remedial Action Workplan	☒	☐	☐				
Radionuclide Remedial Investigation Report	☒	☐	☐				
Radionuclide Remedial Investigation Workplan	☒	☐	☐				

SECTION C. SITE USE

Current Site Use: (check all that apply)

- ☐ Industrial ☐ Agricultural
☐ Residential ☐ Park or recreational use
☐ Commercial ☒ Vacant
☐ School or child care ☐ Government
☒ Other: Roadway

Intended Future Site Use, if known: (check all that apply)

- ☐ Industrial ☐ Park or recreational use
☐ Residential ☐ Vacant
☐ Commercial ☐ Government
☐ School or child care ☐ Future site use unknown
☒ Other: Roadway - Canal Crossing Redevelopment**

SECTION D. CASE TYPE: (check all that apply)

- | | |
|--|---|
| ☒ Administrative Consent Order (ACO) | ☐ Landfill (SRP subject only) |
| ☐ Brownfield Development Area (BDA) | ☐ Regulated Underground Storage Tank (UST) |
| ☐ Child Care Facility | ☐ Remediation Agreement (RA)/Remediation Certification |
| ☒ Chrome Site (Chromate chemical production waste) | ☐ School Development Authority (SDA) |
| ☐ Coal Gas | ☐ School facility |
| ☐ Due Diligence with RAO | ☐ Spill Act Defense – Government Entity |
| ☐ Hazardous Discharge Remediation Fund (HDSRF) Grant/Loan | ☐ Spill Act Discharge |
| ☐ ISRA | ☐ UST Grant/Loan |
| | ☐ Other: _____ |

Federal Case (check all that apply)

- ☐ RCRA GPRA 2020 ☐ CERCLA/NPL ☐ USDOD ☐ USDOE

1. Is the party conducting remediation a government entity? ☐ Yes ☒ No
- If "Yes," check one: ☐ Federal ☐ State ☐ Municipal ☐ County

SECTION E. PUBLIC FUNDS

Did the remediation utilize public funds? ☐ Yes ☒ No

If "Yes," check applicable:

- | | | |
|--------------------------------------|--|---|
| ☐ UST Grant | ☐ UST Loan | ☐ Brownfield Reimbursement Program |
| ☐ HDSRF Grant | ☐ HDSRF Loan | ☐ Landfill Reimbursement Program |
| ☐ Spill Fund | ☐ Schools Development Authority | ☐ Environmental Infrastructure Trust |

SECTION F. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT

LSRP ID Number: _____

First Name: _____ Last Name: _____

Phone Numbers: _____ Ext.: _____ Fax: _____

Mailing Address: _____

Municipality: _____ State: _____ Zip Code: _____

Email Address: _____

This statement shall be signed by the LSRP who is submitting this notification in accordance with N.J.S.A. 58:10C-14, and N.J.S.A. 58:10B-1.3b(1) and (2).

- (1) *I certify, as a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C-1 et seq. to conduct business in New Jersey, that for the remediation described in this submission, and all attachments included in this submission, I personally: Managed, supervised, or performed the remediation conducted at this site that is described in this submission, and all attachments included in this submission; and/or periodically reviewed and evaluated the work performed by other persons that forms the basis for the information in this submission; and/or completed the work of another site remediation professional, licensed or not, after having: (1) reviewed all available documentation on which I relied; (2) conducted a site visit and observed the then-current conditions and verified the status of as much of the work as was reasonably observable; and (3) concluded, in the exercise of my independent professional judgment, that there was sufficient information upon which to complete any additional phase of remediation and prepare workplans and reports related thereto.*
- (2) *I certify:*
- *That I have read this submission and all attachments to this submission;*
 - *That in performing the professional services as the licensed site remediation professional for the entire site or each area of concern, I adhered to the professional conduct standards and requirements governing licensed site remediation professionals provided in N.J.S.A. 58:10C-16;*
 - *That the remediation conducted at the entire site or each area of concern, that is described in this submission and all attachments to this submission, was conducted pursuant to and in compliance with the remediation requirements in N.J.S.A. 58:10C-14.c;*
 - *That the remediation described in this submission, and all attachments to this submission, was conducted pursuant to and in compliance with the regulations of the Site Remediation Professional Licensing Board at N.J.A.C. 7:26I; and*
 - *That the information contained in this submission and all attachments to this submission is true, accurate, and complete.*
- (3) *I certify, when this submission includes a response action outcome, that the entire site or each area of concern has been remediated in compliance with all applicable statutes, rules, and regulations and is protective of public health and safety and the environment.*
- (4) *I certify that no other person is authorized or able to use any password, encryption method, or electronic signature that the Board or the Department have provided to me.*
- (5) *I certify that I understand and acknowledge that:*
- *If I knowingly make a false statement, representation, or certification in any document or information I submit to the Department I may be subject to civil and administrative enforcement pursuant to N.J.S.A. 58:10C-17.a.1(a) through (f) by the Board, including but not limited to license suspension, revocation, or denial of renewal; and*
 - *If I purposely, knowingly, or recklessly make a false statement, representation, or certification in any application, form, record, document or other information submitted to the Department or required to be maintained pursuant to the Site Remediation Reform Act, I shall be guilty, upon conviction, of a crime of the third degree and shall, notwithstanding the provisions of subsection b. of N.J.S.2C:43-3, be subject to a fine of not less than \$5,000 nor more than \$75,000 per day of violation, or by imprisonment, or both.*
- (6) *I certify that I have read this certification prior to signing, certifying, and making this submission.*

LSRP Signature: _____

Date: _____

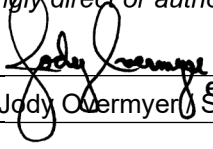
LSRP Name: _____

Company Name: _____

SECTION G. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATIONFull Legal Name of the Person Responsible for Conducting the Remediation: PPG Industries, Inc.Representative First Name: Jody Representative Last Name: OvermyerTitle: Senior Remediation Project ManagerPhone Number: (412) 235-8881 Ext.: _____ FAX: _____Mailing Address: 440 College Park DriveMunicipality: Monroeville State: Pennsylvania Zip code: 15146Email Address: Overmyer@ppg.com

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature:  Date: 3/9/2023Name/Title: Jody Overmyer, Senior Remediation Project Manager**For CEA Submissions:**

☐ Check this box if the person above is also the property owner of the site or their representative. If this person is not the site property owner, please ensure the site property owner's name and address is in the first line of the table in Section E.2 of the Classification Exception Area / Well Restriction Area (CEA/WRA) Fact Sheet Form.

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420



New Jersey Department of Environmental Protection
Site Remediation and Waste Management Program

RECEPTOR EVALUATION (RE) FORM

Date Stamp
(For Department use only)

SECTION A. SITE

Site Name: Phase 3B South and Portions of Site 133 East and Halladay Street South

Program Interest (PI) Number(s): 777089, 629388, 629345, G000008753, G000005480, and 025695

Communication Center Number(s) and/or ISRA number(s) for this submission: (as many as will fit in the space provided)

**This form must be attached to the Cover/Certification Form
if not submitted through a Remedial Phase Online Service**

Indicate the type of submission:

☐ Initial RE Submission

☒ Updated RE Submission

Indicate the reason for submission of an updated RE form

☐ Submission of an Immediate Environmental Concern (IEC) source control report;

☐ Submission of a Remedial Investigation Report;

☒ Submission of a Remedial Action Report;

Check if included in updated RE

☐ The known concentration or extent of contamination in any medium has increased;

☐ A new AOC has been identified;

☐ A new receptor is identified;

☐ A new exposure pathway has been identified.

SECTION B. ON SITE AND SURROUNDING PROPERTY USE

1. Identify any sensitive populations/uses that are currently on-site or surrounding property usage within 200 feet of the site property boundary (check all that apply):

	On-site	Off-site
None of the following	☒	☐
Residences or residential property	☐	☒
Public or Private Schools Grades K-12	☐	☐
Child care centers	☐	☐
Public parks, playgrounds or other recreation areas	☐	☒
Other sensitive population use(s) Explain	☐	☐

If any of the above applies, attach a list of addresses, facility names, type of use, and a map depicting each location relative to the site. (See Attachment 1)

2. Current site uses (check all that apply):

☐ Industrial

☐ Residential

☐ Commercial

☐ School or child care

☐ Government

☐ Park or recreational use

☒ Vacant

☐ Agricultural

☒ Other: Public Roadway R.O.W.

3. Planned future on-site uses and off-site uses within 200 feet of the site boundary (check all that apply):

On-Site Off-Site

On-Site Off-Site

On-Site Off-Site

☐ Industrial

☒ Residential

☒ Commercial

☐ School or child care

☐ Government

☒ Park or recreational use

☐ Vacant

☐ Agricultural

☒ Other: Canal Crossing Redevelopment

Provide a map depicting the location of the proposed changes in land use.

(See Note 1 below)

SECTION C. DESCRIPTION OF CONTAMINATION

1. Identify if any of the following exist at the site:

Yes No

☐ ☒ Free product [N.J.A.C. 7:26E-1.8] identified is ☐ LNAPL* or ☐ DNAPL**.

Date identified: _____

☐ ☒ Residual product [N.J.A.C. 7:26E-1.8]

☐ ☒ Other primary source materials not identified above (e.g., buried drums, containers, unsecured friable asbestos). See form instructions for additional information.

Explain: _____

* LNAPL – measured thickness of .01 feet or more

**DNAPL – See *Ground Water Technical Guidance and USEPA Assessment and Delineation of DNAPL Source Zones at Hazardous Waste Sites* (attached as Appendix A of the NJDEP GW Guidance) available at: http://www.nj.gov/dep/srp/guidance/#pa_si_ri_gw. Also, see US EPA DNAPL Overview available at: [http://clu.in.org/contaminantfocus/default.focus/sec/Dense_Nonaqueous_Phase_Liquids_\(DNAPLS\)/cat/Overview](http://clu.in.org/contaminantfocus/default.focus/sec/Dense_Nonaqueous_Phase_Liquids_(DNAPLS)/cat/Overview)

2. Soil Migration Pathway

Has soil contamination been delineated to the applicable Direct Contact Soil

Remediation Standard pursuant to N.J.A.C. 7:26E-4.2? ☒ Yes ☐ No

Are all soils either below the applicable Direct Contact Criteria or under an institutional control (i.e. deed notice)? ☒ Yes ☐ No

3. If this evaluation is submitted with a technical document that includes contaminant summary information, proceed to Section D. Otherwise, attach a brief summary of all currently available data and information to be included in the site investigation or remedial investigation report.

SECTION D. GROUND WATER USE

1. Have all potentially contaminated areas of concern been evaluated to determine if there is a potential that ground water is contaminated pursuant to N.J.A.C. 7:26E-3.5? ☒ Yes ☐ No

If “No,” proceed to Section E.

2. Is a ground water investigation required? ☒ Yes ☐ No

If “No,” proceed to Section E.

3. Has a groundwater investigation been conducted? ☒ Yes ☐ No

If “Yes”:

Has the laboratory data package been received? ☒ Yes ☐ No

If the laboratory data package has not been received, provide the expected due date for data: _____ and proceed to Section E.

If “No”:

Proceed to Section E.

4. Is ground water contaminated above the Ground Water Remediation Standards [N.J.A.C. 7:9C]? ☒ Yes ☐ No

If “Yes”: Provide the date that the laboratory data package was available and confirmed contamination was identified above the Ground Water Remediation Standards.

Date: 05/15/2007

If “No”: Proceed to Section E.

5. Has ground water contamination been delineated to the applicable Remediation Standard pursuant to N.J.A.C. 7:26E-4.3? ☒ Yes ☐ No

6. What is the ground water classification for this site as per N.J.A.C. 7:9C? (check all that apply)

☐ Class I-A ☒ Class II-A
☐ Class I-PL Pinelands Protection Area ☐ Class III-A
☐ Class I-PL Pinelands Preservation Area ☐ Class III-B

7. Has a well search been completed?.....☒ Yes ☐ No

Date of most recent or updated well search: 09/19/2022 (See Attachment 2)

8. Is a completed Well Search Spreadsheet or historical well search table attached and has an electronic copy of the spreadsheet been submitted to srpgis_wrs@dep.nj.gov.☒ Yes ☐ No

Note: Redacted wells must be excluded from all non-confidential documents including maps, tables, etc. (see RE Instructions).

If "No," explain: _____

9. Are any potable or irrigation wells located within ½ mile of the currently known extent of contamination?☐ Yes ☒ No

If "Yes,":

- A door to door survey is required in accordance with [N.J.A.C.7:26E-1.14(a)ii]. Attach results of the door to door survey.
- Identify if any of the following conditions exist based on the well search and door to door survey [N.J.A.C.7:26E-1.14(a)]:

Yes No

- | | | |
|--------------------------|--------------------------|---|
| ☐ | ☐ | Potable wells located within 500 feet from the downgradient edge of the currently known extent of contamination. |
| ☐ | ☐ | Potable wells located 250 feet upgradient or 500 feet side gradient of the currently known extent of contamination. |
| ☐ | ☐ | Ground water contamination from the discharge is located within a Tier 1 wellhead protection area (WHPA). |

10. Has sampling been conducted of ☐ potable well(s) and /or ☐ non-potable use well(s)?☐ Yes ☒ No

If "No," provide justification then proceed to Question 12.

11. Has contamination been identified in potable well(s), **not attributed to background conditions**, above the Class II Ground Water Remediation Standards or State Safe Drinking Water levels, N.J.A.C 7:1E, whichever is applicable?☐ Yes ☐ No

If "Yes":

- Provide the date laboratory data package was received: _____
- Follow the **IEC** Guidance Document at <http://www.nj.gov/dep/srp/guidance/IEC/index.html> for required actions and answer the following:
- Has an engineered system response action been completed on all impacted receptors?☐ Yes ☐ No
Provide a brief narrative description:

Date completed: _____ NJDEP Case Manager: _____

12. Has contamination been identified in non-potable well(s), **not attributed to background conditions**, above the Class II Ground Water Remediation Standards?.....☐ Yes ☒ No

If "Yes," provide the date laboratory data package was received: _____

13. Has the ground water use evaluation been completed pursuant to N.J.A.C. 7:26E-1.14?☒ Yes ☐ No

SECTION E. VAPOR INTRUSION (VI) [Refer to Note 2.](#)

1. Indicate if any of the following conditions exist that trigger a Vapor Intrusion investigation. For each condition checked "Yes", provide the date the condition was first identified (e.g. date laboratory data package was available). (see *NJDEP Vapor Intrusion Technical Guidance*)

Yes	No		Date Condition First Identified
☐	☐	Ground water contamination in excess of the NJDEP Vapor Intrusion Ground Water Screening Levels (VIGWSL) and within 30 feet of a building for Petroleum Hydrocarbon Compounds (PHC) or 100 feet for non-PHC compounds ..	
☐	☐	Free product within 30 feet of a building for PHC or 100 feet for non-PHC compounds ..	
☐	☐	Soil gas contamination detected at concentrations that exceed the Soil Gas Screening Levels (SGSL) ..	
☐	☐	Indoor air contamination that exceeds the Indoor Air Screening Levels.....	
☐	☐	Wet basement or sump containing free product or ground water containing detectable concentration of volatile organic contaminants ..	
☐	☐	Methane generating conditions causing oxygen deficient or explosion concern ..	
☐	☐	Other human or safety concern from the VI pathway (i.e. elemental mercury, unsaturated soil contamination), <i>explain below:</i> ..	

If you checked "No" to all boxes in Question 1., proceed to Section F, "Ecological Receptors", otherwise complete the rest of this section.

2. Has ground water contamination been delineated to the applicable Vapor Intrusion Ground Water Screening Levels pursuant to N.J.A.C 7:26E-4.3? ☐ Yes ☐ No
3. Was a site-specific screening level, modeling or other alternative approach employed for the VI pathway? ☐ Yes ☐ No
4. Identify and locate, on a scaled map, any buildings/sensitive populations that exist within the following distances from ground water contaminant concentrations above the Vapor Intrusion Ground Water Screening Levels or other specific triggers noted in Question 1 above.:
- | Yes | No | |
|--------------------------|--------------------------|---|
| ☐ | ☐ | 30 feet of petroleum free product or dissolved petroleum hydrocarbon contamination in ground water |
| ☐ | ☐ | 100 feet of any non-petroleum free product (e.g. chlorinated hydrocarbons) or any non-petroleum dissolved volatile organic ground water contamination |
| ☐ | ☐ | Other specific triggers |
| ☐ | ☐ | No buildings exist within the specified distances or other specific triggers |
5. Is the vapor intrusion pathway a concern at or adjacent to the site? (if "No," attach justification) ☐ Yes ☐ No
6. Has soil gas sampling of the building(s) been conducted? ☐ Yes ☐ No
- If "Yes," has the laboratory data package been received? ☐ Yes ☐ No
- If the data package was received, did constituents exceed the Soil Gas Screening Levels? ☐ Yes ☐ No
- If "No," attach technical justification consistent with the NJDEP Vapor Intrusion Technical Guidance.
7. Has indoor air sampling been conducted at the identified building(s)? ☐ Yes ☐ No
- If "Yes," has the laboratory data package been received? ☐ Yes ☐ No
- If the data package has been received, did constituents exceed the Indoor Air Screening Levels? .. ☐ Yes ☐ No
- If "No," or awaiting indoor air laboratory data package, proceed to Question 12.

8. Has indoor air contamination been identified but not suspected to be from a discharge?
(if "Yes," attach justification) ☐ Yes ☐ No
9. Were indoor air results above the NJDEP's Rapid Action Levels? ☐ Yes ☐ No
- If "Yes":
- Provide the date laboratory data package was received: _____
 - Follow the IEC Guidance Document at <http://www.nj.gov/dep/srp/guidance/index.html#iec> for required actions and answer the following:
 - Was the IEC engineering system response for control implemented for all impacted structures? ☐ Yes ☐ No
- Date implemented: _____ NJDEP Case Manager: _____
10. Were the results of indoor air sampling above the NJDEP's Indoor Air Screening Levels but at, or below, the Rapid Action Levels ☐ Yes ☐ No
- If "Yes," answer the following:
- Provide the date laboratory data package was received: _____
 - Has the Vapor Concern (VC) Response Action Form notifying the NJDEP of the exceedances been submitted? ☐ Yes ☐ No
- Date: _____
- Has a plan to mitigate and monitor the exposure been submitted? ☐ Yes ☐ No
- Date: _____
- Has the Mitigation Response Action Report been submitted? ☐ Yes ☐ No
- Date: _____
11. Do one or more buildings have an Indeterminate VI Pathway status? ☐ Yes ☐ No
- If "Yes," attach a list of the building(s) with address(s) and block/lot(s)
12. Has the vapor intrusion investigation been completed? ☐ Yes ☐ No
- If "No", is the vapor intrusion investigation stepping out as part of the site investigation or remedial investigation. (If "No," attach justification) ☐ Yes ☐ No

SECTION F. ECOLOGICAL RECEPTORS

1. Has an Ecological Evaluation (EE) been conducted? [N.J.A.C. 7:26E-1.16] ☒ Yes ☐ No
- Date conducted: 03/03/2011
2. Are any site-related contaminants above any Ecological Screening Criteria? ☐ Yes ☒ No
3. Are there any Environmentally Sensitive Natural Resources (ESNRs) on or adjacent to the site, or potentially impacted by site related contamination? [N.J.A.C. 7:26E-1.16] ☐ Yes ☒ No
4. Do any potential or complete migration pathways exist between Contaminant of Potential Ecological Concern (COPECs) and ESNRs, or did historic migration pathways exist? ☐ Yes ☒ No

If You answered "No" to Questions 2, 3, or 4, above **Stop Here** (form is complete).

5. If site-related free or residual product is/was present, does/did a potential or complete migration pathway exist to an ESNR? ☐ Yes ☐ No
6. Do the results of an EE trigger a remedial investigation of ecological receptors? [N.J.A.C. 7:26E-4.8] ☐ Yes ☐ No
- If "Yes", has a remedial investigation of ecological receptors been conducted? ☐ Yes ☐ No
- Date conducted: _____

7. Do available data indicate an impact (COPECs above Ecological Screening Criteria in ESNRs) to Ecological Receptor(s), Surface water, or Sediment? ☐ Yes ☐ No

If "Yes,"

- a) Check all ESNRs or media that apply:

☐ Surface water ☐ Sediment ☐ Soil ☐ Wetlands

- b) If this information is not submitted with an ecological evaluation that includes contaminant summary information, attach a brief summary of all currently available data and a description of all actions to be taken to mitigate exposure.

8. Have COPECs been fully delineated to the Ecological Screening Criteria [N.J.A.C. 7:26E-4.8(a)] in:

a) Migration pathways ☐ Yes ☐ No

b) ESNR ☐ Yes ☐ No

9. Has an Ecological Risk Assessment been conducted? ☐ Yes ☐ No

10. Provide the following information for any on-site and/or off-site surface water body, which is potentially impacted by the site related discharges:

Surface Water Body Name	Stream Classification	Antidegradation Designation	Trout Production	Trout Maintenance
			☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐
			☐	☐

11. Has a Program Interest (PI) or Permit number been issued for any regulated areas by the Division of Land Use Regulation? (e.g. wetlands, transition areas, flood hazard areas, coastal areas, tidelands, etc.). ☐ Yes ☐ No

If "Yes,":

Identify the type(s) of regulated areas: _____

Provide the Land Use Regulation Program (LURP) PI or Permit number(s) for the site:

12. Are there any **pending** applications for LURP jurisdiction letters or approvals under review by the NJDEP for the remediation? ☐ Yes ☐ No

13. Are there any **valid** LURP jurisdiction letters or approvals issued for the remediation? ☐ Yes ☐ No

Completed forms should be sent to the municipal clerk, designate health department, and:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

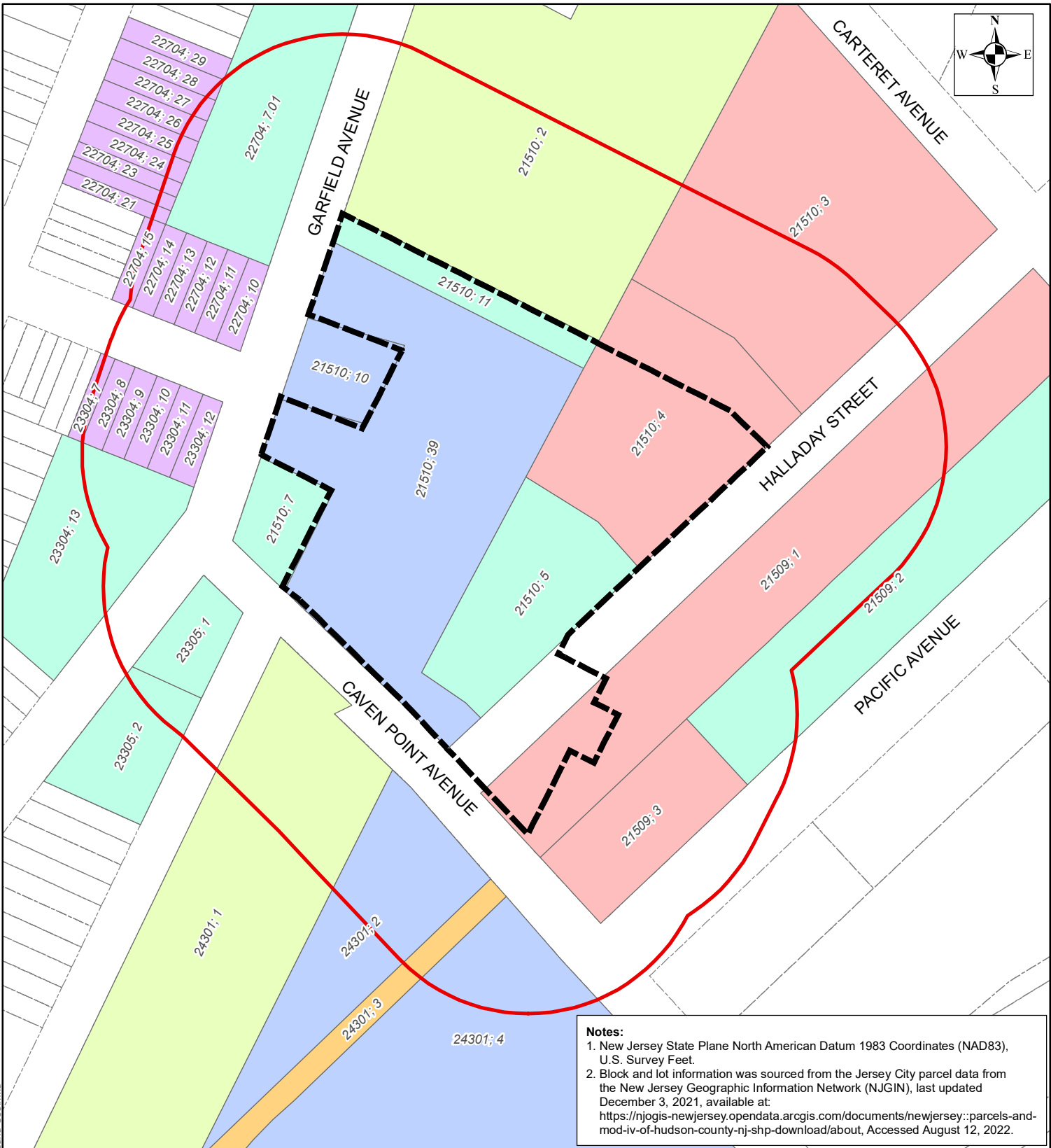
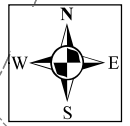
ATTACHMENT 1
200-FT PROPERTY SEARCH

Attachment 1
Properties Within 200 feet of Phase 3B South and Portions of Site 133 East and Halladay Street South

BLOCK	LOT	PROPERTY CLASS	PROPERTY LOCATION	PROPERTY CITY, STATE	OWNER	STREET	OWNER CITY, STATE	ZIP CODE
21510	3	1 - VACANT LAND	45 HALLADAY ST.	JERSEY CITY, NJ	PPG INDUSTRIES, INC.	ONE PPG PLACE	PITTSBURGH, PA	15272
21509	1	1 - VACANT LAND	22 HALLADAY ST.	JERSEY CITY, NJ	PPG INDUSTRIES, INC.	ONE PPG PLACE	PITTSBURGH, PA	15272
21510	39	4B - INDUSTRIAL	800 GARFIELD AVE.	JERSEY CITY, NJ	PPG INDUSTRIES, INC.	ONE PPG PLACE	PITTSBURGH, PA	15272
21510	11	4A - COMMERCIAL	816 GARFIELD AVE.	JERSEY CITY, NJ	PPG INDUSTRIES, INC.	ONE PPG PLACE	PITTSBURGH, PA	15272
21509	3	1 - VACANT LAND	33 PACIFIC AVE.	JERSEY CITY, NJ	GND PACIFIC HOLDINGS, LLC.	17 FOUR COLUMNS DR.	MORGANVILLE, NJ	7751
21510	5	4A - COMMERCIAL	15 HALLADAY ST.	JERSEY CITY, NJ	PPG INDUSTRIES, INC.	ONE PPG PLACE	PITTSBURGH, PA	15272
21510	7	4A - COMMERCIAL	784 GARFIELD AVE.	JERSEY CITY, NJ	SEVEN EIGHTY-FOUR, LLC.	344 PRINCETON AVE.	JERSEY CITY, N.J.	7305
21509	2	4A - COMMERCIAL	51-99 PACIFIC AVENUE	JERSEY CITY, NJ	PPG INDUSTRIES, INC.	ONE PPG PLACE	PITTSBURGH, PA	15272
21510	10	4B - INDUSTRIAL	802 GARFIELD AVE.	JERSEY CITY, NJ	PACE, CLEMENT	1120 HECKEL DR.	MOUNTAINSIDE, NJ	7092
21510	4	1 - VACANT LAND	25 HALLADAY ST.	JERSEY CITY, NJ	PPG INDUSTRIES, INC.	ONE PPG PLACE	PITTSBURGH, PA	15272
21510	2	15C - EXEMPT PUBLIC	824 GARFIELD AVE.	JERSEY CITY, NJ	JERSEY CITY REDEVELOPMENT AGENCY	66 YORK ST.	JERSEY CITY, NJ	7302
23305	2	4A - COMMERCIAL	758 GARFIELD AVE.	JERSEY CITY, NJ	T AND C INVESTMENTS, LLC.	758 GARFIELD AVE.	JERSEY CITY, N. J.	7305
23304	13	4A - COMMERCIAL	783 GARFIELD AVE	JERSEY CITY, NJ	ATLANTIC TIDES, LLC	1459 GARRETT DRIVE	WALL, NJ	7719
23304	11	2 - RESIDENTIAL (SENSITIVE)	3 CLAREMONT AVE.	JERSEY CITY, NJ	TURNHEIM, JACOB	49 DECATUR AVE.	SPRING VALLEY, NY	10977
23304	12	2 - RESIDENTIAL (SENSITIVE)	1 CLAREMONT AVE.	JERSEY CITY, NJ	JACOB KING, LLC	199 LEE AVE., SUITE 571	BROOKLYN, NY	11211
23305	1	4A - COMMERCIAL	770 GARFIELD AVE.	JERSEY CITY, NJ	T & C INVESTMENTS, L.L.C.	770 GARFIELD AVE.	JERSEY CITY, N.J.	7305
23304	10	2 - RESIDENTIAL (SENSITIVE)	5 CLAREMONT AVE.	JERSEY CITY, NJ	YELDELL, DION	7 JUNEGRASS WAY	HACKETTSTOWN, NJ	7840
23304	9	2 - RESIDENTIAL (SENSITIVE)	9 CLAREMONT AVE.	JERSEY CITY, NJ	RAY, THERESA	9 CLAREMONT AVE.	JERSEY CITY, NJ	7304
23304	8	2 - RESIDENTIAL (SENSITIVE)	11 CLAREMONT AVE.	JERSEY CITY, NJ	GG MEDINA	11 CLAREMONT AVE.	JERSEY CITY, NJ	7305
24301	1	15C - EXEMPT PUBLIC	20 COMMERCIAL ST.	JERSEY CITY, NJ	JERSEY CITY MUNICIPAL U.A.	280 GROVE ST.	JERSEY CITY, N.J.	7302
23304	7	2 - RESIDENTIAL (SENSITIVE)	15 CLAREMONT AVE.	JERSEY CITY, NJ	KELLER, ROBBIN	15 CLAREMONT AVE.	JERSEY CITY, N.J.	7305
24301	4	4B - INDUSTRIAL	21 CAVEN POINT AVE.	JERSEY CITY, NJ	21 CAVEN POINT AVENUE, LLC	153 EAST LINDEN AVE.	ENGLEWOOD CLIFFS, NJ	7631
24301	3	5B - RAILROAD CLASS II	CAVEN POINT AVE.	JERSEY CITY, NJ	RELIABLE RALTY, LLC	P. O. BOX 8499	PHILADELPHIA, PA	19101
24301	2	4B - INDUSTRIAL	55 CAVEN POINT AVE.	JERSEY CITY, NJ	55 CAVEN POINT LLC.	534 RIDGE ROAD	PHILLIPSBURG, N.J.	8865
22704	29	2 - RESIDENTIAL (SENSITIVE)	112 RANDOLPH AVE.	JERSEY CITY, NJ	WEATHERS, THIMOTHY	112 RANDOLPH AVE.	JERSEY CITY, N.J.	7305
22704	25	2 - RESIDENTIAL (SENSITIVE)	104 RANDOLPH AVE.	JERSEY CITY, NJ	ABI, LLC	259 NEWKIRK AVE	BROOKLYN, NY	11230
22704	26	2 - RESIDENTIAL (SENSITIVE)	106 RANDOLPH AVE.	JERSEY CITY, NJ	GANNON, DANA	106 RANDOLPH AVE.	JERSEY CITY, NJ	7305
22704	23	2 - RESIDENTIAL (SENSITIVE)	100 RANDOLPH AVE.	JERSEY CITY, NJ	O'NARDE, HEIDI	100 RANDOLPH AVE.	JERSEY CITY, N.J.	7305
22704	24	2 - RESIDENTIAL (SENSITIVE)	102 RANDOLPH AVE.	JERSEY CITY, NJ	DIONISIO, MICHAEL	102 RANDOLPH AVENUE	JERSEY CITY, NJ	7305
22704	7	4A - COMMERCIAL	829 GARFIELD AVE.	JERSEY CITY, NJ	829 GARFIELD HOLDINGS, LP	829 GARFIELD AVE.	JERSEY CITY, NJ	7305
22704	12	2 - RESIDENTIAL (SENSITIVE)	6 CLAREMONT AVE.	JERSEY CITY, NJ	BUNBURY, SOPHI	6 CLAREMONT AVE.	JERSEY CITY, NJ.	7305
22704	13	2 - RESIDENTIAL (SENSITIVE)	8 CLAREMONT AVE.	JERSEY CITY, NJ	OSTREICHER, ABRAHAM	8 CLAREMONT AVE.	JERSEY CITY, N.J.	7310
22704	14	2 - RESIDENTIAL (SENSITIVE)	10 CLAREMONT AVE.	JERSEY CITY, NJ	MIRTHIL, REGINALD	10 CLAREMONT AVENUE	JERSEY CITY, NEW JERSEY	7305
22704	15	2 - RESIDENTIAL (SENSITIVE)	12 CLAREMONT AVE.	JERSEY CITY, NJ	MERRITT, BESIE	12 CLAREMONT AVE	JERSEY CITY, N J	7305
22704	21	2 - RESIDENTIAL (SENSITIVE)	98 RANDOLPH AVE.	JERSEY CITY, NJ	GEELONG, LLC % DIXON ADVISORY	1000 PLAZA TWO, 10 FL	JERSEY CITY, NJ	7311
22704	22	2 - RESIDENTIAL (SENSITIVE)	98.5 RANDOLPH AVE.	JERSEY CITY, NJ	RODRIGUEZ, ROBINSON	98A RANDOLPH AVE.	JERSEY CITY, N.J.	7305
22704	27	2 - RESIDENTIAL (SENSITIVE)	108 RANDOLPH AVE.	JERSEY CITY, NJ	ROLLINS, LORRAINE A.	108 RANDOLPH AVE.	JERSEY CITY, NJ	7305
22704	28	2 - RESIDENTIAL (SENSITIVE)	110 RANDOLPH AVE.	JERSEY CITY, NJ	SAMET, SHIYA	199 LEE AVE., #338	BROOKLYN, NY	11211
22704	10	2 - RESIDENTIAL (SENSITIVE)	2 CLAREMONT AVE.	JERSEY CITY, NJ	BASCOM, MALINI	2 CLAREMONT AVENUE	JERSEY CITY, N.J.	7305
22704	11	2 - RESIDENTIAL (SENSITIVE)	4 CLAREMONT AVE.	JERSEY CITY, NJ	VELEZ, DAVID	4 CLAREMONT AE.	JERSEY CITY, N.J.	7305

Notes:

1. New Jersey State Plane North American Datum 1983 Coordinates (NAD83), U.S. Survey Feet.
 2. Block and lot information was sourced from the Jersey City parcel data from the New Jersey Geographic Information Network (NJGIN), last updated December 3, 2021, available at <https://njgis-newjersey.opendata.arcgis.com/documents/newjersey::parcels-and-mod-iv-of-hudson-county-nj-shp-download/about>, Accessed August 12, 2022.
- NAD83 - North American Datum
 NJ - New Jersey



Notes:

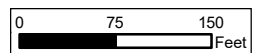
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LEGEND

- SITE BOUNDARY
- 200-FT BUFFER
- SURROUNDING PARCELS

LAND USE WITHIN 200 FEET

1 - VACANT LAND	4B - INDUSTRIAL
2 - RESIDENTIAL	5B - RAILROAD CLASS II
4A - COMMERCIAL	15C - EXEMPT, PUBLIC



PPG
PHASE 3B SOUTH AND PORTIONS OF SITE133
EAST AND HALLADAY STREET SOUTH
JERSEY CITY, NEW JERSEY

DATE: 9/23/22	DRAWN BY: SR	CHECKED BY: JF
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FIGURE 1
200-FT LAND USE MAP

Last Saved By: ravis
Document Path: G:\1920 GIS\WXP\BAR\3B\Fig 1 - RE Land Use.mxd

ATTACHMENT 2
WELL SEARCH

SITE NAME	Phase 3B South and Portions of Site 133 East and Halladay Street South	Enter no information beyond column B
SITE STREET ADDRESS	800 Garfield Avenue, 816 Garfield Avenue, 15 Halladay Street, 25 Halladay Street, 22 Halladay Street	
SITE COUNTY (select)	Hudson	
SITE MUNICIPALITY (select)	Jersey City	
PROGRAM INTEREST (PI) ID # :	629345, G000008753, 629388, 777089, G000005480, 025695	
SOURCE COORDINATE X		610707
SOURCE COORDINATE Y		682487
GROUNDWATER FLOW DIRECTION USED (if any)		
WERE APPLICABLE WELL TYPES FOUND? (Yes/No)	Yes	
IS THIS SUBMISSION AN UPDATE? (Yes/No)	No	
AUTHOR (name of company)	AECOM	
AUTHOR STREET ADDRESS (include town and zip code)	30 Knightsbridge Road, Piscataway, NJ, 08854	
LSRP LICENSE NUMBER OVERSEEING WORK		
LSRP NAME OVERSEEING WORK		
PROFESSIONAL WHO PREPARED SUBMISSION	Joyce Franco	
EMAIL CONTACT	Joyce.Franco@aecom.com	
PHONE CONTACT	908-986-6043	

Download Document	Permit Number	Well Use	Potentially Potable	Document	Date (permitted/drilled/sealed)
PDF Document	E202112643	Industrial	Yes	Permit	12/23/2021
PDF Document	E202010565	Non-Public	Yes	Permit	10/13/2020
PDF Document	E201503280	Industrial	Yes	Record	5/13/2015
PDF Document	E201503280	Industrial	Yes	Permit	4/9/2015
	2600001335	Industrial	Yes	Permit	12/16/1955
	2600001335	Industrial	Yes	Record	4/18/1956
	2600001742	Industrial	Yes	Permit	10/25/1957
	2600001731	Industrial	Yes	Permit	10/11/1957
	2600004392	Industrial	Yes	Permit	4/23/1971
	2600004392	Industrial	Yes	Record	4/27/1971
	2600043694	Industrial	Yes	Permit	2/26/1996
	2600043694	Industrial	Yes	Record	10/15/1996
	2600049931	Industrial	Yes	Permit	2/3/1998
	2600056260	Industrial	Yes	Permit	12/23/1999
	2600056260	Industrial	Yes	Record	5/4/2000

Physical Address	County	Municipality	Block	Lot
386 Martin Luther King Drive	Hudson	Jersey City	21201	17.01
176 Wegman Pkwy	Hudson	Jersey City	24002	93
Martin Luther King Jr. Drive	Hudson	Jersey City	21201	17
Martin Luther King Jr. Drive	Hudson	Jersey City	21201	17
Grand Street	Hudson	Jersey City		
Grand Street	Hudson	Jersey City		
Hudson BLVD. & Pamrato St.	Hudson	Jersey City		
Not Provided	Hudson	Jersey City		
MORRISPESIN	Hudson	Jersey City		
MORRISPESIN	Hudson	Jersey City		
37 MALLORY AVE.	Hudson	Jersey City	1296.5	1.8
37 MALLORY AVE.	Hudson	Jersey City	1296.5	1.8
758 GARFIELD AVE.	Hudson	Jersey City	1487	11A,11B
757 OCEAN AVE.	Hudson	Jersey City	19.74	27
757 OCEAN AVE.	Hudson	Jersey City	19.74	27

Location Method	Easting X	Northing Y	Distance (feet)	Depth (feet)	Capacity (gal/min)
Digital Image	609586	684247	2,086.68	600	65
GPS	607562	682330	3,148.92	250	10
GPS	609575	684261	2,104.4	450	40
GPS	609575	684261	2,104.4	300	10
Prop Loc - Hard Copy	609825	683567		200	250
Prop Loc - Dig Image	614920	686324	5,698.11	335	0
Prop Loc - Hard Copy	604232	677468		200	5
Prop Loc - Hard Copy	604213	681516		150	40
Prop Loc - Hard Copy	613468	678828		150	40
Prop Loc - Hard Copy	613468	678828		180	0
Prop Loc - Hard Copy	606261	688306		150	35
Prop Loc - Hard Copy	606261	688306		205	40
Prop Loc - Hard Copy	610374	681545		300	65
Prop Loc - Hard Copy	609277	685588		500	50
Prop Loc - Hard Copy	609277	685588		855	

Location Method	Easting X	Northing Y	Distance (feet)	Depth (feet)	Capacity (gal/min)
Digital Image	609586	684247	2,086.68	600	65
GPS	607562	682330	3,148.92	250	10
GPS	609575	684261	2,104.4	450	40
GPS	609575	684261	2,104.4	300	10
Prop Loc - Hard Copy	609825	683567		200	250
Prop Loc - Dig Image	614920	686324	5,698.11	335	0
Prop Loc - Hard Copy	604232	677468		200	5
Prop Loc - Hard Copy	604213	681516		150	40
Prop Loc - Hard Copy	613468	678828		150	40
Prop Loc - Hard Copy	613468	678828		180	0
Prop Loc - Hard Copy	606261	688306		150	35
Prop Loc - Hard Copy	606261	688306		205	40
Prop Loc - Hard Copy	610374	681545		300	65
Prop Loc - Hard Copy	609277	685588		500	50
Prop Loc - Hard Copy	609277	685588		855	

[illegible]

Public Notice

Public Notification Form

Cover Letter

Fact Sheet

Site Description

Display Advertisement

Public Notification Mailing List

The attached public notice presented in this section was sent out on August 25, 2021 to satisfy biennial public notice requirements. A newspaper display advertisement was printed on September 17, 2021 in The Jersey Journal.

Public Notification Form



New Jersey Department of Environmental Protection
Site Remediation and Waste Management Program

PUBLIC NOTIFICATION AND OUTREACH

Date Stamp
(For Department use only)

SECTION A. SITE LOCATION

Site Name: Phase 3B South and Portions of Site 133 East and Halladay Street South

Program Interest (PI) Number(s): 777089, 629388, 629345, G000008753, G000005480, and 025695

Case Tracking Number(s) for this submission:

This form must be submitted with the Authorization to Submit a Report/Form Through NJDEP Online Form
Completed form should be uploaded to NJDEP Online.

There are required fields on this form, see instructions for details.

SECTION B. NOTIFICATION INFORMATION

1. Indicate the type of Public Notification:

☐ Initial ☒ Update

2. Provide the date initial field activities associated with the remedial investigation will or have commenced pursuant to 7:26C-1.7 (h). Date: 07/19/1990

3. Has it been determined that contamination migrated off site?..... ☐ Yes ☒ No

If "Yes", provide the date off site migration was determined pursuant to 7:26C-1.7 (I):

4. Public notification was provided via: (Check all that apply)

Sign ☐ Yes ☒ No

If "Yes", date posted:

Letter ☒ Yes ☐ No

If "Yes", date provided: 08/25/2021

Fact sheet..... ☒ Yes ☐ No

If "Yes", date provided: 08/25/2021

Newspaper Display Advertisement..... ☒ Yes ☐ No

If "Yes", date published: 09/17/2021

5. Were materials produced in a language other than English? ☒ Yes ☐ No

If "Yes", in what other language was notification prepared? Spanish

6. Were copies provided to municipal clerk, local/county health dept., and local health agency? ☒ Yes ☐ No

7. Was public notification conducted using an alternate plan and is the rationale for this plan included? ☐ Yes ☒ No

8. Was additional public outreach conducted due to the NJDEP's determination of substantial public interest? ☐ Yes ☒ No

9. Add any comments:

NOTE: Do not scan this form or alter it in any way, and do not incorporate it into any other document prior to upload. Complete the form on your computer and save it with a unique file name prior to upload.

Completed form should be uploaded to NJDEP Online

Notification Cover Letter



PPG
440 College Park Drive
Monroeville, PA 15146

August 25, 2021

Re: Chromium Cleanup Sites on Garfield Avenue

Dear Sir or Madam,

This letter is to inform you that PPG is the party responsible for the investigation and/or remediation of chromium at the addresses referenced in the attached and to advise you of the status of the work at each site.

This notification is being sent to you in compliance with New Jersey's requirements for public notification in connection with contaminated site cleanups. These rules require that property owners and tenants within 200 feet of the site boundary of a contaminated site be notified before investigation or remediation work begins and every two years until the cleanup is complete. In addition, the law requires responsible parties to notify property owners and tenants within 200 feet of an impacted site when there is evidence of off-property contaminant migration from that site.

You are being notified by PPG because you are a property owner or tenant located within 200 feet of the boundary of one or more sites referenced in the attached. In addition, you are being notified because contamination has migrated from one of these sites.

No action is required on your part. For your reference, however, we are enclosing a brief description of each site, summarizing conditions and activities to be taken. In addition, please find a fact sheet about groundwater contamination migration from Site No. 114.

Environmental reports about these sites submitted to the New Jersey Department of Environmental Protection are also being sent to the municipality for its review and comment. To learn more about New Jersey's public outreach requirements, visit: https://www.nj.gov/dep/srp/guidance/public_notification/

If you have any questions concerning the sites referenced above, you can visit www.chromecleanup.com or contact the independent, court-appointed site administrator overseeing the investigation and cleanup of these sites. The administrator can be reached by:

- Calling 201-777-2099;
- Sending an email to info@chromecleanup.com; or
- Writing to Chromium Cleanup Partnership, One Hovchild Plaza, 4000 Route 66, 4th Floor (MDMC), Tinton, Falls, N.J. 07753.

You can also direct your questions and comments to Jeff Worden, a PPG community relations consultant. His telephone number is: 412.253.0816. His email address is: jeff@worden-pr.com.

Sincerely,
PPG

(Over for Spanish)
(Página de la vuelta para español)



25 de agosto de 2021

Asunto: Sitios de limpieza de cromo en Garfield Avenue

Estimado(a) Sr(a).:

Sirva esta carta para hacerle saber que PPG es la parte responsable de la investigación y/o del saneamiento de cromo en los domicilios señalados en el documento adjunto y para avisarle de la situación del trabajo en cada sitio. Se le envía esta notificación en cumplimiento con los requisitos de Nueva Jersey de notificación pública en relación con las tareas de limpieza de lugares contaminados. Estas normas exigen que los propietarios e inquilinos dentro de un radio de 200 pies (61 m) del perímetro del sitio contaminado sean notificados antes de iniciar la investigación o las tareas de saneamiento, y cada dos años hasta que la limpieza haya concluido. Asimismo, la ley requiere que las partes responsables notifiquen a los propietarios e inquilinos dentro de un perímetro de 200 pies con respecto a un lugar afectado cuando exista evidencia de una migración contaminante fuera de la propiedad en dicho sitio.

Usted está siendo notificado por PPG debido a su condición de propietario o inquilino que se encuentra dentro de un perímetro de 200 pies respecto de los límites de uno o más lugares mencionados en el anexo. Además, se le está notificando debido que la contaminación migró de uno de estos sitios. No es necesario que tome ninguna medida. Sin embargo, para su referencia, adjuntamos una breve descripción de cada lugar y un resumen de las condiciones y actividades que se realizarán. Adicionalmente, sírvase encontrar una hoja informativa acerca de la migración de la contaminación en aguas subterráneas desde el sitio No. 114.

Los informes ambientales sobre este lugar presentados al Departamento de Protección de Medio Ambiente del Nueva Jersey también están siendo enviados a la municipalidad para su revisión y comentarios. Para obtener más información acerca de los requisitos de difusión al público de Nueva Jersey, visite : https://www.nj.gov/dep/srp/guidance/public_notification/. Si tiene alguna pregunta acerca de los sitios mencionados anteriormente, puede visitar www.chromecleanup.com o comunicarse con el administrador del sitio designado por el tribunal para inspeccionar las tareas de investigación y limpieza de estos sitios. Puede comunicarse con el administrador de las siguientes formas:

- Llamar al 201-777-2099;
- Enviar un correo electrónico a info@chromecleanup.com; o
- Escribir a Chromium Cleanup Partnership, One Hovchild Plaza, 4000 Route 66, 4th Floor (MCDC), Tinton, Falls, N.J. 07753.

También puede enviar sus preguntas y comentarios a Jeff Worden, consultor de relaciones con la comunidad de PPG. Su número de teléfono es: 412.253.0816. Su dirección de correo electrónico es: jeff@worden-pr.com.

Atentamente,
PPG

(Over for English)
(Página de la vuelta para inglés)

Fact Sheet



Fact Sheet

In accordance with New Jersey Department of Environmental Protection (NJDEP) requirements for “Notification and Public Outreach,” PPG is providing the following information relating to environmental conditions, remedial activities and off-site impacts in connection with the site described below.

Hudson County Chrome Site No. 114 – Garfield Avenue Site
880-900 Garfield Avenue, Jersey City, N.J. 07305
Block 21501, Lots 16, 17, 18.01, 19.01 and 20.01
NJDEP ID No. G000005480

From 1905 to 1976, Hudson County was a center for chrome manufacturing, processing chromite ore imported into the United States. In the early 1900s, the Natural Products Refining Company opened a chrome plant at 880-900 Garfield Avenue. PPG purchased the plant in 1954 and ceased operations in 1963, selling the facility and property in 1964. The manufacturing process used at the facility produced a waste byproduct known as chromate chemical production waste, or CCPW. Over the years, the soil impacted with CCPW was used as fill material at residential, commercial and industrial construction sites.

PPG first detected hexavalent chromium at the Garfield Avenue Site (the Site) in the early 1980s. Concentrations of hexavalent chromium – a component of CCPW – were found to exceed soil cleanup criteria and total chromium concentrations in groundwater exceeded NJDEP groundwater quality standards (GWQS). As a result, PPG assumed responsibility for the remediation of 67 sites in Hudson County. In addition, PPG jointly accepted responsibility with Honeywell for 10 other sites. PPG is also responsible for addressing non-chromium contamination at Site 114, including volatile organics, semivolatile organics, non-CCPW metals, polychlorinated biphenyls and pesticides.

Before remediation was conducted, investigation activities identified that hexavalent chromium in soil was present throughout the Site with the majority above the meadow mat layer (approximately 15 feet below surface). Deeper soil impacts were found in the area of the former Morris Canal, which ran through the Site in a north-south direction.

CCPW in the soil was the source of hexavalent chromium in the groundwater at the Site. The highest concentrations of hexavalent chromium were found in the western portion of the Site, in the shallow (approximately 15 to 20 feet below ground surface) and intermediate (approximately 30 to 40 feet below ground surface) groundwater zones. Limited impacts have been observed at deeper depths. In 2005, PPG determined that chromium-impacted groundwater was migrating to the south and east of the Site and reported this information to the NJDEP in 2006. Investigations have since concluded that the southern boundary of the groundwater plume is at Caven Point Avenue, which is about 800 feet from the Garfield Avenue Site. The eastern boundary is along Pacific Avenue, which is approximately 200 feet away. The northern boundary is located at a commercial property located at 90 and 98 Forrest Street.

Interim remedial measures for soil were installed at the Garfield Avenue Site between 1990 and 1992. These measures, consisting of plastic covering, crushed gravel, and a perimeter fence, prevented direct contact with,

(Over)



or airborne exposure to, chrome residue at the Site until the cleanup began. Inspections of these measures were conducted quarterly and repairs were made as necessary.

Groundwater recovery sumps were installed at the Site between 2004 and 2005 to prevent water from migrating onto Garfield Avenue. Water generated by this system was collected on-site and transported to an offsite, permitted treatment facility until this procedure was replaced by the use of an onsite treatment facility to support excavation activities in 2011.

The excavation of chromium-impacted soil and debris at the Site was completed in November 2014. More than 530,000 tons of chromium-impacted soil were excavated, hauled off site, treated and disposed of at permitted disposal facilities.

The placement of clean backfill to near-final grade was completed in January 2015. Clean fill for a majority of the Site was amended with FerroBlack®-H. This water-based suspension of ferrous iron and sulfide is designed to prevent the backfill from being contaminated by chromium-impacted groundwater and to support groundwater remediation. Testing indicates shallow groundwater (less than 20 feet deep) throughout most of the site is already in compliance with the federal and New Jersey drinking water standard for total chromium.

To remediate areas of elevated chromium in groundwater within the intermediate and deep water-bearing zones and localized areas of the shallow water-bearing zone within Site 114 (i.e., the location of the former chromite ore processing plant), two interim remedial measures have been implemented or are under way. A third measure is being designed to treat areas of chromium contamination in the accessible shallow, intermediate and deep water-bearing zones in areas outside Site 114 and select areas within Site 114 that are beneath the vertical extents of the first measure. The measures use a combination of technologies to inject organic substrates into the subsurface to establish and maintain biological and/or chemical reactive zones to reduce chromium concentrations. Following treatment, the injected substrates will remain in the subsurface to maintain a geochemically reducing environment for an extended period, which will continue to provide treatment of chromium in groundwater. Once the substrates are used up, the site will transition to a monitored natural attenuation remedy.

PPG submitted a Groundwater Remedial Investigation report and Remedial Action Work Plan describing the nature and extent of groundwater contamination and the proposed remedial action plan for groundwater in March 2021.

It is important to note that groundwater is not used for drinking water purposes in Jersey City. Reservoirs in Boonton, N.J., supply Jersey City with its drinking water.

To learn more about hexavalent chromium, visit:

- New Jersey Department of Environmental Protection: <http://www.state.nj.us/dep/dsr/chromium/>
- Agency for Toxic Substances and Disease Registry: <https://wwwn.cdc.gov/TSP/ToxFAQs/ToxFAQsDetails.aspx?faqid=61&toxid=17>

If you have questions about the Garfield Avenue Site and related off-site impacts, you can contact the independent, court-appointed site administrator overseeing the investigation and cleanup of the Site. The administrator can be reached by:



- Calling: 201-777-2099;
- Sending an email to: info@chromecleanup.com;
- Writing to: Chromium Cleanup Partnership, One Hovchild Plaza, 4000 Route 66, 4th Floor (MCDC), Tinton, Falls, N.J. 07753; or
- Visiting: www.chromecleanup.com.

You can also direct your questions and comments to Jeff Worden, PPG's community relations consultant. His telephone number is: 412.253.0816. His email address is: jeff@worden-pr.com.



Hoja de información básica

De conformidad con los requisitos del Departamento de Protección Ambiental de Nueva Jersey (NJDEP) en cuanto a “Notificación y divulgación al público”, PPG suministra la siguiente información relacionada con las condiciones ambientales, actividades de saneamiento e impactos externos relacionados con el sitio que se describe a continuación.

**Condado de Hudson, lugar contaminado con cromo N.º 114: sitio en Garfield Avenue
880-900 Garfield Avenue, Jersey City, N.J. 07305
Manzana 21501, Lotes 16, 17, 18.01, 19.01 y 20.01
No. de ID de NJDEP G000005480**

Entre 1905 y 1976, el condado de Hudson fue el centro de la fabricación de cromo, procesando cromita importada a los Estados Unidos. Natural Products Refining Company abrió una planta de cromo en 880-900 Garfield Avenue en la década de 1900. PPG adquirió la planta en 1954 y cesó sus operaciones en 1963, vendiendo la instalación y propiedad en 1964. El proceso de fabricación utilizado en la instalación produjo grandes cantidades de un subproducto de residuo conocido como residuos químicos de cromato, o CCPW. Con el transcurso de los años, el suelo afectado por CCPW se usó como material de relleno en sitios de construcción residenciales, comerciales e industriales.

PPG detectó cromo hexavalente por primera vez en el sitio de Garfield Avenue (el sitio) a principios de la década de 1980. Se detectó que las concentraciones de cromo hexavalente, un componente de los CCPW, exceden los criterios para limpieza del suelo y las concentraciones de cromo totales en las aguas subterráneas excedieron las normas de calidad para aguas subterráneas (GWQS) del NJDEP. Como resultado, PPG asumió la responsabilidad del saneamiento de 67 sitios en el Condado de Hudson. Además, PPG aceptó la responsabilidad conjunta con Honeywell para otros 10 sitios. PPG también es responsable de abordar la contaminación sin cromo en el sitio 114, incluidos compuestos orgánicos volátiles, compuestos orgánicos semivolátiles, metales sin CCPW, bifenilos policlorados y pesticidas.

Antes de la realización del saneamiento, las actividades de investigación identificaron que el cromo en el suelo estaba presente en el sitio, en su mayoría sobre la capa de turba (aproximadamente 15 pies bajo la superficie). Se encontraron impactos más profundos en el suelo en la zona del antiguo Morris Canal, que fluía por el sitio de norte a sur.

Los CCPW en el suelo eran la fuente de cromo hexavalente en las aguas subterráneas en el sitio. Las mayores concentraciones de cromo hexavalente se encontraron en la parte oeste del sitio, en las zonas de aguas subterráneas poco profundas (aproximadamente de 15 a 20 pies bajo la superficie del suelo) e intermedias (aproximadamente de 30 a 40 pies bajo la superficie del suelo). Se han observado impactos limitados a mayores profundidades. En 2005, PPG determinó que las aguas subterráneas afectadas por cromo estaban migrando hacia el sur y el este del sitio, e informó dicha situación al NJDEP en 2006. Desde entonces, las investigaciones han concluido que el límite sur de la pluma de aguas subterráneas es Caven Point Avenue, que se encuentra a aproximadamente 800 pies del sitio de Garfield Avenue. El límite oriental se encuentra a lo largo de Pacific Avenue, que está aproximadamente a 200 pies. El límite norte se encuentra en una propiedad comercial ubicada en 90 y 98 Forrest Street.



Entre los años 1990 y 1992 se instauraron medidas de saneamiento provisionales en el sitio ubicado de Garfield Avenue. Estas medidas, que implicaban recubrimiento con plástico, grava triturada y una cerca perimetral, evitaban el contacto directo con residuos de cromo

(Reverso)

o la exposición en el aire a ellos en el sitio hasta el inicio de la limpieza. Se realizaron inspecciones trimestrales de estas medidas y se realizaron las reparaciones necesarias.

Entre los años 2004 y 2005 se instalaron sumideros para la recuperación de aguas subterráneas en el sitio a fin de evitar la migración del agua hacia Garfield Avenue. El agua generada por este sistema se recolectaba en el sitio y transportaba a una planta de tratamiento autorizada fuera del sitio hasta que este procedimiento fue reemplazado por el uso de una planta de tratamiento en el sitio para apoyar las actividades de excavación en 2011.

La excavación de suelo y desechos afectados por cromo en el sitio se concluyó en noviembre de 2014. Más de 530,000 toneladas de suelo afectado por cromo se excavaron, retiraron del sitio, se trataron y eliminaron en instalaciones de eliminación autorizadas.

La colocación del relleno limpio hasta la calificación casi final se completó en enero de 2015. El relleno limpio para la mayoría del sitio se modificó con FerroBlack®-H. Esta suspensión a base de agua de hierro ferroso y sulfuro está diseñada para evitar que el relleno se contamine con aguas subterráneas afectadas por cromo y para apoyar el saneamiento de las aguas subterráneas. Las pruebas indican que las aguas subterráneas poco profundas (de menos de 20 pies de profundidad) en la mayor parte del sitio ya cumplen con las normas federales y del estado de Nueva Jersey para el cromo total en el agua potable.

Para sanear áreas de cromo elevado en aguas subterráneas dentro de las zonas intermedias y profundas y áreas localizadas de la zona de aguas poco profundas dentro del sitio n.º 114 (es decir, la ubicación de la antigua planta procesadora de cromita), se han implementado o están en marcha dos medidas correctivas provisionales. Se está diseñando una tercera medida para tratar áreas contaminadas con cromo en las zonas accesibles de aguas poco profundas, intermedias y profundas en áreas fuera del sitio n.º 114 y áreas específicas dentro del sitio que están debajo del alcance vertical de la primera medida. Las medidas combinan tecnologías para inyectar sustratos orgánicos en la subsuperficie con el fin de establecer y mantener zonas biológicas y/o químicas reactivas para reducir las concentraciones de cromo. Después del tratamiento, los sustratos inyectados permanecerán en la subsuperficie para mantener un entorno de reducción geoquímica durante un período prolongado, que continuará tratando el cromo en las aguas subterráneas. Una vez que los sustratos se hayan agotado, el sitio pasará a un saneamiento de atenuación natural monitorizado.

PPG presentó un informe de investigación del saneamiento de las aguas subterráneas y un plan de trabajo de medidas correctivas en el que se describía la naturaleza y el alcance de la contaminación de las aguas subterráneas y el plan de medidas correctivas propuesto para tratar dichas aguas en marzo de 2021.

Es importante tener en cuenta que las aguas subterráneas no se utilizan con fines de agua potable en Jersey City. Las reservas en Boonton, N.J., suministran el agua potable a Jersey City.



Para conocer más sobre el cromo hexavalente, visite:

- Departamento de Protección Ambiental de Nueva Jersey: <http://www.state.nj.us/dep/dsr/chromium/>
- Agencia para Sustancias Tóxicas y el Registros de Enfermedades: <http://www.atsdr.cdc.gov/toxfags/tf.asp?id=61&tid=17>

Si tiene alguna pregunta acerca del sitio de Garfield Avenue y los impactos fuera del sitio relacionados, puede comunicarse con el administrador del sitio designado por el tribunal para inspeccionar las tareas de investigación y limpieza del sitio. Puede comunicarse con el administrador de las siguientes formas:

- Por teléfono: 201-777-2099;
- Por correo electrónico: info@chromecleanup.com;
- Por carta: Chromium Cleanup Partnership, One Hovchild Plaza, 4000 Route 66, 4th Floor (MCDC), Tinton, Falls, N.J. 07753; o
- Sitio web: www.chromecleanup.com.

También puede dirigir sus preguntas y comentarios a:

- Jeff Worden, consultor de relaciones con la comunidad de PPG: 412.253.0816; o
- Departamento de Protección Ambiental de Nueva Jersey, Oficina de Relaciones con la Comunidad: 1-800-253-5647.

Site Description



Site Descriptions

PPG is responsible for the investigation of hexavalent chromium that exceeds New Jersey Department of Environmental Protection (NJDEP) requirements at the following sites. In addition, if the source of hexavalent chromium is chromate chemical production waste, otherwise known as CCPW, then PPG is responsible for its cleanup. Also, PPG is responsible for the investigation and cleanup of all contaminants of concern that exceed NJDEP requirements at Site No. 114 and at properties that the company owns. This document includes a series of site descriptions that indicate the contaminants of concern, work completed and additional work to be conducted at each of the sites.

Hudson County Chrome Site No. 114 – Garfield Avenue Site
880-900 Garfield Ave., Jersey City, N.J. 07305
Block 21501, Lots 16, 17, 18.01, 19.01 and 20.01
NJDEP ID No. G000005480

Chromate chemical production waste, or CCPW, was the source of hexavalent chromium concentrations that exceeded soil cleanup criteria and total chromium concentrations that exceed Groundwater Quality Standards (GWQS). PPG is also responsible for addressing nonchromium contamination, including volatile organics, semivolatile organics, non-CCPW metals, polychlorinated biphenyls and pesticides. Public Service Electric and Gas (PSEG) is taking the lead on addressing soil and groundwater impacts related to the former manufactured gas plant, including those emanating onto other sites.

PPG's soil remediation at Site 114 is complete. The excavation of chromium-impacted soil was conducted between July 2010 and November 2014 with approximately 530,000 tons of material removed from the site. Excavated material was treated and disposed of at licensed, offsite locations in accordance with applicable regulations. Most of the nonchromium contamination was removed during the chromium excavation. A soil cap has been installed to prevent direct contact or airborne exposure to the remaining impacted material. NJDEP issued a Consent Judgment Compliance Letter in June 2020 documenting that no further remedial action for soil is required.

The placement of clean backfill to near-final grade was completed in January 2015. Clean fill for a majority of the site was amended with FerroBlack®-H. This water-based suspension of ferrous iron and sulfide is designed to prevent the backfill from being contaminated by chromium-impacted groundwater and to support groundwater remediation. Ongoing testing indicates shallow groundwater (less than 20 feet deep) throughout most of the site is already in compliance with NJDEP's GWQS for total chromium.

The chromium-impacted soil at the site was the source of the chromium impacts in groundwater. To address these impacts, an interim groundwater remediation is under way. For more details about groundwater impacts, please see the fact sheet included in this mailing. No groundwater in Jersey City is used for drinking purposes. Furthermore, NJDEP has approved a Classification Exception Area, which forbids the installation or use of groundwater wells at the impacted properties. Reservoirs in Boonton, N.J., supply Jersey City with its drinking water.

Hudson County Chrome Site No. 132 – Town and Country Linen Warehouse
824 Garfield Ave., Jersey City, N.J. 07305
Block 21510, Lot 2
NJDEP ID No. G000008749

Chromate chemical production waste, or CCPW, was the source of hexavalent chromium concentrations that exceeded soil cleanup criteria and total chromium concentrations that exceed NJDEP's GWQS in the intermediate zone.

PPG's soil remediation at Site 132 is complete. In July 2013, the building on site was demolished and the building debris was properly disposed. Soil remediation was conducted between March 2014 and September 2014 with approximately 72,200 tons of chromium-contaminated waste being dug up and hauled away from this area. The excavated material was treated and disposed of at licensed, offsite locations in accordance with applicable regulations. NJDEP issued a Consent Judgment Compliance letter for soil in November 2019, documenting that no further remedial action is required.

The placement of clean backfill to near-final grade was completed in May 2015. Clean fill for a portion of the site was amended with FerroBlack®-H. This water-based suspension of ferrous iron and sulfide is designed to prevent the backfill from being contaminated by chromium-impacted groundwater and to support groundwater remediation.

Hudson County Chrome Site No. 133 – Ross Wax
15 and 22-68 Halladay St., Jersey City, N.J. 07304
Block 21510, Lot 5, and Block 21509, Lot 1
NJDEP ID No. 025695

Chromate chemical production waste, or CCPW, is the source of hexavalent chromium concentrations that exceed soil cleanup criteria and total chromium concentrations that exceed NJDEP's GWQS in shallow groundwater beneath Halladay Street, which is adjacent to the site.

PPG purchased the western side of the site, 15 Halladay Street, in May 2013, and the eastern side of the site, 22-68 Halladay Street, in February 2014.

15 Halladay St. (Site 133 West)

A soil investigation was conducted, resulting in a report that was submitted to NJDEP in 2012. Soil excavation began in August 2018 and resumed when the excavation commenced at the Ten West Apparel property in April 2021. Excavation and backfill are scheduled to be complete by December 2021.

22-68 Halladay St. (Site 133 East)

PPG's remediation of CCPW-impacted soil is complete for the majority of Site 133 East. The building on this site was demolished in October 2014 and the debris was disposed of at a regulated facility. Soil remediation was conducted between April 2015 and October 2015 with approximately 88,500 tons of chromium-contaminated waste being dug up and hauled away from this area, including the adjacent eastern properties on Site 135, where remediation was conducted concurrently with this site. The excavated material was treated and disposed of at licensed, offsite locations in accordance with

applicable regulations. NJDEP issued a Consent Judgment Compliance Letter for soil at Site 133 East in March of 2020, documenting that no further remedial action is required.

The placement of clean backfill to near-final grade was completed in July 2016. Clean fill for the northern portion of the site was amended with FerroBlack®-H. This water-based suspension of ferrous iron and sulfide is designed to prevent the backfill from being contaminated by chromium-impacted groundwater and to support groundwater remediation. Clean fill for the southern portion of the site was amended in the top two feet of the backfill.

A small portion of Site 133 East in proximity to the Ten West Apparel property was excavated and backfilled in 2021 as part of the ongoing Ten West Apparel remediation.

At Sites 133 West and East, PPG has retained a licensed site remediation professional (LSRP) to address nonchromium contamination from historic fill and prior site operations unrelated to PPG, including volatile organics, semivolatile organics, polychlorinated biphenyls or PCBs, non-CCPW metals and petroleum. Piotr Serwik of AECOM is the LSRP. His telephone number is: 610-234-4888. His email address is: Piotr.Serwik@aecom.com.

Under the LSRP program at Site 133 East, a remedial investigation report was submitted in September 2019. The closure of an underground storage tank containing fuel oil at Site 133 East was completed and a Response Action Outcome (RAO) was issued in December 2020, documenting no additional remedial action is required. At Site 133 West, the remedial investigation to address nonchromium contamination is ongoing. Nonchromium contaminants that exceed soil remediation standards and NJDEP's GWQS are being addressed under the LSRP program.

Hudson County Chrome Site No. 135 – Vitarroz
51-99 Pacific Ave., Jersey City, N.J. 07304
Block 21509, Lot 2
NJDEP ID No. 246332

Chromate chemical production waste, or CCPW, was the source of hexavalent chromium concentrations that exceeded soil cleanup criteria and total chromium concentrations that exceed NJDEP's GWQS in the adjacent right-of-way.

PPG's soil remediation of CCPW-impacted soil is complete. PPG purchased the property in August 2015. Between January and November 2015, the buildings on site were demolished and the building debris was properly disposed. Soil remediation was conducted between February 2016 and August 2016 with approximately 88,500 tons of chromium-contaminated waste being dug up and hauled away from this area, including the adjacent western properties on Site 133 East, where remediation was conducted concurrently with this site. The excavated material was disposed of at licensed, offsite locations in accordance with applicable regulations. NJDEP issued a Consent Judgment Compliance Letter for soil at Site 135 in January 2021, documenting that no further remedial action is required.

The placement of clean backfill to near-final grade was completed in December 2016. Clean fill for the northern portion of the site was amended with FerroBlack®-H. Clean fill for the southern portion of the site was amended in the top two feet of the backfill. This water-based suspension of ferrous iron and

sulfide is designed to prevent the backfill from being contaminated by chromium-impacted groundwater and to support groundwater remediation.

PPG has retained an LSRP to address nonchromium contamination from historic fill and prior site operations unrelated to PPG, including volatile organics, semivolatile organics, non-CCPW metals, PCBs and petroleum. Piotr Serwik of AECOM is the LSRP. His telephone number is: 610-234-4888. His email address is: Piotr.Serwik@aecom.com.

Under the LSRP program, a remedial action report for the closure of three separate underground storage tanks containing fuel oil was submitted to NJDEP in July 2017. Mercury-impacted soil associated with Incident No. 16-04-13-1350-52 was removed during the chromium remediation. An RAO was issued in December 2018, documenting that no further remedial action was required for mercury-impacted soil. A remedial action permit application to address impacts associated with historic fill was submitted to NJDEP in January 2021.

A remedial investigation to address nonchromium contamination in groundwater is ongoing. Nonchromium contaminants that exceed NJDEP's GWQS will be addressed under the LSRP program.

Hudson County Chrome Site No. 137 – Rudolf Bass
25 and 45 Halladay St., Jersey City, N.J. 07304
Block 21510, Lots 3 and 4
NJDEP ID No. G000008753

Chromate chemical production waste, or CCPW, was the source of hexavalent chromium concentrations that exceeded soil cleanup criteria and total chromium concentrations that exceed NJDEP's GWQS in the intermediate groundwater zone (about 20 to 40 feet deep).

PPG purchased the southern portion of the site (TSI Carriers, 25 Halladay Street) in May 2013 and the northern portion of the site (Rudolf Bass, 45 Halladay Street) in December 2013. PPG then demolished the building at 25 Halladay Street in August and September 2013 and the building at 45 Halladay Street in March and April 2014. Debris from both buildings was disposed at a regulated facility.

45 Halladay and the Northern Portion of 25 Halladay (Site 137 North)

PPG's soil remediation at Site 137 North is complete. The chromium soil cleanup was conducted between July 2014 and May 2015 for 45 Halladay Street and a portion of 25 Halladay Street, resulting in approximately 107,000 tons of chromium-contaminated waste being dug up and hauled away from this area. The material was treated and disposed of at licensed, offsite locations in accordance with applicable regulations. NJDEP issued a Consent Judgment Compliance Letter for soil at Site 137 North in June 2020, documenting that no further remedial action is required.

The placement of clean backfill to near-final grade was completed at 45 Halladay Street and the northern portion of 25 Halladay Street in August 2015. Clean fill for a majority of the site was amended with FerroBlack®-H. This water-based suspension of ferrous iron and sulfide is designed to prevent the backfill from being contaminated by chromium-impacted groundwater and to support groundwater remediation.

Southern Portion of 25 Halladay (Site 137 South)

Soil excavation activities began in August 2018. Excavation resumed when the Ten West Apparel excavation commenced in April 2021. Excavation and backfill are scheduled to be complete by December 2021.

For Sites 137 North and South, PPG has retained an LSRP to address nonchromium contamination from historic fill and prior site operations unrelated to PPG, including volatile organics, semivolatile organics, PCBs, pesticides, non-CCPW metals and petroleum. Piotr Serwik of AECOM is the LSRP. His telephone number is: 610-234-4888. His email address is: Piotr.Serwik@aecom.com.

Under the LSRP program, for Site 137 North, an RAO was issued in March 2020, documenting that no further remedial action is required. For Site 137 South, a remedial investigation to address nonchromium contamination is ongoing. Nonchromium contaminants that exceed soil remediation standards and NJDEP's GWQS will be addressed under the LSRP program.

Hudson County Chrome Site No. 143 – F. Talarico Auto
846 Garfield Ave., Jersey City, N.J. 07305
Block 21510, Lot 1
NJDEP ID No. G000008759

Chromate chemical production waste, or CCPW, was the source of hexavalent chromium concentrations in soil that exceeded cleanup criteria and total chromium concentrations that exceed NJDEP's GWQS in the intermediate groundwater zone (about 20 to 40 feet deep).

PPG's soil remediation of CCPW-impacted soil is complete. PPG purchased the site in February 2013 and demolished the building in June 2013, disposing of the debris at a regulated facility. Soil remediation was conducted between March 2014 and September 2014. Approximately 20,400 tons of chromium-contaminated waste was dug up and hauled away from this area. The material was treated and disposed of at licensed, offsite locations in accordance with applicable regulations. NJDEP issued a Consent Judgment Compliance Letter for soil at Site 143 in June 2020, documenting that no further remedial action is required.

The placement of clean backfill to near-final grade was completed in May 2015. Clean fill for a portion of the site was amended with FerroBlack®-H. This water-based suspension of ferrous sulfide is designed to prevent the backfill from being contaminated by chromium-impacted groundwater and to support groundwater remediation.

PPG has retained an LSRP to address nonchromium contamination from historic fill and prior site operations unrelated to PPG, including volatile organics, semivolatile organics, PCBs, pesticides, non-CCPW metals and petroleum. Al LoPilato of AECOM is the LSRP. His telephone number is: 845.425.4980. His email address is: alfred.lopilato@aecom.com.

Under the LSRP program, a remedial action report is being prepared to document that no additional remediation is required to address nonchromium contamination.

Hudson County Chrome Site No. 186 – Garfield Avenue No. 1
947 Garfield Ave., Jersey City, N.J. 07304
Block 19802, Lot 2
NJDEP ID No. G0000114777

Chromate chemical production waste, or CCPW, was the source of hexavalent chromium concentrations that exceeded soil cleanup criteria.

The soil cleanup was completed in November 2013. NJDEP issued a Consent Judgment Compliance Letter for soil at Site 186 in July 2015, documenting no further remedial action is required.

Groundwater quality at this site has been evaluated and the data are presented in the Garfield Avenue Group Groundwater Remedial Investigation Report. No further action is required related to groundwater.

Former Fishbein Property
816 Garfield Ave., Jersey City, N.J. 07305
Block 21510, Lot 11
NJDEP ID No. 629388

Hexavalent chromium concentrations exceed soil cleanup criteria and total chromium concentrations exceed NJDEP's GWQS at this location.

PPG purchased this property in December 2013. The results of a remedial investigation were submitted in 2012 and supplemented in 2018. Excavation of chromium-impacted material at this site is being conducted this month as part of the Ten West Apparel cleanup, which began in April 2021. Excavation and backfill are scheduled to be complete by December 2021.

PPG has retained an LSRP to address nonchromium contamination from historic fill and prior site operations unrelated to PPG, including semivolatile organics, PCBs and non-CCPW metals. Piotr Serwik of AECOM is the LSRP. His telephone number is: 610-234-4888. His email address is:
Piotr.Serwik@aecom.com.

Under the LSRP program, a remedial investigation report addressing nonchromium contamination was submitted in January 2019. Remediation of nonchromium contaminants that exceed soil remediation standards and NJDEP's GWQS are being addressed under the LSRP program.

Former Halsted Bag Company Property
78 Halladay St., Jersey City, N.J. 07304
Block 21502, Lots 12 through 17
NJDEP ID No. 722429

Hexavalent chromium concentrations exceeded soil cleanup criteria and total chromium concentrations exceed NJDEP's GWQS at this location.

PPG's chromium soil remediation at this site is complete. PPG purchased the site in February 2016 and demolished the building between April and June 2018, disposing of the debris at a regulated facility. Soil remediation was conducted between May 2018 and August 2018. Approximately 16,500 tons of

chromium-contaminated waste were dug up and hauled away from this area. The material was treated and disposed of at licensed, offsite locations in accordance with applicable regulations. A draft remedial action report was submitted to NJDEP in June 2021 to document that no further remedial action is required. The placement of clean backfill to near-final grade was completed in August 2018.

PPG completed the excavation and backfill for the site in 2018 except for areas adjacent to Halladay Street North. These areas were excavated and backfilled concurrent with remediation of Halladay Street North, which was completed in April 2020. The delineation of soil impacts on the eastern boundary of this property is ongoing. Clean fill for a portion of the site was amended with FerroBlack®-H. This water-based suspension of ferrous iron and sulfide is designed to prevent the backfill from being contaminated by chromium-impacted groundwater and to support groundwater remediation. A remedial action report was submitted to NJDEP in June 2021.

PPG, meanwhile, has retained an LSRP to address nonchromium contamination from historic fill and prior site operations unrelated to PPG, including volatile organics, semivolatile organics, non-CCPW metals, PCBs and pesticides. Nonchromium contaminants that exceed soil remediation standards and groundwater screening levels will be addressed under the LSRP program. In January of 2021, PPG submitted to NJDEP a Remedial Investigation Report and Remedial Action Workplan for Non-Chromate Contaminants in soil and groundwater. Jeff Hosterman of Tetra Tech is the LSRP. His telephone number is: 302.283.2289. His email address is: jeff.hosterman@tetrattech.com

Forrest Street Properties

84, 86-90, 98-100, and 108 Forrest Street, Jersey City, N.J. 07304
Block 21501, Lots 11, 12 and 14.01

Hexavalent chromium concentrations exceed soil cleanup criteria and total chromium concentrations exceed NJDEP's GWQS at this location.

Excavation of chromium-impacted soil and the placement of clean backfill on 108 Forrest Street began in March 2017 and were completed in July 2017 with approximately 9,600 tons of chromium-contaminated waste being dug up and hauled away from this area. The excavated material was disposed of at licensed, offsite locations in accordance with applicable regulations.

The placement of clean backfill to near-final grade on 108 Forrest Street was completed in August 2017. Clean fill for the northern portion of the site was amended with FerroBlack®-H in areas where groundwater was encountered. This water-based suspension of ferrous iron and sulfide is designed to prevent the backfill from being contaminated by chromium-impacted groundwater and to support groundwater remediation. A remedial action report for 108 Forrest was submitted to NJDEP in January 2019 and was conditionally approved by NJDEP in November 2019. Final approval by NJDEP is pending written concurrence from the property owner.

In March 2019, PPG submitted a remedial action work plan to propose an engineering control and restricted use remedy for these properties, taking into account the properties' current nonresidential use and impacts that remain under and adjacent to the buildings. Installation of the engineering controls began in June 2021 and will be completed this fall. PPG will conduct remedial excavation of the impacts that remain under and adjacent to the buildings in conjunction with the properties' future residential development.

Al Smith Moving Property
33 Pacific Avenue, Jersey City, N.J. 07304
Block 21509, Lot 3

Hexavalent chromium concentrations exceeded soil cleanup criteria at this location.

PPG's remediation at this property is complete. Demolition of the Al Smith Moving building occurred in July and August 2017. Soil remediation was conducted between August 2017 and January 2018 with approximately 12,600 tons of chromium-contaminated waste being dug up and hauled away from this area.

NJDEP issued a Consent Judgment Compliance Letter in October 2019, which documents that no further remedial action is required.

Former Ten West Apparel Property
800 Garfield, Jersey City, N.J. 07304
Block 21510, Lot 39

Hexavalent chromium concentrations exceed soil cleanup criteria and total chromium concentrations exceed NJDEP's GWQS at this location.

PPG purchased this property in April 2017 and demolished the building in May 2021, disposing of the debris at a regulated facility. Remedial excavation began in April 2021. Excavation and backfill are scheduled to be complete by December 2021. A groundwater investigation will follow.

PPG has retained an LSRP to address nonchromium contamination from historic fill and prior site operations unrelated to PPG. Nonchromium contaminants that exceed soil remediation standards and groundwater screening levels will be addressed under the LSRP program. In April of 2021, PPG submitted a Remedial Investigation Report and Remedial Action Workplan for Non-Chromate Contaminants in soil and groundwater to NJDEP. Jeff Hosterman of Tetra Tech is the LSRP. His telephone number is: 302.283.2289. His email address is: jeff.hosterman@tetrattech.com.

457 Communipaw Ave., Jersey City, N.J. 07305
Block 18901 Lots 11, 14 and 15
NJDEP ID No. 715149

Chromate chemical production waste, or CCPW, is the source of hexavalent chromium concentrations that exceed soil cleanup criteria. Chromium impacted soil was discovered at the intersection of Berry Lane and Communipaw Avenue.

The excavation of approximately 70 tons of chromium-impacted soil was conducted between February and March 2016 at the Communipaw Avenue Right-of-Way (Block 18901, Lot 1.01) adjacent to 457 Communipaw Avenue. Excavated material was transported and disposed of at licensed, offsite locations in accordance with applicable regulations. The portion of this impacted area that was accessible to PPG has been fully remediated.

During the excavation, and confirmed by post excavation analytical results, CCPW was observed on the western sidewall of the excavation. This indicated soil impacts extend onto the adjacent property (457 Communipaw Ave, Block 18901, Lot 15). PPG conducted additional investigation between 2017 and September 2020. PPG is preparing a report that will document the findings of the investigation and propose a remedial approach.

Additional investigation was also conducted on the properties at 457-463 Communipaw in 2021. Chromium impacted soil was identified at depths up to about 9 feet below ground surface in portions of the site. A Remedial Investigation Report is being prepared to document the findings and a current use Remedial Action Work Plan is in preparation to excavate and/or cap impacted areas. The plan includes the installation of groundwater monitoring wells to evaluate groundwater conditions at the site.

Chrome blooms, meanwhile, were identified in a small area of the basement wall at 465 Communipaw Ave., and were addressed by the installation of an epoxy barrier. Monthly inspections of the basement indicate the epoxy barrier remains an effective remedial measure to prevent further impacts. Based on the success of this interim remedial measure, inspections will be extended to quarterly in the fall of 2021.

Roadways

Caven Point Avenue and Pacific Avenue (Between Garfield and Carteret avenues) – Hexavalent chromium concentrations exceed soil cleanup criteria at this location.

Remedial action for the site is engineering controls (existing asphalt cap) and institutional control (notice in lieu of deed notice). The institutional control is being implemented as a precautionary measure and will also serve as a nonresidential land use restriction. The remedy supports existing and expected future use of Caven Point Avenue and Pacific Avenue as public roads. PPG is preparing a draft remedial action report to document that no further remedial action is required.

Carteret Avenue (Between Garfield and Pacific avenues) – Chromate chemical production waste, or CCPW, is the source of hexavalent chromium concentrations that exceed soil cleanup criteria.

PPG's soil remediation in Carteret Avenue is complete. Remedial excavation began in June 2019 and was completed in January 2020 with approximately 37,200 tons of hazardous waste being dug up and hauled away from this area. The excavated material was disposed of at licensed offsite locations in accordance with applicable regulations. A final draft remedial action report was submitted to NJDEP in August 2021 to document that no further remedial action is required.

The placement of clean backfill to near-final grade was completed in February 2020. Clean fill was amended with FerroBlack®-H. This water-based suspension of ferrous iron and sulfide is designed to prevent the backfill from being contaminated by chromium-impacted groundwater and to support groundwater remediation.

Forrest Street (West of intersection with Halladay Street) – Chromate chemical production waste, or CCPW, is the source of hexavalent chromium concentrations that exceed soil cleanup criteria.

PPG's soil remediation in Forrest Street is complete. A section of Forrest Street has been fully restored following PPG's excavation of chromium-impacted soil in 2017. A Remedial Action Report was submitted

to NJDEP in February 2019 and approved by NJDEP in November 2020. A Remedial Action Permit application was submitted to NJDEP in March 2021. Chromium-impacted soil and debris under and in the proximity of the buildings will be addressed when the property is redeveloped.

Garfield Avenue (Between Carteret Avenue and light-rail bridge) – Chromate chemical production waste, or CCPW, is the source of hexavalent chromium concentrations that exceed soil cleanup criteria. A work plan to address the chromium-impacted soil beneath the street was approved by NJDEP and the City of Jersey City in December 2019. Remedial excavation will not begin until the street is closed to traffic as part of the planned redevelopment in this area.

Halladay Street North (Between Carteret Avenue and Forrest Street) – Chromate chemical production waste, or CCPW, was the source of hexavalent chromium concentrations that exceeded soil cleanup criteria. Remedial excavation began in January 2020 and was completed in April 2020 with approximately 12,200 tons of hazardous waste being dug up and hauled away from this area. Excavated material was disposed of at licensed offsite locations in accordance with applicable regulations. A draft remedial action report was submitted to NJDEP in July 2021 documenting that no further remedial action is required.

The placement of clean backfill to near-final grade was completed in April 2020. Clean fill for a portion of the site was amended with FerroBlack®-H. This water-based suspension of ferrous iron and sulfide is designed to prevent the backfill from being contaminated by chromium-impacted groundwater and to support groundwater remediation.

Halladay Street South (Between Carteret and Caven Point avenues) -- Chromate chemical production waste, or CCPW, was the source of hexavalent chromium concentrations that exceeded soil cleanup criteria.

PPG's soil remediation in Halladay Street South is complete. Remedial excavation began in May 2015. Excavation was performed concurrently with Site 133 East and was completed in October 2015 with approximately 44,600 tons of hazardous waste being dug up and hauled away from these areas. NJDEP issued a Consent Judgment Compliance Letter in June 2020, documenting that no further remedial action is required.

The placement of clean backfill to near-final grade was completed in July 2016. Clean fill for a majority of the site was amended with FerroBlack®-H. This water-based suspension of ferrous iron and sulfide is designed to prevent the backfill from being contaminated by chromium-impacted groundwater and to support groundwater remediation.

Additional Investigations

Based upon a request from the NJDEP to further delineate chromium contamination, the following properties were also investigated (the results were less than the soil remediation standards):

- Parness Trucking Corporation – 181 Pacific Avenue (Block 19903, Lots 1, 4, 5, 8 & 9)
- Valero Station – 770 Garfield Avenue (Block 23305, Lots 1 & 2)
- East Coast Collision – 783 Garfield Avenue (Block 23304, Lot 13)
- Frenchpark Warehouse – 855 Garfield Avenue (Block 21404, Lots 3 & 5)
- Cypress Tavern – 784 Garfield Avenue (Block 21510, Lot 7)

- Garfield Avenue Scrap Metal – 802 Garfield Avenue (Block 21510, Lot 10)
- 20 Commercial Street (Block 24301, Lot 1)
- Former Northern Morris Canal Area (Block 18901, Lots 3 - 15)
- 851 Garfield Avenue, LLC - 851 Garfield Avenue (Block 21404, Lot 6) [The wells installed on this property may be used in the future groundwater remedial investigation.]

Total chromium concentrations of groundwater samples collected at wells on and near the Frenchpark Warehouse property in 2018 did not exceed NJDEP's GWQS. Samples collected before the soil excavation began across the street at Site 114 in 2014 exceeded standards.



Descripciones del lugar

PPG es responsable de la investigación de cromo hexavalente que excede los requisitos del Departamento de Protección Ambiental de Nueva Jersey (NJDEP) en los siguientes sitios. Además, si la fuente de cromo hexavalente son residuos químicos de cromato, también conocidos como CCPW, entonces PPG es responsable de su limpieza. Además, PPG es responsable de la investigación y limpieza de todos los contaminantes de interés que exceden los requisitos del NJDEP en el sitio No. 114 y en las propiedades que posee la empresa. Este documento incluye una serie de descripciones de sitios que indican los contaminantes de interés, el trabajo completado y el trabajo adicional que se realizará en cada uno de los sitios.

**Condado de Hudson, lugar contaminado con cromo N.º 114: sitio en Garfield Avenue
880-900 Garfield Ave., Jersey City, N.J. 07305
Manzana 21501, Lotes 16, 17, 18.01, 19.01 y 20.01
No. de ID de NJDEP G000005480**

Los desechos de producción química de cromato, o CCPW, eran la fuente de concentraciones de cromo hexavalente que excedieron los criterios para limpieza de suelo y las concentraciones de cromo total que superan las normas de calidad para aguas subterráneas (GWQS, por sus siglas en inglés). PPG también es responsable de abordar la contaminación sin cromo, incluidos compuestos orgánicos volátiles, compuestos orgánicos semivolátiles, metales sin CCPW, bifenilos policlorados y pesticidas. Public Service Electric and Gas (PSEG) está tomando la iniciativa para abordar los impactos del suelo y las aguas subterráneas relacionados con la antigua planta de gas manufacturado, incluidos los que emanan en otros sitios.

Se completó el saneamiento del suelo por parte de PPG en el sitio n.º 114. La excavación del suelo afectado por cromo se realizó entre julio de 2010 y noviembre de 2014 y se removieron aproximadamente 530,000 toneladas de material del sitio. El material excavado se trató y eliminó en ubicaciones autorizadas, fuera del sitio, de acuerdo con las reglamentaciones pertinentes. La mayor parte de la contaminación sin cromo se eliminó durante la excavación de cromo. Se ha instalado una capa de tierra para evitar el contacto directo o la exposición en el aire al material afectado restante. El NJDEP emitió una carta de cumplimiento de la sentencia acordada en junio de 2020 en la que se documenta que no se requiere ninguna medida correctiva adicional para el suelo.

La colocación del relleno limpio hasta la calificación casi final se completó en enero de 2015. El relleno limpio para la mayoría del sitio se modificó con FerroBlack®-H. Esta suspensión a base de agua de hierro ferroso y sulfuro está diseñada para evitar que el relleno se contamine con aguas subterráneas afectadas por cromo y para apoyar el saneamiento de las aguas subterráneas. Las pruebas continuas indican que las aguas subterráneas poco profundas (de menos de 20 pies de profundidad) en la mayor parte del sitio ya cumplen con las GWQS del NJDEP.

El suelo afectado por cromo en el sitio era la fuente de los impactos de cromo en las aguas subterráneas. Para abordar estos impactos, se está llevando a cabo un saneamiento provisional de las aguas subterráneas. Para obtener más detalles sobre los impactos en las aguas subterráneas, consulte la hoja informativa incluida en este correo. En Jersey City no se utilizan aguas subterráneas como agua

potable. Además, el NJDED ha aprobado un Área de Excepción de Clasificación, que prohíbe la instalación o el uso de pozos de agua subterránea en las propiedades afectadas. Las reservas en Boonton, N.J., suministran el agua potable a Jersey City.

**Condado de Hudson, lugar contaminado con cromo N.º 132 – Town and Country Linen Warehouse
824 Garfield Ave., Jersey City, N.J. 07305
Cuadra 21510, Lote 2
N.º de identificación del NJDEP G000008749**

Los residuos químicos de cromato, o CCPW, eran la fuente de concentraciones de cromo hexavalente que excedieron los criterios para limpieza de suelo y las concentraciones de cromo totales que exceden las GWQS del NJDEP en la zona intermedia.

Se completó el saneamiento del suelo por parte de PPG en el sitio n.º 132. En julio de 2013, el edificio en el sitio fue demolido y los escombros del edificio fueron eliminados adecuadamente. El saneamiento del suelo se realizó entre marzo de 2014 y septiembre de 2014, donde se extrajeron y retiraron de esta área aproximadamente 72,200 toneladas de desechos contaminados con cromo. El material excavado se trató y eliminó en ubicaciones autorizadas, fuera del sitio, de acuerdo con las reglamentaciones pertinentes. El NJDEP emitió una carta de cumplimiento de la sentencia acordada con respecto al suelo en noviembre de 2019, en la que se documenta que no se requiere ninguna otra medida correctiva.

La colocación del relleno limpio hasta la calificación casi final se completó en mayo de 2015. El relleno limpio de una parte del sitio se modificó con FerroBlack®-H. Esta suspensión a base de agua de hierro ferroso y sulfuro está diseñada para evitar que el relleno se contamine con aguas subterráneas afectadas por cromo y para apoyar el saneamiento de las aguas subterráneas.

**Condado de Hudson, lugar contaminado con cromo N.º 133: Ross Wax
15 and 22-68 Halladay St., Jersey City, N.J. 07304
Cuadra 21510, Lote 5 y Cuadra 21509, Lote 1
Nº de identificación del NJDEP 025695**

Los desechos de producción química de cromato, o CCPW, son la fuente de concentraciones de cromo hexavalente que exceden los criterios para limpieza de suelo y las concentraciones de cromo total que exceden las GWQS del NJDEP en aguas subterráneas debajo de la calle Halladay, que está adyacente al sitio.

PPG compró el lado occidental del sitio, 15 Halladay Street, en mayo de 2013, y el lado oriental del sitio, 22-68 Halladay Street, en febrero de 2014.

15 Halladay St. (sitio No. 133 oeste)

Se llevó a cabo una investigación del suelo y se presentó un informe al NJDEP en 2012. La excavación del suelo comenzó en agosto de 2018 y se reanudó cuando comenzó la excavación en la propiedad de Ten West Apparel en abril de 2021. La finalización de la excavación y el relleno está programada para diciembre de 2021.

22-68 Halladay St. (sitio No. 133 este)

Se completó el saneamiento del suelo afectado por CCPW en la mayoría del sitio n.º 133 este por parte de PPG. El edificio en este sitio fue demolido en octubre de 2014 y los escombros fueron eliminados en una instalación regulada. Se realizó el saneamiento del suelo entre abril de 2015 y octubre de 2015; se extrajeron y retiraron de esta área más de 88,500 toneladas de desechos contaminados con cromo, incluidas las propiedades adyacentes en el lado este en el sitio No. 135, donde el saneamiento se llevó a cabo simultáneamente con este sitio. El material excavado se trató y eliminó en ubicaciones autorizadas, fuera del sitio, de acuerdo con las reglamentaciones pertinentes. El NJDEP emitió una carta de cumplimiento de la sentencia acordada con respecto al suelo en el sitio 133 este, en marzo de 2020, en la que se documenta que no se requiere ninguna otra medida correctiva.

La colocación del relleno limpio hasta la calificación casi final se completó en julio de 2016. El relleno limpio de la parte norte del sitio se modificó con FerroBlack®-H. Esta suspensión a base de agua de hierro ferroso y sulfuro está diseñada para evitar que el relleno se contamine con aguas subterráneas afectadas por cromo y para apoyar el saneamiento de las aguas subterráneas. El relleno limpio de la parte sur del sitio se modificó en los dos pies superiores del relleno.

Se excavó y relleno una pequeña porción del sitio n.º 133 este, próxima a la propiedad Ten West Apparel, en 2021 como parte del actual saneamiento de Ten West Apparel.

En los sitios n.º 133 oeste y este, PPG ha contratado a un profesional de saneamiento de sitios con licencia (LSRP, por sus siglas en inglés) para abordar la contaminación sin cromo, proveniente del relleno histórico y de las operaciones que se desarrollaban antes en el sitio, no relacionada con PPG, incluidos compuestos orgánicos volátiles, compuestos orgánicos semivolátiles, bifenilos policlorados o PCB, metales sin CCPW y petróleo. Piotr Serwik de AECOM es el LSRP. Su número de teléfono es: 610-234-4888. Su dirección de correo electrónico es: Piotr.Serwik@aecom.com.

En el marco del programa del LSRP en el sitio n.º 133 este, se presentó un informe de investigación sobre el saneamiento en septiembre de 2019. Se completó la clausura de un tanque de almacenamiento subterráneo que contenía aceite combustible en el sitio n.º 133 este y, en diciembre de 2020, se emitió el resultado de la solución (RAO, por sus siglas en inglés), en el que se documenta que no se requieren medidas correctivas adicionales. En el sitio n.º 133 oeste, la investigación sobre el saneamiento para tratar la contaminación sin cromo está en curso. Los contaminantes sin cromo que exceden los estándares de saneamiento del suelo y las GWQS del NJDEP se están tratando en el marco del programa del LSRP.

Condado de Hudson, lugar contaminado con N.º 135: Vitarroz
51-99 Pacific Ave., Jersey City, N.J. 07304
Cuadra 21509, Lote 2
Nº de identificación del NJDEP 246332

Los desechos de producción química de cromato, o CCPW, son la fuente de concentraciones de cromo hexavalente que excedieron los criterios para limpieza de suelo y las concentraciones de cromo total que exceden las GWQS del NJDEP en el derecho de paso adyacente.

Se completó el saneamiento del suelo afectado por CCPW por parte de PPG. PPG compró la propiedad en agosto de 2015. Entre enero y noviembre de 2015, el edificio en el sitio fue demolido y los escombros

del edificio fueron eliminados adecuadamente. Se realizó el saneamiento del suelo entre febrero de 2016 y agosto de 2016; se extrajeron y retiraron de esta área más de 88,500 toneladas de desechos contaminados con cromo, incluidas las propiedades adyacentes en el lado este en el sitio No. 133 este, donde el saneamiento se llevó a cabo simultáneamente con este sitio. El material excavado se eliminó en ubicaciones autorizadas, fuera del sitio, de acuerdo con las reglamentaciones pertinentes. El NJDEP emitió una carta de cumplimiento de la sentencia acordada con respecto al suelo en el sitio n.º 135, en enero de 2021, en la que se documenta que no se requiere ninguna otra medida correctiva.

La colocación del relleno limpio hasta la calificación casi final se completó en diciembre de 2016. El relleno limpio de la parte norte del sitio se modificó con FerroBlack®-H. El relleno limpio de la parte sur del sitio se modificó en los dos pies superiores del relleno. Esta suspensión a base de agua de hierro ferroso y sulfuro está diseñada para evitar que el relleno se contamine con aguas subterráneas afectadas por cromo y para apoyar el saneamiento de las aguas subterráneas.

PPG ha contratado a un LSRP para abordar la contaminación sin cromo del relleno histórico y las operaciones anteriores del sitio no relacionadas con PPG, incluidos compuestos orgánicos volátiles, compuestos orgánicos semivolátiles, metales que no son CCPW, PCB y petróleo. Piotr Serwik de AECOM es el LSRP. Su número de teléfono es: 610-234-4888. Su dirección de correo electrónico es: Piotr.Serwik@aecom.com

En el marco del programa del LSRP, en julio de 2017 se presentó al NJDEP un informe de medidas correctivas para la clausura de tres tanques de almacenamiento subterráneos que contienen aceite combustible. El suelo afectado por mercurio asociado con el incidente No. 16-04-13-1350-52 se removió durante el saneamiento del cromo. En diciembre de 2018 se publicó el RAO, en el que se documentaba que no se requerían medidas correctivas adicionales para los suelos afectados por el mercurio. En enero de 2021 se presentó al NJDEP una solicitud de permiso de medida correctiva para abordar las afectaciones asociadas al relleno histórico.

Hay en curso una investigación sobre el saneamiento para abordar la contaminación sin cromo en las aguas subterráneas. Los contaminantes sin cromo que excedan las GWQS del NJDEP se tratarán en el marco del programa del LSRP.

Condado de Hudson, lugar contaminado con cromo N.º 137: Rudolf Bass
25 and 45 Halladay St., Jersey City, N.J. 07304
Cuadra 21510, Lotes 3 y 4
N.º de identificación del NJDEP G000008753

Los residuos químicos de cromato, o CCPW, eran la fuente de concentraciones de cromo hexavalente que excedieron los criterios para limpieza de suelo y las concentraciones de cromo totales que exceden las GWQS del NJDEP en la zona intermedia de aguas subterráneas (alrededor de 20 a 40 pies de profundidad).

PPG compró la parte sur del sitio (TSI Carriers, 25 Halladay Street) en mayo de 2013 y la parte norte del sitio (Rudolf Bass, 45 Halladay Street) en diciembre de 2013. PPG luego demolió el edificio en 25 Halladay Street en agosto y septiembre de 2013 y el edificio en 45 Halladay Street en marzo y abril de 2014. Los escombros de ambos edificios se eliminaron en una instalación regulada.

45 Halladay y la parte norte de 25 Halladay (sitio No. 137 norte)

Se completó el saneamiento del suelo en el sitio n.º 137 norte por parte de PPG. La limpieza del suelo con cromo se realizó entre julio de 2014 y mayo de 2015 en 45 Halladay Street y una parte de 25 Halladay Street, donde se extrajeron y retiraron de esta área aproximadamente 107,000 toneladas de desechos contaminados con cromo. El material se trató y eliminó en ubicaciones autorizadas, fuera del sitio, de acuerdo con las reglamentaciones pertinentes. El NJDEP emitió una carta de cumplimiento de la sentencia acordada con respecto al suelo en el sitio n.º 137 norte, en junio de 2020, en la que se documenta que no se requiere ninguna otra medida correctiva.

Se realizó la colocación de relleno limpio en una calificación casi final en 45 Halladay Street y la parte norte de 25 Halladay Street en agosto de 2015. El relleno limpio para la mayoría del sitio se modificó con FerroBlack®-H. Esta suspensión a base de agua de hierro ferroso y sulfuro está diseñada para evitar que el relleno se contamine con aguas subterráneas afectadas por cromo y para apoyar el saneamiento de las aguas subterráneas.

Parte sur de 25 Halladay (sitio No. 137 sur)

Las actividades de excavación del suelo comenzaron en agosto de 2018. La excavación se reanudó cuando comenzó la excavación de Ten West Apparel en abril de 2021. La finalización de la excavación y el relleno está programada para diciembre de 2021.

Para los sitios n.º 137 norte y sur, PPG ha contratado a un LSRP para abordar la contaminación sin cromo, proveniente del relleno histórico y de las operaciones que se desarrollaban antes en el sitio, no relacionada con PPG, incluidos compuestos orgánicos volátiles, compuestos orgánicos semivolátiles, PCB, pesticidas, metales sin CCPW y petróleo. Piotr Serwik de AECOM es el LSRP. Su número de teléfono es: 610-234-4888. Su dirección de correo electrónico es: Piotr.Serwik@aecom.com.

En el marco del programa del LSRP, para el sitio n.º 137 norte, se emitió el RAO en marzo de 2020, en el que se documenta que no se requiere ninguna otra medida correctiva. Para el sitio n.º 137 sur, se está llevando a cabo una investigación sobre el saneamiento para tratar la contaminación sin cromo. Los contaminantes que no contienen cromo que exceden las normas de saneamiento del suelo y las GWQS del NJDEP se abordarán en el marco del programa del LSRP.

**Sitio contaminado con cromo No. 143 del condado de Hudson, F. Talarico Auto
846 Garfield Ave., Jersey City, N.J. 07305
Cuadra 21510, Lote 1
Nº de identificación del NJDEP G000008759**

Los residuos químicos de cromato, o CCPW, eran la fuente de cromo hexavalente que excedieron los criterios para limpieza de suelo y las concentraciones de cromo totales que exceden las GWQS del NJDEP en la zona intermedia de aguas subterráneas (alrededor de 20 a 40 pies de profundidad).

Se completó el saneamiento del suelo afectado por CCPW por parte de PPG. PPG compró el sitio en febrero de 2013 y demolió el edificio en junio de 2013, eliminando los escombros en una instalación regulada. El saneamiento del suelo se realizó entre marzo de 2014 y septiembre de 2014. Se extrajeron y retiraron de esta área aproximadamente 20,400 toneladas de desechos contaminados con cromo. El material se trató y eliminó en ubicaciones autorizadas, fuera del sitio, de acuerdo con las

reglamentaciones pertinentes. El NJDEP emitió una carta de cumplimiento de la sentencia acordada con respecto al suelo en el sitio n.º 143 en junio de 2020, en la que se documenta que no se requiere ninguna otra medida correctiva.

La colocación del relleno limpio hasta la calificación casi final se completó en mayo de 2015. El relleno limpio de una parte del sitio recibió relleno limpio que se modificó con FerroBlack®-H. Esta suspensión a base de agua de sulfuro ferroso está diseñada para evitar que el relleno se contamine con aguas subterráneas afectadas por cromo y para apoyar el saneamiento de las aguas subterráneas.

PPG ha contratado a un LSRP para abordar la contaminación sin cromo del relleno histórico y las operaciones anteriores del sitio no relacionadas con PPG, incluidos compuestos orgánicos volátiles, compuestos orgánicos semivolátiles, PCB, pesticidas, metales que no son CCPW y petróleo. Al LoPilato de AECOM es el LSRP. Su número de teléfono es: 845.425.4980. Su dirección de correo electrónico es: alfred.lopilato@aecom.com.

En el marco del programa del LSRP, se está preparando un informe de medidas correctivas para documentar que no se requiere ninguna corrección adicional para abordar la contaminación sin cromo.

Condado de Hudson, lugar contaminado con cromo N.º 186: Garfield Avenue No. 1
947 Garfield Ave., Jersey City, N.J. 07304
Cuadra 19802, Lote 2
No. de ID de NJDEP G0000114777

Los desechos de producción química de cromato, o CCPW, eran la fuente de concentraciones de cromo hexavalente que superaban los criterios para limpieza del suelo.

La limpieza del suelo se realizó en noviembre de 2013. El NJDEP emitió una carta de cumplimiento de la sentencia acordada con respecto al suelo en el sitio 186 en julio de 2015, en la que se documenta que no se requiere ninguna otra medida correctiva.

Se ha evaluado la calidad de las aguas subterráneas en este sitio y los datos se presentan en un informe de investigación sobre el saneamiento de aguas subterráneas del Grupo Garfield Avenue. No se requiere ninguna otra medida relacionada con las aguas subterráneas.

Antigua propiedad de Fishbein
816 Garfield Ave., Jersey City, N.J. 07305
Cuadra 21510, Lote 11
Nº de identificación del NJDEP 629388

Las concentraciones de cromo hexavalente exceden los criterios para limpieza del suelo y las concentraciones de cromo total exceden las GWQS del NJDEP en esta ubicación.

PPG compró esta propiedad en diciembre de 2013. Los resultados de una investigación de saneamiento se presentaron en 2012 y se complementaron en 2018. La excavación del material afectado por cromo en este sitio se lleva a cabo este mes como parte de la limpieza de Ten West Apparel, que comenzó en abril de 2021. La finalización de la excavación y el relleno está programada para diciembre de 2021.

PPG ha contratado a un LSRP para abordar la contaminación sin cromo del relleno histórico y las operaciones anteriores del sitio no relacionadas con PPG, incluidos compuestos orgánicos semivolátiles, PCB y metales que no son CCPW. Piotr Serwik de AECOM es el LSRP. Su número de teléfono es: 610-234-4888. Su dirección de correo electrónico es: Piotr.Serwik@aecom.com.

En el marco del programa del LSRP, en enero de 2019 se presentó un informe de investigación sobre el saneamiento que aborda la contaminación sin cromo. El saneamiento de contaminantes sin cromo que exceden los estándares de saneamiento del suelo y las GWQS del NJDEP se están abordando en el marco del programa del LSRP.

Antigua propiedad de Halsted Bag Company
78 Halladay St., Jersey City, N.J. 07304
Cuadra 21502, Lotes 12 a 17
Nº de identificación del NJDEP 722429

Las concentraciones de cromo hexavalente excedieron los criterios para limpieza del suelo y las concentraciones de cromo total exceden las GWQS del NJDEP en esta ubicación.

Se completó el saneamiento del suelo con cromo en este sitio por parte de PPG. PPG compró el sitio en febrero de 2016, demolió el edificio entre abril y junio de 2018 y eliminó los escombros en una instalación regulada. El saneamiento del suelo se realizó entre mayo de 2018 y agosto de 2018. Se extrajeron y retiraron de esta área aproximadamente 16,500 toneladas de desechos contaminados con cromo. El material se trató y eliminó en ubicaciones autorizadas, fuera del sitio, de acuerdo con las reglamentaciones pertinentes. En junio de 2021 se presentó al NJDEP un proyecto de informe sobre medidas correctivas para documentar que no se requieren medidas correctivas adicionales.

La colocación del relleno limpio hasta la calificación casi final se completó en agosto de 2018. PPG realizó la excavación y el relleno del sitio en 2018, excepto en las áreas adyacentes a Halladay Street North. Estas áreas se excavaron y rellenaron de forma simultánea con el saneamiento de Halladay Street North, proceso que se completó en abril de 2020. La delimitación de los impactos del suelo en el límite oriental de esta propiedad está en curso. El relleno limpio de una parte del sitio se modificó con FerroBlack®-H. Esta suspensión a base de agua de hierro ferroso y sulfuro está diseñada para evitar que el relleno se contamine con aguas subterráneas afectadas por cromo y para apoyar el saneamiento de las aguas subterráneas. En junio de 2021 se presentó un informe de medidas correctivas al NJDEP.

Mientras tanto, PPG ha contratado a un LSRP para abordar la contaminación sin cromo, proveniente del relleno histórico y de las operaciones que se desarrollaban antes en el sitio, no relacionada con PPG, incluidos compuestos orgánicos volátiles, compuestos orgánicos semivolátiles, metales sin CCPW, PCB y pesticidas. Estos y otros contaminantes que no contienen cromo que exceden las normas de saneamiento del suelo y los niveles de detección de aguas subterráneas se abordarán bajo el programa LSRP. En enero de 2021, PPG presentó al NJDEP un informe de investigación sobre el saneamiento y un plan de trabajo de medidas correctivas para los contaminantes sin cromatos en suelos y aguas subterráneas. Jeff Hosterman de Tetra Tech es el LSRP. Su número de teléfono es: 302.283.2289. Su dirección de correo electrónico es: jeff.hosterman@tetrattech.com

Propiedades de Forrest Street
84, 86-90, 98-100 y 108 Forrest Street, Jersey City, N.J. 07304
Cuadra 21501, Lotes 11, 12 y 14.01

Las concentraciones de cromo hexavalente exceden los criterios para limpieza del suelo y las concentraciones de cromo total exceden las GWQS del NJDEP en esta ubicación.

La excavación del suelo afectado por cromo y la colocación de relleno limpio en 108 Forrest Street comenzaron en marzo de 2017 y finalizaron en julio de 2017; se extrajeron y retiraron de esta área aproximadamente 9,600 toneladas de desechos contaminados con cromo. El material excavado se eliminó en ubicaciones autorizadas, fuera del sitio, de acuerdo con las reglamentaciones pertinentes.

La colocación del relleno limpio hasta la calificación casi final en 108 Forrest Street se completó en agosto de 2017. El relleno limpio para la parte norte del sitio se modificó con FerroBlack®-H en áreas donde se encontró agua subterránea. Esta suspensión a base de agua de hierro ferroso y sulfuro está diseñada para evitar que el relleno se contamine con aguas subterráneas afectadas por cromo y para apoyar el saneamiento de las aguas subterráneas. Un informe de medidas correctivas para 108 Forrest se presentó al NJDEP en enero de 2019 y el NJDEP lo aprobó de forma condicional en noviembre de 2019. La aprobación final por parte del NJDEP está pendiente de la aprobación por escrito del titular de la propiedad.

En marzo de 2019, PPG presentó un plan de trabajo de medidas correctivas que propone un control de ingeniería y un saneamiento de uso restringido para estas propiedades, considerando el uso no residencial actual de las propiedades y las afectaciones que quedan debajo y adyacentes a los edificios. La instalación de los controles de ingeniería comenzó en junio de 2021 y finalizará este otoño. PPG llevará a cabo una excavación de saneamiento de los impactos que permanecen debajo y adyacentes a los edificios junto con el futuro desarrollo residencial de las propiedades.

Propiedad de Al Smith Moving
33 Pacific Avenue, Jersey City, N.J. 07304
Cuadra 21509, Lote 3

Las concentraciones de cromo hexavalente excedieron los criterios para limpieza del suelo en este lugar.

PPG ha finalizado el saneamiento de esta propiedad. La demolición del edificio de Al Smith Moving tuvo lugar en julio y agosto de 2017. El saneamiento del suelo se realizó entre agosto de 2017 y enero de 2018, donde se extrajeron y retiraron de esta área aproximadamente 12,600 toneladas de desechos contaminados con cromo.

El NJDEP emitió una carta de cumplimiento de la sentencia acordada en octubre de 2019, la cual documenta que no se requiere ninguna otra medida correctiva.

Antigua propiedad de Ten West Apparel
800 Garfield, Jersey City, N.J. 07304
Cuadra 21510, Lote 39

Las concentraciones de cromo hexavalente exceden los criterios para limpieza del suelo y las concentraciones de cromo total exceden las GWQS del NJDEP en esta ubicación.

PPG compró esta propiedad en abril de 2017, demolió el edificio en mayo de 2021 y eliminó los escombros en una instalación regulada. Las excavaciones para el saneamiento comenzaron en abril de

2021. La finalización de la excavación y el relleno está programada para diciembre de 2021. Luego se realizará una investigación sobre las aguas subterráneas.

PPG ha contratado a un LSRP para abordar la contaminación sin cromo del relleno histórico y las operaciones anteriores del sitio no relacionadas con PPG. Estos y otros contaminantes que no contienen cromo que exceden las normas de saneamiento del suelo y los niveles de detección de aguas subterráneas se abordarán bajo el programa LSRP. En abril de 2021, PPG presentó al NJDEP un informe de investigación sobre el saneamiento y un plan de trabajo de medidas correctivas para los contaminantes sin cromatos en suelos y aguas subterráneas. Jeff Hosterman de Tetra Tech es el LSRP. Su número de teléfono es: 302.283.2289. Su dirección de correo electrónico es: jeff.hosterman@tetrattech.com.

457 Communipaw Ave., Jersey City, N.J. 07305
Cuadra 18901, Lotes 11, 14 y 15
No. de ID de NJDEP 715149

Los desechos de producción química de cromato, o CCPW, son la fuente de concentraciones de cromo hexavalente que exceden los criterios de limpieza del suelo. Se descubrió suelo afectado por cromo en la intersección de Berry Lane y Communipaw Avenue.

La excavación de aproximadamente 70 toneladas de tierra afectada por cromo se realizó entre febrero y marzo de 2016 en el derecho de paso de Communipaw Avenue (cuadra 18901, lote 1.01) adyacente a 457 Communipaw Avenue. El material excavado se transportó y eliminó en ubicaciones autorizadas, fuera del sitio, de acuerdo con las reglamentaciones pertinentes. La parte de esta zona afectada que era accesible a PPG ha sido saneada por completo.

Durante la excavación se observaron CCPW en la pared lateral occidental de la excavación, lo cual confirmaron los resultados analíticos posteriores a la excavación. Esto indica que las afectaciones en el suelo se extienden a la propiedad adyacente (457 Communipaw Ave, cuadra 18901, lote 15). PPG realizó una investigación adicional entre 2017 y septiembre de 2020. PPG prepara un informe que documentará los resultados de la investigación y propondrá un enfoque correctivo.

También se realizaron investigaciones adicionales sobre las propiedades en 457-463 Communipaw en 2021. El suelo afectado por cromo se identificó a profundidades de hasta 9 pies por debajo de la superficie del suelo en partes del sitio. Se está preparando un informe de investigación sobre el saneamiento para documentar las conclusiones y se está preparando un plan de trabajo de medidas correctivas de uso actual para eliminar y/o tapar las áreas afectadas. El plan incluye la instalación de pozos de monitoreo de aguas subterráneas para evaluar las condiciones de dichas aguas en el sitio.

Mientras tanto, se identificaron proliferaciones de cromo en un área pequeña de la pared del sótano en 465 Communipaw Ave. y se abordaron con la instalación de una barrera de epoxi. Las inspecciones mensuales del sótano indican que la barrera epoxídica sigue siendo una medida correctiva eficaz para prevenir nuevas afectaciones. A partir del éxito de esta medida correctiva provisional, las inspecciones pasarán a ser trimestrales en el otoño de 2021.

Carreteras

Caven Point Avenue y Pacific Avenue Roadways: (entre Garfield Avenue y Carteret Avenue)

Las concentraciones de cromo hexavalente exceden los criterios para limpieza del suelo en este lugar. Las medidas correctivas para el sitio son los controles de ingeniería (tapa de asfalto existente) y el control institucional (aviso en lugar de aviso de escritura). El control institucional se está implementando como medida cautelar y también servirá como una restricción para el uso del terreno con fines no residenciales. El saneamiento apoya el uso actual y esperado a futuro de Caven Point Avenue y Pacific Avenue como vías públicas. PPG prepara un proyecto de informe de medidas correctivas para documentar que no se requieren más medidas correctivas.

Carteret Avenue (entre las avenidas Garfield y Pacific): los desechos de producción química de cromato, o CCPW, son la fuente de concentraciones de cromo hexavalente que exceden los criterios de limpieza del suelo.

Se completó el saneamiento del suelo en Carteret Avenue por parte de PPG. Las excavaciones de saneamiento del suelo comenzaron en junio de 2019 y finalizaron en enero de 2020. Se extrajeron y retiraron de esta área aproximadamente 37.200 toneladas de desechos peligrosos. El material excavado se eliminó en ubicaciones autorizadas, fuera del sitio, de acuerdo con las reglamentaciones pertinentes. En agosto de 2021 se presentó al NJDEP un proyecto final de informe sobre medidas correctivas para documentar que no se requiere ninguna otra medida correctiva.

La colocación del relleno limpio para la explanación casi final del terreno se completó en febrero de 2020. El relleno limpio se modificó con FerroBlack®-H. Esta suspensión a base de agua de hierro ferroso y sulfuro está diseñada para evitar que el relleno se contamine con aguas subterráneas afectadas por cromo y para apoyar el saneamiento de las aguas subterráneas.

Forrest Street (al oeste de la intersección con Halladay Street): los desechos de producción química de cromato, o CCPW, son la fuente de concentraciones de cromo hexavalente que exceden los criterios de limpieza del suelo.

Se completó el saneamiento del suelo en Forrest Street por parte de PPG. Una sección de Forrest Street ha sido completamente restaurada después de la excavación del suelo afectado por cromo por parte de PPG en 2017. En febrero de 2019 se presentó un informe de medidas correctivas al NJDEP, el cual se aprobó en noviembre de 2020. La solicitud de permiso para las medidas correctivas se presentó ante el NJDEP en marzo de 2021. El suelo y los escombros contaminados con cromo que se encuentran debajo y en las proximidades de los edificios se tratarán cuando la propiedad se vuelva a reurbanizar.

Garfield Avenue (entre Carteret Avenue y el puente ferroviario): los desechos de producción química cromato, o CCPW, son la fuente de concentraciones de cromo hexavalente que exceden los criterios de limpieza del suelo. En diciembre de 2019, el NJDEP y la Ciudad de Jersey aprobaron un plan de trabajo para tratar el suelo afectado por el cromo debajo de la calle. La excavación de saneamiento no comenzará hasta que la calle esté cerrada al tráfico como parte de la reurbanización planificada en esta área.

Halladay Street North (entre Carteret Avenue y Forrest Street): los desechos de producción química de cromato, o CCPW, fueron la fuente de concentraciones de cromo hexavalente que excedieron los criterios de limpieza del suelo. Las excavaciones de saneamiento comenzaron en enero de 2020 y finalizaron en abril de 2020, con aproximadamente 12.200 toneladas de desechos peligrosos que se

excavaron y retiraron de esta zona. El material excavado se eliminó en ubicaciones autorizadas, fuera del sitio, de acuerdo con las reglamentaciones pertinentes. En julio de 2021 se presentó al NJDEP un proyecto de informe sobre medidas correctivas en el que se documentaba que no se requieren medidas correctivas adicionales.

La colocación del relleno limpio para la explanación casi final del terreno se completó en abril de 2020. El relleno limpio de una parte del sitio se modificó con FerroBlack®-H. Esta suspensión a base de agua de hierro ferroso y sulfuro está diseñada para evitar que el relleno se contamine con aguas subterráneas afectadas por cromo y para apoyar el saneamiento de las aguas subterráneas.

Halladay Street South (entre las avenidas Carteret y Caven Point): los desechos de producción química de cromato, o CCPW, fueron la fuente de concentraciones de cromo hexavalente que excedieron los criterios de limpieza del suelo.

Se completó el saneamiento del suelo en Halladay Street South por parte de PPG. Las excavaciones de saneamiento comenzaron en mayo de 2015. La excavación se realizó simultáneamente con la del sitio n.º 133 este y se completó en octubre de 2015, con aproximadamente 44.600 toneladas de desechos peligrosos excavados y retirados de estas áreas. El NJDEP emitió una carta de cumplimiento de la sentencia acordada en junio de 2020, en la que se documenta que no se requiere ninguna otra medida correctiva.

La colocación del relleno limpio hasta la calificación casi final se completó en julio de 2016. El relleno limpio para la mayoría del sitio se modificó con FerroBlack®-H. Esta suspensión a base de agua de hierro ferroso y sulfuro está diseñada para evitar que el relleno se contamine con aguas subterráneas afectadas por cromo y para apoyar el saneamiento de las aguas subterráneas.

Investigaciones adicionales

De acuerdo con una solicitud del NJDEP para delinear aún más la contaminación por cromo, también se investigaron las siguientes propiedades (los resultados fueron menores que las normas de saneamiento del suelo):

- Parness Trucking Corporation – 181 Pacific Avenue (cuadra 19903, lotes 1, 4, 5, 8 & 9)
- Estación Valero – 770 Garfield Avenue (cuadra 23305, lotes 1 & 2)
- East Cost Collision – 783 Garfield Avenue (cuadra 23304, lote 13)
- Frenchpark Warehouse – 855 Garfield Avenue (cuadra 21404, lotes 3 & 5)
- Cypress Tavern – 784 Garfield Avenue (cuadra 21510, lote 7)
- Garfield Avenue Scrap Metal – 802 Garfield Avenue (cuadra 21510, lote 10)
- 20 Commercial Street (cuadra 24301, lote 1)
- Antigua zona de Northern Morris Canal (cuadra 18901, lotes 3 - 15)
- 851 Garfield Avenue, LLC - 851 Garfield Avenue (cuadra 21404, lote 6) [Los pozos instalados en esta propiedad pueden usarse en la futura investigación de saneamiento de aguas subterráneas].

Las concentraciones de cromo total de las muestras de agua subterránea recolectadas en pozos y cerca de la propiedad de Frenchpark Warehouse en 2018 no excedieron las GWQS del NJDEP. Las muestras recolectadas antes de que comenzara la excavación del suelo al otro lado de la calle en el sitio No. 114 en 2014 excedieron las normas.

Display Advertisement

JC cop pleads guilty to attempted sex with minors charge

BY KEVIN CANESSA JR.
CITY EDITOR

A 34-year-old Jersey City police officer pleaded guilty to a charge he traveled to Atlantic City to sexually assault two underage girls, Acting Attorney General Andrew J. Bruck said yesterday.

Stephen T. Wilson, 34, of Bayonne, had been charged with one count of second-degree attempted aggravated sexual assault in

Atlantic County. Under his plea agreement, the state will recommend Wilson be sentenced to eight years in state prison.

He will also be required to register as a sex offender under Megan's Law and will be subject to parole supervision for life, the AG's office said.

Sentencing is set for Oct. 21.

Wilson reportedly used a chat app with other adults who told him they'd provide him access to

children he could sexually assault, reports said.

The Attorney General's Office said Wilson, who was suspended after his Feb. 26 arrest, traveled to Atlantic City to meet adults he met on an incest chat app, who offered him access to underage girls, ages 8 and 10, in exchange for \$200. When he was nabbed, he reportedly had condoms and more than \$500 in cash on him.

"Predators like Wilson will go

to great lengths to sexually exploit children, but law enforcement will go farther to bring them to justice," Bruck said. "Let this sentence serve as a warning to anyone who believes they can exploit or prey on innocent children. We will continue to work with our partners to aggressively investigate and prosecute child predators."

Wilson made \$109,756 with the Jersey City PD and had been with

the department for 13 years, according to state pension records.

Authorities urge anyone with information about the distribution of child sexual-abuse materials on the internet — or about suspected improper contact by anyone communicating with children on the internet — to call the New Jersey Internet Crimes Against Children Task Force Tipline at 888-648-6007.



NJ ADVANCE MEDIA FILE PHOTO

WESTFIELD GARDEN State Plaza parking lot.

JC residents carjacked at Bergen mall: police

BY NOAH COHEN
NJ ADVANCE MEDIA

Two men were carjacked at gunpoint late Tuesday at the Westfield Garden State Plaza in Bergen County, police said.

The Jersey City residents told officers they left the mall in Paramus and saw a man sitting on a light post stanchion near their 2020 Mercedes G-Wagon around 9:20 p.m., according to Paramus Police Chief Kenneth Ehrenberg.

When the men got into the SUV, the assailant ran over to them, pulled a handgun and demanded the keys, Ehrenberg said. The carjacker took off in the Mercedes, he

said.

The New Jersey State Police Auto Theft Task Force helped Paramus police find the stolen SUV in Jersey City, according to the chief, who said borough police also seized a vehicle used in the carjacking.

The suspect was described as a man, approximately 6-foot-3 tall with a black sweatshirt and grey sweatpants and wearing a black face mask, according to police.

Ehrenberg asked anyone with information to call police at 201-262-3400 or use the department's anonymous tips app available at www.paramuspolice.org.

Man beat store owner with brick: cops

BY RON ZEITLINGER
MANAGING EDITOR

A Jersey City store owner was beaten with a brick after a dispute with a man who entered his store Wednesday afternoon, authorities said.

The 51-year-old, whose business is located on Monticello

Avenue, was treated at the Jersey City Medical Center and released, a Jersey City spokesman said.

Yerola Pitter, 30, also of Jersey City, was arrested and charged with aggravated assault after the 4 p.m. incident, the spokesman said. Pitter is charged with possession of a weapon, the brick, and using it for an unlawful purpose.

Notification of Environmental Investigation and Cleanup Hudson County Chromate Site No. 114, Garfield Avenue Site 880-900 Garfield Ave., Jersey City, N.J. 07305 Block 21501, Lots 16, 17, 18.01, 19.01 and 20.01 NJDEP ID #G000005480 September 15, 2021

In accordance with New Jersey Department of Environmental Protection (NJDEP) regulations for "Notification and Public Outreach," PPG is required to provide information relating to environmental conditions and remedial activities being conducted at the above-referenced site.

Former operations conducted at the Garfield Avenue Site (the Site) included a chromium ore processing plant. Groundwater at the Site is impacted with hexavalent chromium and other incidental metals that were associated with Site operations and were initially detected in the groundwater in 1983 and in the soil in 1990. PPG has determined that the contamination in groundwater has migrated from the Site and has defined the extent of contamination in the shallow, intermediate and deep-water bearing zones. Investigation in the bedrock water-bearing zone continues.

Excavation of chromium-impacted soil at Site 114, which was the source of chromium in groundwater, was completed in November 2014. Groundwater treatment, meanwhile, began in 2017 and remains under way. The southern boundary of the groundwater contamination is located approximately at Caven Point Avenue, which is about 1,000 feet from the Site. The eastern boundary is approximately 500 feet from the Site, east of Pacific Avenue near the intersection with Carteret Avenue. The northern boundary is located proximate to the Hudson-Bergen Light Rail tracks.

The chromium-impacted groundwater is located beneath properties in and immediately around the Site. Water reservoirs in Boonton, N.J., supply Jersey City with its drinking water. No groundwater in Jersey City is used for drinking, household or commercial uses. Furthermore, NJDEP has approved a Classification Exception Area, which forbids the installation or use of groundwater wells at the impacted properties.

For additional information or to obtain a copy of the complete fact sheet for this Site, please contact:

- The independent, court-appointed site administrator for PPG's cleanups via:
 - Telephone: 201-777-2099;
 - Email: Info@chromecleanup.com; or
 - Letter: Chromium Cleanup Partnership, One Hovchild Plaza, 4000 Route 66, 4th Floor (MDMC), Tinton, Falls, N.J. 07753; or
- * PPG's community relations consultant, Jeff Worden, via:
 - Telephone: 412-253-0816; or
 - Email: jeff@worden-pr.com.

Public Notification Mailing List

Public Notification Mailing List

Chromium Cleanup Sites on Garfield Avenue

Owner Name	Other	Street Address	City, State	Zip Code
John 723, LLC		63 Major Drive	Sayreville, NJ	08872
Current Occupant		5 Summit Avenue	Jersey City, NJ	07307
John 723, LLC		63 Major Drive	Sayreville, NJ	08872
Current Occupant		1 Summit Avenue	Jersey City, NJ	07304
John 723, LLC		63 Major Drive	Sayreville, NJ	08872
Current Occupant		478A Communipaw Avenue	Jersey City, NJ	07304
470 Parkway Realty, LLC		98 Jewett Avenue	Staten Island, NY	10302
Current Occupant		470 Communipaw Avenue	Jersey City, NJ	07304
Communipaw Associates, LLC		1879 Morris Avenue	Union, NJ	07083
Current Occupant		487 Communipaw Avenue	Jersey City, NJ	07304
N.J. Dept. of Transportation		1035 Parkway Avenue	Trenton, NJ	08625
Current Occupant		Communipaw Avenue	Jersey City, NJ	07304
Akram, Qaiser		88 Gifford Avenue	Jersey City, NJ	07304
Current Occupant		Communipaw Avenue	Jersey City, NJ	07304
Junction Holding Company, LLC	Or Current Occupant	475 Communipaw Avenue	Jersey City, NJ	07302
Conwway, Somwattie	Or Current Occupant	12-14 Harmon Street	Jersey City, NJ	07302
Gomez, Sandra M.		413 Communipaw Avenue	Jersey City, NJ	07304
Current Occupant		16 Harmon Street	Jersey City, NJ	07304
452 Communipaw Avenue Realty Corp.		452 Communipaw Avenue	Jersey City, NJ	07304
Current Occupant		466 Communipaw Avenue	Jersey City, NJ	07304
Comfield, LLC		464 Communipaw Avenue	Jersey City, NJ	07305
Current Occupant(s)		1112 Garfield Ave.	Jersey City, NJ	07304
City of Jersey City		280 Grove Street	Jersey City, NJ	07302
Current Occupant		460 Communipaw Avenue	Jersey City, NJ	07304
Wesson, Marc & R. & C. Tenn	Or Current Occupant	430 Communipaw Avenue	Jersey City, NJ	07304
Comfield, LLC c/o Alma Realty		31-10 37th Ave., Suite 500	Long Island City, N.J.	11101
Current Occupant(s)		452 Communipaw Avenue	Jersey City, NJ	07304
Jersey City Redevelopment Agency		66 York Street	Jersey City, NJ	07302
Current Occupant		1 Berry Road	Jersey City, NJ	07304
Jersey City Redevelopment Agency		30 Montgomery Street	Jersey City, NJ	07302
Current Occupant		1000 Garfield Avenue	Jersey City, NJ	07304
Simmons, La Toya C/O K. Simmons		134 Krone Place	Hackensack, NJ	07601
Current Occupant		1028 Garfield Avenue	Jersey City, NJ	07304
Gipson & Sons		504 Coleman Drive	Clayton, N.J.	08312
Current Occupant		1042 Garfield Avenue	Jersey City, NJ	07304
Bell, Clifton & Philip	Or Current Occupant	1052 Garfield Avenue	Jersey City, NJ	07304
Jersey City Redevelopment Agency		66 York Street	Jersey City, NJ	07302
Current Occupant		1054 Garfield Avenue	Jersey City, NJ	07304
Jersey City Redevelopment Agency		66 York Street	Jersey City, NJ	07302
Current Occupant		1056 Garfield Avenue	Jersey City, NJ	07304
Jersey City Redevelopment Agency		66 York Street	Jersey City, NJ	07302
Current Occupant		1058 Garfield Avenue	Jersey City, NJ	07304
Jersey City Redevelopment Agency		66 York Street	Jersey City, NJ	07302
Current Occupant		1060 Garfield Avenue	Jersey City, NJ	07304
285 Lincoln Ave, LLC		295 Newark Avenue	Jersey City, NJ	07302
Current Occupant		1064 Garfield Avenue	Jersey City, NJ	07304
Jersey City Redevelopment Agency		66 York Street	Jersey City, NJ	07302
Current Occupant		1068 Garfield Avenue	Jersey City, NJ	07304
285 Lincoln Ave, LLC		295 Newark Avenue	Jersey City, NJ	07302
Current Occupant		467 Communipaw Avenue	Jersey City, NJ	07304
285 Lincoln Ave, LLC		295 Newark Avenue	Jersey City, NJ	07302
Current Occupant		461 Communipaw Avenue	Jersey City, NJ	07304
285 Lincoln Ave, LLC		295 Newark Avenue	Jersey City, NJ	07302
Current Occupant		457 Communipaw Avenue	Jersey City, NJ	07304
ISC, LLC		445 Communipaw Avenue	Jersey City, NJ	07302
Current Occupant		7 Berry Road	Jersey City, NJ	07304
Ideal Supply Co.	Or Current Occupant	445 Communipaw Avenue	Jersey City, NJ	07304
451 Communipaw Ave. Inc. C/O Snow Joe LLC		305 Veterans Blvd.	Carlstadt, NJ	07072
Current Occupant		451 Communipaw Avenue	Jersey City, NJ	07304
Ragbarsingh, Rickhi & Leela		363 Mcloud Drive	Fort Lee, NJ	07024
Current Occupant		245 Randolph Avenue	Jersey City, NJ	07304
243 Randolph, LLC	Or Current Occupant	243 Randolph Avenue	Jersey City, NJ	07304
Simmons, Jared & Portia		1123 Morning Glory Drive	Monroe Township, NJ	08831
Current Occupant		241 Randolph Avenue	Jersey City, NJ	07304
Lopez, Raymond	Or Current Occupant	239 Randolph Avenue	Jersey City, NJ	07304
Robinson, Jermaine	Or Current Occupant	237 Randolph Avenue	Jersey City, NJ	07304
So, Kimberly, As Trustee		546 W 156 St #29	New York, NY	10032
Current Occupant		16 Union Street	Jersey City, NJ	07304
18 Union Street, LLC.		373 4th Street	Jersey City, NJ	07302
Current Occupant		18 Union Street	Jersey City, NJ	07304
Riske, Roger		7733 79th Street	Playa Del Rey, CA	90293
Current Occupant		20 Union Street	Jersey City, NJ	07304
Morrisette, Samuel & Julia	Or Current Occupant	22 Union Street	Jersey City, NJ	07304
Suriel, Nelson Jr.	Or Current Occupant	24 Union Street	Jersey City, NJ	07304
Valles-Mann, Justin & Stephanie	Or Current Occupant	26 Union Street	Jersey City, NJ	07304
Freeman-Scott, Shuwanna & Nathaniel		47 Nutmeg Road	Aberdeen, NJ	07747
Current Occupant		236 Randolph Avenue	Jersey City, NJ	07304
Salley, Rudolph & Glenda	Or Current Occupant	238 Randolph Avenue	Jersey City, NJ	07304

Salley, Rudolph & Glenda		238 Randolph Avenue	Jersey City, NJ	07304
Current Occupant		240 Randolph Avenue	Jersey City, NJ	07304
Perkins, Meia		238 Randolph Avenue	Jersey City, NJ	07304
Current Occupant		242 Randolph Avenue	Jersey City, NJ	07304
Randolph Avenue 15, L.L.C.		4706 18th Avenue	Brooklyn, N.Y.	11204
Current Occupant		244 Randolph Avenue	Jersey City, NJ	07304
Ijuba, LLC		246-8 Randolph Avenue	Jersey City, NJ	07304
Current Occupant		246 Randolph Avenue	Jersey City, NJ	07304
Ryms Realty, Inc.		4706 18th Avenue	Brooklyn, N.Y.	11204
Current Occupant		2 Union Street	Jersey City, NJ	07304
10-12 Union, LLC		4706 18th Avenue	Brooklyn, N.Y.	11204
Current Occupant		10-12 Union Street	Jersey City, NJ	07304
Randolph Properties, LLC		338 Randolph Avenue	Jersey City, NJ	07304
Current Occupant(s)		340 Randolph Avenue	Jersey City, NJ	07304
Wong, Cedric & Leung Victor		123 Town Square Pl., #296	Jersey City, NJ	07310
Current Occupant		342 Randolph Avenue	Jersey City, NJ	07304
GND Holdings II LLC		17 Four Columns Drive	Morganville, NJ	07751
Current Occupant		344 Randolph Avenue	Jersey City, NJ	07304
Perez, Leticia		PO Box 5222	Jersey City, NJ	07305
Current Occupant		346 Randolph Avenue	Jersey City, NJ	07304
Perez, George		P. O. Box 5222	Jersey City, NJ	07305
Current Occupant		348 Randolph Avenue	Jersey City, NJ	07304
Martinez, Olnavi	Or Current Occupant	350 Randolph Avenue	Jersey City, NJ	07304
Wu, Jing		389 Morris Road	Wayne, PA	19087
Current Occupant		352 Randolph Avenue	Jersey City, NJ	07304
Public Service Electric & Gas Co.		80 Park Pl. Tax Dept. T-6B	Newark, NJ	07102
Current Occupant		1051 Garfield Avenue	Jersey City, NJ	07304
Public Service Electric & Gas Co.		80 Park Pl. Tax Dept. T-6B	Newark, NJ	07102
Current Occupant		1047 Garfield Avenue	Jersey City, NJ	07304
312 Arlington Ave. Condo Assoc., Inc.	Or Current Occupant	312 Arlington Avenue	Jersey City, NJ	07305
KLM-18, LLC		138 Canterbury Way	Basking Ridge, NJ	07920
Current Occupant		23 Union Street	Jersey City, NJ	07304
Arias, Jose & Santos	Or Current Occupant	21 Union Street	Jersey City, NJ	07304
Nicasio, Ana	Or Current Occupant	19 Union Street	Jersey City, NJ	07304
Portocarrero, Jose	Or Current Occupant	17 Union Street	Jersey City, NJ	07304
Mowatt, Esthrana	Or Current Occupant	15 Union Street	Jersey City, NJ	07304
Tasgeel LLC	Or Current Occupant	13 Union Street	Jersey City, NJ	07304
Howling, Latasha & Todd		225 Randolph Avenue	Jersey City, NJ	07304
Current Occupant		227 Randolph Avenue	Jersey City, NJ	07304
Howling, Latasha & Todd	Or Current Occupant	225 Randolph Avenue	Jersey City, NJ	07304
Santiago, Victor & Elizabeth	Or Current Occupant	223 Randolph Avenue	Jersey City, NJ	07304
Robinson, Valencia & Gentry	Or Current Occupant	221 Randolph Avenue	Jersey City, NJ	07304
Blache, Michael & Ramsamooj, L.	Or Current Occupant	219 Randolph Avenue	Jersey City, NJ	07304
Arlington Avenue Group, LLC		192 C. Columbus Drive	Jersey City, NJ	07302
Current Occupant		292 Arlington Avenue	Jersey City, NJ	07304
McKenzie, Aishah & Orlana Hendy	Or Current Occupant	298 Arlington Avenue	Jersey City, NJ	07304
Bligen, Eliza & Abraham Jr.	Or Current Occupant	300 Arlington Avenue	Jersey City, NJ	07304
Chom 302 A, LLC.		7 Glenwood Ave., Suite 418	East Orange, NJ	07017
Current Occupant		302 Arlington Avenue	Jersey City, NJ	07304
Wu, Jing & Liu Lucy		104 Fairview Avenue, #1	Jersey City, NJ	07304
Current Occupant		304 Arlington Avenue	Jersey City, NJ	07304
Klepner, Shimon	Or Current Occupant	306 Arlington Avenue	Jersey City, NJ	07304
Hines, John L. & Jean	Or Current Occupant	308 Arlington Avenue	Jersey City, NJ	07304
Zhang, Zhen	Or Current Occupant	310 Arlington Avenue	Jersey City, NJ	07304
Metropolitan Family Health Network	Or Current Occupant	935 Garfield Avenue	Jersey City, NJ	07304
Rodriguez, Jorge		100 Linden Avenue, Apt. #1	Jersey City, NJ	07305
Current Occupant		947 Garfield Avenue	Jersey City, NJ	07304
Wallabout Realty Holding LLC		26 Rutledge Street	Brooklyn, N.Y.	11249
Current Occupant		87 Van Horne Street	Jersey City, NJ	
Wallabout Realty Holding LLC		26 Rutledge Street	Brooklyn, N.Y.	11249
Current Occupant		Woodward Street	Jersey City, NJ	07304
Wallabout Realty Holding LLC		26 Rutledge Street	Brooklyn, N.Y.	11249
Current Occupant		97 Van Horne Street	Jersey City, NJ	07304
90 Van Horne Street		206 Railroad St.	Bayport, N.Y.	11705
Current Occupant(s)		90 Van Horne Street	Jersey City, NJ	07304
Alt Investments, Inc.		100 Rock Road West	Green Brook, N.J.	08812
Current Occupant(s)		92 Van Horne Street	Jersey City, NJ	07304
Leonard Parness Trucking Corp.		181 Pacific Avenue	Jersey City, NJ	07304
Current Occupant		142 Halladay Street	Jersey City, NJ	07304
City of Jersey City		280 Grove Street	Jersey City, NJ	07302
Current Occupant		144 Halladay Street	Jersey City, NJ	07304
Leonard Parness Trucking Corp.	Or Current Occupant	181 Pacific Avenue	Jersey City, NJ	07304
Jersey City Sewerage Authority		575 State Highway 440	Jersey City, NJ	07305
Current Occupant		280 Arlington Avenue	Jersey City, NJ	
Pronti Construction Inc.		192 C. Columbus Drive	Jersey City, NJ	07302
Current Occupant		203-5 Randolph Avenue	Jersey City, NJ	07304
Pronti Construction Inc.		192 Columbus Drive	Jersey City, NJ	07302
Current Occupant		201 Randolph Avenue	Jersey City, NJ	07304
Jersey City Sewerage Authority		555 Route 440	Jersey City, NJ	07305
Current Occupant		207 Randolph Avenue	Jersey City, NJ	07304
New Jersey Transit		One Penn Plaza East	Newark, NJ	07105
Current Occupant		923 Garfield Avenue	Jersey City, NJ	07304
Frenchpark Warehouse Co.		P. O. Box 280	Kenilworth, NJ	07033
Current Occupant		855 Garfield Avenue	Jersey City, NJ	07304

Frenchpark Warehouse Co.		P. O. Box 280	Kenilworth, NJ	07033
Current Occupant		861 Garfield Avenue	Jersey City, NJ	07304
Frenchpark Warehouse Co.		P. O. Box 280	Kenilworth, NJ	07033
Current Occupant		859 Garfield Avenue	Jersey City, NJ	07304
851 Garfield Avenue, LLC		54 Edgewater Road	Cliffside, NJ	07010
Current Occupant		851 Garfield Avenue	Jersey City, NJ	07304
Fulton Capital Group Moch LLC.		7 Glenwood Ave.	East Orange, NJ	07017
Current Occupant		118 Carteret Avenue	Jersey City, NJ	
Midnight Publishing LCC		528 Bergen Avenue	Jersey City, NJ	07304
Current Occupant		122 Carteret Avenue	Jersey City, NJ	
Reid, Dwayne		9 Pulaski Avenue	Carteret, NJ	07008
Current Occupant		124 Carteret Avenue	Jersey City, NJ	
Perkins, Glenda	Or Current Occupant	144 Randolph Avenue	Jersey City, NJ	07305
JC Capital Fund Moch 3 LLC	Or Current Occupant	146 Randolph Avenue	Jersey City, NJ	07305
L & A Asset Holdings LLC		252 Pacific Avenue	Jersey City, NJ	07304
Current Occupant		148A Randolph Avenue	Jersey City, NJ	
Bruce Construction Corp.		117-05 89th Avenue	Richmond Hills, NY	11418
Current Occupant		150 Randolph Avenue	Jersey City, NJ	07304
Gulin, Ivan N.	Or Current Occupant	152 Randolph Avenue	Jersey City, NJ	07305
Williams, Annie	Or Current Occupant	154 Randolph Avenue	Jersey City, NJ	07305
Delaware Investments MOH 1, LLC		7 Glenwood Ave.	East Orange, NJ	07017
Current Occupant		156 Randolph Ave.	Jersey City, NJ	
Lipshitz, Joel		4118 14th Avenue, #148	Brooklyn, N.Y.	11219
Current Occupant		158 Randolph Avenue	Jersey City, NJ	07304
Toral Rafael & Rogelio		PO Box 8189	Jersey City, NJ	07308
Current Occupant		166 Randolph Avenue	Jersey City, NJ	07304
Tudela, Luis V. & Kathiuska	Or Current Occupant	168 Randolph Avenue	Jersey City, NJ	07302
Mousa, Atef & Gerges, Mona		3737 West Ave., #M10	Lancaster, CA	93536
Current Occupant		170 Randolph Avenue	Jersey City, NJ	07305
Shaw, Delores	Or Current Occupant	172 Randolph Avenue	Jersey City, NJ	07305
Game Holdings, LLC		P. O. Box 38	Pomona, N.Y.	10970
Current Occupant		176 Randolph Avenue	Jersey City, NJ	07305
GND Builders, LLC		17 Four Columns Drive	Morganville, NJ	07751
Current Occupant		180 Randolpph Avenue	Jersey City, NJ	07304
182 Randolph Ave. Condominium Assoc.	Or Current Occupant	182 Randolph Avenue	Jersey City, NJ	07305
Thompson, Robert G. & Adolphus, Lena	Or Current Occupant	184 Randolph Avenue	Jersey City, NJ	07305
Okoeguuale, Ero-Mosele	Or Current Occupant	186 Randolph Avenue	Jersey City, NJ	07304
Mazur, Anatoliy & Maria		8 Rale Place	Palm Coast, FL	32164
Current Occupant		188 Randolph Avenue	Jersey City, NJ	07304
Gulin, Iryna & Volodymyr	Or Current Occupant	190 Randolph Avenue	Jersey City, NJ	07304
Orach, Rostyslav		711 Amsterdam Avenue #21L	New York, NY	10025
Current Occupant		192 Randolph Avenue	Jersey City, NJ	07305
Mazur, Taras	Or Current Occupant	194 Randolph Avenue	Jersey City, NJ	07304
196 Randolph LLC		199 Van Horne Street	Jersey City, NJ	07304
Current Occupant		196 Randolph Avenue	Jersey City, NJ	07304
Majewski, Daniel & Amanda	Or Current Occupant	196 Randolph Avenue	Jersey City, NJ	07305
Malich, O. Chaykivskyy, M. & S.	Or Current Occupant	198 Randolph Avenue	Jersey City, NJ	07305
Jersey City Sewerage Authority		575 State Highway 440	Jersey City, NJ	07305
Current Occupant		163 Halladay Street	Jersey City, NJ	07304
E27 Street LLC		181 Pacific Avenue	Jersey City, NJ	07304
Current Occupant		151 Halladay Street	Jersey City, NJ	07304
Glushko, Walter	Or Current Occupant	149 Halladay Street	Jersey City, NJ	07304
Mendoza, Donald & Margie Daryl H.	Or Current Occupant	147 Halladay Street	Jersey City, NJ	07304
Garcia, Margarita	Or Current Occupant	145 Halladay Street	Jersey City, NJ	07304
Bonilla, Julissa	Or Current Occupant	143 Halladay Street	Jersey City, NJ	07304
Kulozu, Bekir		P.O. Box 13017	Jersey City, NJ	07303
Current Occupant(s)		141 Halladay Street	Jersey City, NJ	07304
78 Forrest Street Assoc.		28 Bromleigh Road	Stuart Manor, NY	11530
Current Occupant		78 Forrest Street	Jersey City, NJ	07304
90 Forrest Associates, L.L.C.		28 Bromleigh Road	Stewart Manor, NY	11530
Current Occupant		84 Forrest Street	Jersey City, NJ	07304
90 Forrest Associates, L.L.C.		28 Bromleigh Road	Stewart Manor, NY	11530
Current Occupant		86 Forrest Street	Jersey City, NJ	07304
151 Halladay Street, LLC		181 Pacific Street	Jersey City, NJ	07304
Current Occupant		Inside Halladay Street	Jersey City, NJ	07304
100 Forrest Associates, L.L.C.		28 Bromleigh Road	Stewart Manor, NY	11530
Current Occupant		98 Forrest Street	Jersey City, NJ	07304
100 Forrest Associates, LLC		2473 NW 66th Drive	Boca Raton, FL	33496
Current Occupant		108 Forrest Street	Jersey City, NJ	07304
Jersey City Redevelopment Agency		55 York St.	Jersey City, NJ	07302
Current Occupant		2 Dakota Street	Jersey City, NJ	
Jersey City Redevelopment Agency		66 York St.	Jersey City, NJ	07302
Current Occupant		70 Carteret Avenue	Jersey City, NJ	07305
Jersey City Redevelopment Agency		66 York St.	Jersey City, NJ	07302
Current Occupant		880 Garfield Avenue	Jersey City, NJ	07304
Jersey City Redevelopment Agency		30 Montgomery Street	Jersey City, NJ	07302
Current Occupant		884 Garfield Avenue	Jersey City, NJ	07304
900 Garfield Avenue, % Ryann LLC		1735 Market Street #A-400	Philadelphia, PA	19103
Current Occupant		900 Garfield Avenue	Jersey City, NJ	07304
Wieder, Israel	Or Current Occupant	77 Forrest Street	Jersey City, NJ	07304
Quartz Realty, L.L.C.		20 Birch Street	Jersey City, NJ	07305
Current Occupant		163 Pacific Avenue	Jersey City, NJ	07304
Pacific Kater LLC		210 Fairmount Avenue	Jersey City, NJ	07306
Current Occupant		161 Pacific Avenue	Jersey City, NJ	07304

Pacific Kater LLC		210 Fairmount Avenue	Jersey City, NJ	07306
Current Occupant		159 Pacific Avenue	Jersey City, NJ	07304
Pacific Kater LLC		210 Fairmount Avenue	Jersey City, NJ	07306
Current Occupant		157 Pacific Avenue	Jersey City, NJ	07304
Metrick, Stuart & Michelle	Or Current Occupant	149 Pacific Avenue	Jersey City, NJ	07304
Ross, Isaac % Artis Jordan	Or Current Occupant	28 Lorelei Dr	Howell, NJ	07731
Current Occupant		145 Pacific Avenue	Jersey City, NJ	
Nine Lawton Street, Inc.		1058 Jassamine Way	Fort Lee, NJ	07024
Current Occupant		133 Pacific Avenue	Jersey City, NJ	07304
107-123 & 127 Pacific Ave. Assoc., LLC		130 North Main St. #St 201	New City, NY	10956
Current Occupant		131 Pacific Avenue	Jersey City, NJ	07304
107-123 & 127 Pacific Ave. Assoc., LLC		130 North Main St. #St 201	New City, NY	10956
Current Occupant		107 Pacific Avenue	Jersey City, NJ	07304
One0One Pacific Ave., LLC		415 Newark St #6B	Hoboken, NJ	07030
Current Occupant		105-101 Pacific Avenue	Jersey City, NJ	07304
PPG Industries, Inc.		One PPG Place	Pittsburgh, PA	15272
Current Occupant(s)		78 Halladay Street	Jersey City, NJ	07304
PPG Industries, Inc.		One PPG Place	Pittsburgh, PA	15272
Current Occupant		94 Halladay Street	Jersey City, NJ	07304
PPG Industries, Inc.		One PPG Place	Pittsburgh, PA	15272
Current Occupant		98 Halladay Street	Jersey City, NJ	07304
PPG Industries, Inc.		One PPG Place	Pittsburgh, PA	15272
Current Occupant		100 Halladay Street	Jersey City, NJ	07304
PPG Industries, Inc.		One PPG Place	Pittsburgh, PA	15272
Current Occupant		102 Halladay Street	Jersey City, NJ	07304
PPG Industries, Inc.		One PPG Place	Pittsburgh, PA	15272
Current Occupant		104 Halladay Street	Jersey City, NJ	07304
Halladay Invest. Inc.		186 Ocean Avenue	Jersey City, NJ	07305
Current Occupant		106-116 Halladay Street	Jersey City, NJ	07304
Halladay Invest. Inc.		186 Ocean Avenue	Jersey City, NJ	07305
Current Occupant		118-126 Halladay Street	Jersey City, NJ	07304
Caven Point Partners LLC		418 West Side Avenue	Jersey City, NJ	07305
Current Occupant		34 Caven Point Avenue	Jersey City, NJ	07305
Antonucci, Alan		P. O. Box 6466	Jersey City, NJ	07306
Current Occupant		2-22 Pacific Avenue	Jersey City, NJ	07304
Antonucci, Alan & Christopher		P. O. Box 6466 Ave.	Jersey City, NJ	07306
Current Occupant		24-46 Pacific Avenue	Jersey City, NJ	07304
Spectrum Health Care Inc.	Or Current Occupant	74 Pacific Avenue	Jersey City, NJ	07304
Eden Wood Realty, LLC		47 Parsippany Road	Whippany, N.J.	07981
Current Occupant		33-47 Carteret Avenue	Jersey City, NJ	07305
Eden Wood Realty, LLC		47 Parsippany Road	Whippany, N.J.	07981
Current Occupant		Central R R Ins	Jersey City, NJ	07305
Eden Wood Realty, LLC		47 Parsippany Road	Whippany, N.J.	07981
Current Occupant		150 Pacific Avenue	Jersey City, NJ	07304
200 Pacific 18, L.L.C. %Fortune FNCL		PO Box 5397	New York, NY	10185
Current Occupant		184-200 Pacific Avenue	Jersey City, NJ	07304
PPG Industries, Inc.		One PPG Place	Pittsburgh, PA	15272
Current Occupant		22 Halladay Street	Jersey City, NJ	07304
PPG Industries, Inc.		One PPG Place	Pittsburgh, PA	15272
Current Occupant		51-99 Pacific Avenue	Jersey City, NJ	07304
Njeda, C/O A. Smith Moving & Furn	Or Current Occupant	33 Pacific Avenue	Jersey City, NJ	07304
PPG Industries, Inc. %Tax Admin. Dept.		One PPG Place	Pittsburgh, PA	15272
Current Occupant		846 Garfield Avenue	Jersey City, NJ	07304
Jersey City Redevelopment Agency		66 York St.	Jersey City, NJ	07302
Current Occupant		824 Garfield Avenue	Jersey City, NJ	07304
PPG Industries, Inc. %Tax Admin. Dept.		One PPG Place	Pittsburgh, PA	15272
Current Occupant		45 Halladay Street	Jersey City, NJ	07304
PPG Industries, Inc. %Tax Admin. Dept.		One PPG Place	Pittsburgh, PA	15272
Current Occupant		25 Halladay Street	Jersey City, NJ	07304
PPG Industries, Inc. %Tax Admin. Dept.		One PPG Place	Pittsburgh, PA	15272
Current Occupant		15 Halladay Street	Jersey City, NJ	07304
Michael, John		344 Princeton Avenue	Jersey City, NJ	07305
Current Occupant		784 Garfield Avenue	Jersey City, NJ	07304
Pace, Clement		1120 Heckel Avenue	Mountainside, NJ	07092
Current Occupant		802 Garfield Avenue	Jersey City, NJ	07304
PPG Industries, Inc. %Tax Admin. Dept.		One PPG Place	Pittsburgh, PA	15272
Current Occupant		816 Garfield Avenue	Jersey City, NJ	07304
PPG Industries, Inc.		One PPG Place	Pittsburgh, PA	15272
Current Occupant(s)		800 Garfield Ave.	Jersey City, N.J.	07305
Dariel Building, LLC	Or Current Occupant	133 Carteret Avenue	Jersey City, NJ	07305
Essendon, LLC %Dixon Advisory		PO Box 2032	Jersey City, NJ	07303
Current Occupant		140 Randolph Avenue	Jersey City, NJ	07304
Russell, Willie & Ella	Or Current Occupant	123 Carteret Avenue	Jersey City, NJ	07305
Murillo, Tiffany	Or Current Occupant	121 Carteret Avenue	Jersey City, NJ	07305
Teague, Garthelia A.	Or Current Occupant	119 Carteret Avenue	Jersey City, NJ	07305
Brun, Donald	Or Current Occupant	117 Carteret Avenue	Jersey City, NJ	07305
115 Carteret Ave., LLC.	Or Current Occupant	115 Carteret Avenue	Jersey City, NJ	07305
829 Garfield Holdings, LP	Or Current Occupant	829 Garfield Avenue	J	07305
Bascom, Malini	Or Current Occupant	2 Claremont Avenue	Jersey City, NJ	07305
Velez, David	Or Current Occupant	4 Claremont Avenue	Jersey City, NJ	07305
Bunbury, Sophi	Or Current Occupant	6 Claremont Avenue	Jersey City, NJ	07305
Ostreicher, Abraham	Or Current Occupant	8 Claremont Avenue	Jersey City, NJ	07310
Mirthil, Reginald	Or Current Occupant	10 Claremont Avenue	Jersey City, NJ	07305
Merritt, Besie	Or Current Occupant	12 Claremont Avenue	Jersey City, NJ	07305

Geelong, LLC % Dixon Advisory		1000 Plaza Two, 10 Fl.	Jersey City, NJ	07311
Current Occupant		98 Randolph Avenue	Jersey City, NJ	07305
Rodriguez, Robinson		98A Randolph Avenue	Jersey City, NJ	07305
Current Occupant		98.5 Randolph Avenue	Jersey City, NJ	07305
O'Marde, Heidi	Or Current Occupant	100 Randolph Avenue	Jersey City, NJ	07305
Dionisio, Michael	Or Current Occupant	102 Randolph Avenue	Jersey City, NJ	07305
ABI, LLC		259 Newkirk Avenue	Brooklyn, N.Y.	11230
Current Occupant		104 Randolph Avenue	Jersey City, NJ	07305
Gannon, Dana	Or Current Occupant	106 Randolph Avenue	Jersey City, NJ	07305
Rollins, Lorraine A.	Or Current Occupant	108 Randolph Avenue	Jersey City, NJ	07305
Samet, Shiya		199 Lee Ave., #338	Brooklyn, N.Y.	11211
Current Occupant		110 Randolph Avenue	Jersey City, NJ	07305
Weathers, Timothy	Or Current Occupant	112 Randolph Avenue	Jersey City, NJ	07305
Smith, Arnold & Regina & Peoples, Mae	Or Current Occupant	114 Randolph Avenue	Jersey City, NJ	07305
Randolph Estates LLC		1274 49th Street, #546	Brooklyn, N.Y.	11219
Current Occupant		116 Randolph Avenue	Jersey City, NJ	07305
Badawi, Fahmi		68 Magnolia Avenue, #C2	Jersey City, NJ	07306
Current Occupant		118 Randolph Avenue	Jersey City, NJ	07305
Little, Oralee J.	Or Current Occupant	120 Randolph Avenue	Jersey City, NJ	07305
122 Randolph Ave. Realty, LLC		P.O. Box 796	Monroe, N.Y.	10949
Current Occupant		122 Randolph Avenue	Jersey City, NJ	07305
126 Randolph Holdings, LLC.		85 Main Street #204	Hackensack, NJ	07601
Current Occupant		126 Randolph Avenue	Jersey City, NJ	
Vergara, Luis E. & Diane Valencia		47 Gallinson Drive	New Providence, NJ	07974
Current Occupant		128 Randolph Avenue	Jersey City, NJ	07305
Bernales, Namnama & Perkins, Alex	Or Current Occupant	130 Randolph Avenue	Jersey City, NJ	07305
Luyando, Bemgil	Or Current Occupant	132 Randolph Avenue	Jersey City, NJ	07305
Keller Robbin	Or Current Occupant	15 Claremont Avenue	Jersey City, NJ	07305
GG Medina	Or Current Occupant	11 Claremont Avenue	Jersey City, NJ	07305
Ray, Theresa	Or Current Occupant	9 Claremont Avenue	Jersey City, NJ	07304
Yeldell, Dion		7 Junegrass Way	Hackettstown, NJ	07840
Current Occupant		5 Claremont Avenue	Jersey City, NJ	07305
Turnheim, Jacob		49 Decatur Avenue	Spring Valley, NY	10977
Current Occupant(s)		3 Claremont Ave.	Jersey City, N.J.	07305
Jacob King LLC		199 Lee Ave., Suite 571	Brooklyn, N.Y.	11211
Current Occupant(s)		1 Claremont Ave.	Jersey City, N.J.	07305
Atlantic Tides LLC		1459 Garrett Drive	Wall, N.J.	07719
Current Occupant(s)		783 Garfield Avenue	Jersey City, N.J.	07305
T & C Investments, L.L.C.	Or Current Occupant	770 Garfield Avenue	Jersey City, NJ	07305
T & C Investments, L.L.C.	Or Current Occupant	758 Garfield Avenue	Jersey City, NJ	07305
City of Jersey City		280 Grove Street	Jersey City, NJ	07302
Current Occupant		20 Commercial Street	Jersey City, NJ	07305
Sudylo, Andrew & Julia		534 Ridge Road	Phillipsburg, NJ	08865
Current Occupant		55 Caven Point Avenue	Jersey City, NJ	07305
Consolidated Rail		P. O. Box 8499	Philadelphia, PA	19101
Current Occupant		Caven Point Avenue	Jersey City, NJ	07305
21 Caven Point Avenue, LLC		153 E. Linden Ave.	Englewood Cliffs, N.J.	07631
Current Occupant		21 Caven Point Avenue	Jersey City, NJ	07305
Current Occupant(s)		2 Union St., Apt. 1A	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 1B	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 1C	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 1D	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 1E	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 1F	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 1G	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 1H	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 1I	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 1J	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 1K	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 1L	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 1M	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 1N	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 1O	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 1P	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 1Q	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 1R	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2A	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2B	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2C	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2D	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2E	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2F	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2G	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2H	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2I	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2J	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2K	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2L	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2M	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2N	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2O	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2P	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2Q	Jersey City, N.J.	07304
Current Occupant(s)		2 Union St., Apt. 2R	Jersey City, N.J.	07304

Eastern Waterproofing	350 Communipaw Ave.	Jersey City, N.J.	07304
Wilson Automotive Warehouse	98 Forrest St.	Jersey City, N.J.	07304
Vision Tours Corp.	77 Forrest St.	Jersey City, N.J.	07304
State Transtour Corp.	77 Forrest St.	Jersey City, N.J.	07304
Milly's Unisex Beauty Center	163 Pacific Avenue	Jersey City, N.J.	07304
Current Occupant	181A Pacific Avenue	Jersey City, N.J.	07304
J & A Auto Repair	181 Pacific Avenue	Jersey City, N.J.	07304
Restaurant Supplies, Inc.	181 Pacific Avenue	Jersey City, N.J.	07304
Rim Repair	181 Pacific Avenue	Jersey City, N.J.	07304
Pacific Pic and Pac	181 Pacific Avenue	Jersey City, N.J.	07304
Parness	181 Pacific Avenue	Jersey City, N.J.	07304
Pacific Logistics	181 Pacific Avenue	Jersey City, N.J.	07304
LS Restaurant Supplies	181 Pacific Avenue	Jersey City, N.J.	07304
El Boricua Lechoria	213 Pacific Avenue	Jersey City, N.J.	07304
Eden Wood Corporation	150 Pacific Avenue	Jersey City, N.J.	07304
Midway Transportation	150 Pacific Avenue, C-2	Jersey City, N.J.	07304
Verdi Travel Ware	150 Pacific Avenue, A-1	Jersey City, N.J.	07304
Lou Levy & Sons	150 Pacific Avenue, A-2	Jersey City, N.J.	07304
Contract Furniture Transport, Inc.	150 Pacific Avenue, Building Q	Jersey City, N.J.	07304
Cable TV of Jersey City	150 Pacific Avenue, Building P	Jersey City, N.J.	07304
At Home USA	150 Pacific Avenue, Building R	Jersey City, N.J.	07304
Advanced Built Structures, Inc.	150 Pacific Avenue	Jersey City, N.J.	07304
Green Environmental Services	118 Halladay	Jersey City, N.J.	07304
Current Occupant	120 Halladay	Jersey City, N.J.	07304
Turnpike Auto	94 Halladay Street	Jersey City, N.J.	07304
Liberty Aggregates	34 Caven Point Avenue	Jersey City, N.J.	07305
Liberty Stone	50 Caven Point Avenue	Jersey City, N.J.	07305
Reliable Recycling	1 Caven Point Avenue	Jersey City, N.J.	07305
Luna Pallet	55 Caven Point Avenue	Jersey City, N.J.	07305
Current Occupant	20 Caven Point Avenue	Jersey City, N.J.	07305
Current Occupant	21 Caven Point Avenue	Jersey City, N.J.	07305
Dorothy Laguzza, K&L Gates LLP	One Newark Center	Newark, NJ	07102
Jeff Worden, Worden Public Relations	P.O. Box 10443	Pittsburgh, PA	15234



New Jersey Department of Environmental Protection
Site Remediation and Waste Management Program

FULL LABORATORY DATA DELIVERABLES FORM

☐ LSRP

☐ Subsurface Evaluator

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Phase 3B South and Portions of Site 133 East and Halladay Street South

List all AKAs: Former Fishbein Property, Former Ten West Apparel Property, Site 133 East, and Halladay Street South

Street Address: 15/22/25 Halladay St, 800/816 Garfield Ave, Halladay St between Caven Point Ave & Carteret Ave

Municipality: Jersey City (Township, Boro or City)

County: Hudson Zip Code: 07035

Program Interest (PI) Number(s): 777089, 629388, 629345 Case Tracking Number(s): _____

SECTION B. NJDEP CASE MANAGER G000008753, G000005480, and 025695

Do you have an assigned Case Manager?..... ☒ Yes ☐ No

If "Yes," please list the Case Manager: Ian Curtis

SECTION C. REMEDIAL PHASE

☐ Immediate Environmental Concern

☐ Preliminary Assessment Report

☐ Site Investigation Report

☐ Remedial Investigation/Remedial Action Work Plan

☒ Remedial Action Report

☐ Response Action Outcome

☐ Remedial Action Permit

SECTION D. Matrix Type/Analysis and Number of Samples

☐ Potable Well Water# of samples: _____ Sampling Date: _____

Analytical Method(s) _____

☐ VI (i.e., indoor air, soil gas, and ambient air samples).....# of samples: _____ Sampling Date: _____

Analytical Method _____

☐ Polychlorinated dibenzo-p-dioxins/polychlorinated dibenzofurans # of samples: _____ Sampling Date: _____

Analytical Method _____

☒ Hexavalent chromium soil sample# of samples: 1212 Sampling Date: 11/01/2021

Analytical Method Method 7196/7199; 12/07/2006-11/01/2021

☒ Other Soil# of samples: 459 Sampling Date: 05/19/2022

Analytical Method Metals 6010B; 12/07/2006-05/19/2022

☐ Other# of samples: _____ Sampling Date: _____

Analytical Method _____

☐ Other# of samples: _____ Sampling Date: _____

Analytical Method _____

SECTION E. GENERAL

1. Was a full laboratory data deliverables package provided? ☒ Yes ☐ No

2. Was a certified laboratory(s) used for the analyses? ☒ Yes ☐ No

Provide name of laboratory(s): Test America Eurofins Environment Testing America, SGS-Accutest

3. Were data summaries provided for all samples? ☒ Yes ☐ No

4. Were electronic deliverables submitted? ☒ Yes ☐ No

5. For air sample data, were the TO-15 Conversion Tables (hit-lists) provided on disc in the appropriate Excel format pursuant to the VIG? Not applicable ☐ Yes ☐ No

Section F. Data Quality Assurance/Quality Control

1. Were the appropriate sample preservation requirements met? ☒ Yes ☐ No

2. Were appropriate sample holding times (for both extraction/sample preparation and analysis) met? ☐ Yes ☒ No

If "No," provide a brief explanation.

35 CCPW results were qualified or rejected and 5 Cr6 results were qualified or rejected due to holding time exceedances. See Remedial Action Report Section 6.0 Reliability of Data: Data Validation and Usability and/or Appendices D (Laboratory Analytical Reports) and E (Data Validation Reports).

3. Were the samples diluted? ☒ Yes ☐ No

Indicate the identity of the samples and why.

See Appendices D (Laboratory Analytical Reports) and E (Data Validation Reports).

4. If applicable, did sample dilutions result in elevated reporting limits that exceed applicable standards? .. ☒ Yes ☐ No

If "Yes," list the affected samples.

Cr6 for sample 137-4BI_21.0-22.0_808697 and thallium for sample 10W-H39A-5.0-5.5.

5. Were any applicable standards exceeded for any samples? ☒ Yes ☐ No

If "Yes," include the number of samples and laboratory sample identification numbers.

Ten Cr6 results exceeded the applicable standard. See Table 5-1.

Antimony results in several samples exceeded the applicable standard. See Tables 5-2 and 5-3.

6. Were the laboratory reporting limits below the applicable remediation standards/criteria required for the site? ☐ Yes ☒ No

If "No," provide a brief explanation of action taken.

The reporting limit was above remediation standards/criteria for the nondetect Cr6 result in sample 137-4BI_21.0-22.0_808697.

7. Were qualifications noted in the non-conformance summary? ☒ Yes ☐ No

Provide a brief explanation.

See Appendices D (Laboratory Analytical Reports) and E (Data Validation Reports).

8. Were qualified data used? ☒ Yes ☐ No

9. Were rejections noted in the non-conformance summary? ☒ Yes ☐ No

Provide a brief explanation.

See Appendices D (Laboratory Analytical Reports) and E (Data Validation Reports).

10. Were rejected data used? ☒ Yes ☐ No

If "Yes," please indicate reasons rejected data were used:

☒ For Hex Chrome, data were rejected because spike recovery was less than 50%.

☐ Data were rejected due to missing deliverables.

☐ Data were rejected but an applicable standard exceedance exists.

☐ Data were rejected in an early phase of a remediation; however, additional sampling and analysis are scheduled to be performed.

☒ Other reasons not noted directly above. Explain:

Data were rejected due to holding time nonconformances, poor matrix spike recoveries, and field duplicate precision. See Remedial Action Report Section 6.0 Reliability of Data: Data Validation and Usability and/or Appendices D (Lab Reports) and E (DV Reports).

11. Were the quality control criteria associated with the compounds of concern at the site met? ☐ Yes ☒ No

12. Were the QC Summary Forms reviewed? ☒ Yes ☐ No

13. Surrogate recoveries acceptable Not applicable ☐ Yes ☐ No

14. Internal Standards acceptable Not applicable to Hexavalent Chromium ☒ Yes ☐ No

15. MS/MSDs acceptable ☐ Yes ☒ No

16. Tune summaries acceptable Not applicable to Hexavalent Chromium ☒ Yes ☐ No

17. Calibration summaries acceptable ☒ Yes ☐ No

18. Serial dilutions acceptable Not applicable to Hexavalent Chromium ☐ Yes ☒ No

19. Inorganic duplicates acceptable ☐ Yes ☒ No

20. LCS recovery acceptable ☐ Yes ☒ No

21. Other QC acceptable? ☐ Yes ☒ No

Provide a brief explanation if applicable:

Item 15: Results for Cr6 and CCPW metals are considered estimated or rejected due to %Rs outside of criteria. Item 18: One result for total chromium is considered estimated due to serial dilution outside of criteria. Item 19: Results for Cr6 and CCPW metals are considered estimated due to RPDs outside of criteria for LCS/LCSDs, MS/MSDs and/or lab duplicate samples. Item 20: Results for Cr6 are considered estimated due to %Rs outside of criteria. Item 21: Cr6 and CCPW metals are considered estimated or rejected due to low % solids, field duplicate precision, negative instrument drift, and lab/field blank contamination.

See Remedial Action Report Section 6.0 Reliability of Data: Data Validation and Usability and/or Appendices D (Lab Reports) and E (DV Reports).

SECTION G. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: PPG Industries, Inc.

Representative First Name: Jody Representative Last Name: Overmyer

Title: Senior Remediation Project Manager

Phone Number: (412) 235-8881 Ext: _____ Fax: _____

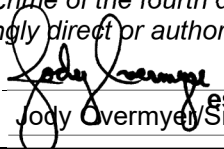
Mailing Address: 440 College Park Drive

City/Town: Monroeville State: PA Zip Code: 15146

Email Address: Overmyer@ppg.com

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature:  Date: 3/9/2023

Name/Title: Jody Overmyer Sr Remediation Project Manager

SECTION H. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT

LSRP ID Number: _____

First Name: _____ Last Name: _____

Phone Numbers: _____ Ext.: _____ Fax: _____

Mailing Address: _____

Municipality: _____ State: _____ Zip Code: _____

Email Address: _____

This statement shall be signed by the LSRP who is submitting this notification in accordance with N.J.S.A. 58:10C-14, and N.J.S.A. 58:10B-1.3b(1) and (2).

(1) *I certify, as a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C-1 et seq. to conduct business in New Jersey, that for the remediation described in this submission, and all attachments included in this submission, I personally: Managed, supervised, or performed the remediation conducted at this site that is described in this submission, and all attachments included in this submission; and/or periodically reviewed and evaluated the work performed by other persons that forms the basis for the information in this submission; and/or completed the work of another site remediation professional, licensed or not, after having: (1) reviewed all available documentation on which I relied; (2) conducted a site visit and observed the then-current conditions and verified the status of as much of the work as was reasonably observable; and (3) concluded, in the exercise of my independent professional judgment, that there was sufficient information upon which to complete any additional phase of remediation and prepare workplans and reports related thereto.*

(2) *I certify:*

- *That I have read this submission and all attachments to this submission;*
- *That in performing the professional services as the licensed site remediation professional for the entire site or each area of concern, I adhered to the professional conduct standards and requirements governing licensed site remediation professionals provided in N.J.S.A. 58:10C-16;*
- *That the remediation conducted at the entire site or each area of concern, that is described in this submission and all attachments to this submission, was conducted pursuant to and in compliance with the remediation requirements in N.J.S.A. 58:10C-14.c;*
- *That the remediation described in this submission, and all attachments to this submission, was conducted pursuant to and in compliance with the regulations of the Site Remediation Professional Licensing Board at N.J.A.C. 7:26l; and*
- *That the information contained in this submission and all attachments to this submission is true, accurate, and complete.*

(3) *I certify, when this submission includes a response action outcome, that the entire site or each area of concern has been remediated in compliance with all applicable statutes, rules, and regulations and is protective of public health and safety and the environment.*

(4) *I certify that no other person is authorized or able to use any password, encryption method, or electronic signature that the Board or the Department have provided to me.*

(5) *I certify that I understand and acknowledge that:*

- *If I knowingly make a false statement, representation, or certification in any document or information I submit to the Department I may be subject to civil and administrative enforcement pursuant to N.J.S.A. 58:10C-17.a.1(a) through (f) by the Board, including but not limited to license suspension, revocation, or denial of renewal; and*
- *If I purposely, knowingly, or recklessly make a false statement, representation, or certification in any application, form, record, document or other information submitted to the Department or required to be maintained pursuant to the Site Remediation Reform Act, I shall be guilty, upon conviction, of a crime of the third degree and shall, notwithstanding the provisions of subsection b. of N.J.S.2C:43-3, be subject to a fine of not less than \$5,000 nor more than \$75,000 per day of violation, or by imprisonment, or both.*

(6) *I certify that I have read this certification prior to signing, certifying, and making this submission.*

LSRP Signature: _____

Date: _____

LSRP Name: _____

Company Name: _____

SECTION I. SUBSURFACE EVALUATOR UST REPORT CERTIFICATION FORM

Certification by the Subsurface Evaluator:

I certify under penalty of law that the work was performed under my oversight and I have reviewed the report and all attached documents, and the submitted information is true, accurate and complete in accordance with the requirements of N.J.A.C. 7:14B and N.J.A.C. 7:26E. I am aware that there are significant civil and criminal penalties for submitting false, inaccurate or incomplete information including fines and/or imprisonment.

Name: _____ UST Cert. No.: _____
Firm: _____ Firm's UST Cert. Number: _____
Firm Address: _____
City/Town: _____ State: _____ Zip Code: _____
Phone Number: _____ Ext: _____ Fax: _____
Signature: _____ Date: _____

Completed forms should be sent to:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

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List of Acronyms and Abbreviations

AAC	Acceptable Ambient Concentration
ACM	asbestos-containing materials
ACO	Administrative Consent Order
AMP	Air Monitoring Plan
AOC	Area of Concern
ASTM	American Society for Testing and Materials
bgs	below ground surface
BOL	bill of lading
CCPW	Chromate Chemical Production Waste
CID	Case Inventory Document
CMAA	Construction Manager as Agent
COC	constituent of concern
COPR	Chromite Ore Processing Residue
Cr ⁺⁶	hexavalent chromium
CrSCC	Chromium Soil Cleanup Criterion/Criteria
DCP	Dust Control Plan
DGA	dense-graded aggregate
DIGWSSL	Default Impact to Groundwater Soil Screening Level
EDD	electronic data deliverable
EI.	elevation
ENTACT	ENTACT Environmental Services of Latrobe, Pennsylvania
EQ	Environmental Quality Company
ERFS	Environmental Remediation and Financial Services, LLC
FSP-QAPP	Field Sampling Plan – Quality Assurance Project Plan
ft	foot or feet
GA Group	Garfield Avenue Group
GGM	green-gray mud
GPS	global positioning system
GWQS	Groundwater Quality Standard(s)
HASP	Health and Safety Plan
HCC	Hudson County Chromate
IGWSRS-GAG	Impact to Groundwater Soil Remediation Standard - Garfield Avenue Group
JCMUA	Jersey City Municipal Utilities Authority
JCO	Judicial Consent Order
JCRA	Jersey City Redevelopment Agency
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LSRP	Licensed Site Remediation Professional
MRCE	Mueser Rutledge Consulting Engineers
MGP	manufactured gas plant
MS	matrix spike
MSD	matrix spike duplicate
NAVD88	North American Vertical Datum of 1988

Ni	nickel
NJ	New Jersey
N.J.A.C.	New Jersey Administrative Code
NJDEP	New Jersey Department of Environmental Protection
NJDOT	New Jersey Department of Transportation
NJGIN	New Jersey Geographic Information Network
N.J.S.A.	New Jersey Statutes Annotated
NRDCSRS	Non-residential Direct Contact Soil Remediation Standard(s)
OSHA	Occupational Safety and Health Administration or Act
PCBs	polychlorinated biphenyls
PDI	pre-design investigation
PI	Program Interest
PM	Project Manager
PPE	personal protective equipment
PSEG	Public Service Electric and Gas Company
PVSC	Passaic Valley Sewerage Commission
QA	quality assurance
QC	quality control
RA	remedial action
RAR	Remedial Action Report
RAWP	Remedial Action Work Plan
RDCSRS	Residential Direct Contact Soil Remediation Standard(s)
RE	receptor evaluation
RI	Remedial Investigation
RIR	Remedial Investigation Report
RIWP	Remedial Investigation Work Plan
RPD	relative percent difference
Sb	antimony
SESCP	Soil Erosion and Sediment Control Plan
SOP	Standard Operating Procedure
SRP	Site Remediation Program
SRS	Soil Remediation Standard(s)
SSRIR	Supplemental Soil Remedial Investigation Report
SVOC	semi-volatile organic compound
TEP	Technical Execution Plan
TOC	total organic carbon
TRSR	Technical Requirements for Site Remediation
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
V	vanadium
VOC	volatile organic compound
Weston	Weston Solutions, Inc.

Regulatory Cross Reference Table

Regulatory Cross Reference Table
Remedial Action Report
Phase 3B South and Portions of Site 133 East and Halladay Street South
Garfield Avenue Group
PPG, Jersey City, New Jersey

N.J.A.C. 7:26E (last amended August 6, 2018) and 7:26C (last amended August 6, 2018) regulations are the primary source of Remedial Action Report (RAR) requirements. This document is not to be used as a replacement for the Technical Regulations.

Regulation	Description	Document Location	
N.J.A.C. 7:26E-5.7	Remedial Action Report Requirements	Report	Location
5.7(a)	The person responsible for conducting the remediation shall implement the remedial action and submit to the Department a remedial action report, along with a form found on the Department's website at www.nj.gov/dep/srp/srra/forms , pursuant to (b) below, and according to the applicable regulatory timeframe in N.J.A.C. 7:26E-5.8.	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Throughout
5.7(b)	The person responsible for conducting the remediation shall present and discuss in the remedial action report all of the information identified or collected pursuant to N.J.A.C. 7:26E-5.1 through 5.6, along with all of the following:	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Throughout
5.7(b) 1	The general reporting requirements in N.J.A.C. 7:26E-1.6;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	See below
1.6(a) 1	Submit all documents, forms, spreadsheets and worksheets required in this chapter;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	The Cover/Certification Form is included with the Regulatory Forms. The paper Remedial Action Report form is no longer accepted and is intended for work conducted under the Licensed Site Remediation Professional Program. As this work is being conducted under direct oversight and not being submitted online, no Remedial Action Report form is included.
1.6(a) 2	Certify and have the licensed site remediation professional certify, pursuant to N.J.A.C. 7:26C-1.5, all forms and documents prepared to pursuant to this chapter;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	The Cover/Certification Form is included with the Regulatory Forms. The work is being conducted under direct oversight so it does not require certification by a Licensed Site Remediation Professional.
1.6(a) 3	Submit a completed case inventory document (CID) worksheet available on the Department's website at www.nj.gov/dep/srp/srra/forms at the front of each remedial phase workplan and report required by this chapter, except for a preliminary assessment report where no areas of concern were identified;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Regulatory Forms
1.6(a) 4	Submit a quality assurance project plan (QAPP) prepared pursuant to N.J.A.C. 7:26E-2.2 with each remedial phase workplan and report required by this chapter, except for a preliminary assessment report and remedial action report;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Not Applicable for this Remedial Action Report

Regulatory Cross Reference Table
Remedial Action Report
Phase 3B South and Portions of Site 133 East and Halladay Street South
Garfield Avenue Group
PPG, Jersey City, New Jersey

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Regulation	Description	Document Location	
N.J.A.C. 7:26E-5.7	Remedial Action Report Requirements	Report	Location
1.6(a) 5	Except where a final remediation document for unrestricted use is filed with the Department within one year after the earliest applicable trigger to remediate listed in N.J.A.C. 7:26C-2.2, submit all sampling data electronically in a summary table using the format outlined in the Site Remediation Program's "Electronic Data Interchange Manual," available at www.nj.gov/dep/srp/hazsite/docs/ , in effect as of the date the document is submitted and include items described in subsections 1.6(a) 5.i-iii of Tech Reg.	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Electronic data deliverable provided to NJDEP for data used to document compliance with remedial action goals ; receipts of submittal are included in Appendix D-2 - Documentation of EDD Submittal.
1.6(a) 6	Submit a geographic information system (GIS) compatible site plan that includes the site boundaries and the location of all areas of concern as polygons.	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Figure 1-2 - Site Plan
1.6(b) 1	The physical setting of the site that includes a general description of soils, geology, hydrology, hydrogeology, and topography of the site and surroundings;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Section 2.2 - Physical Setting of the Site
1.6(b) 2	A description of any significant events or seasonal variations that may have influenced sampling procedures or analytical results;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	No significant events or seasonal variations influenced sampling procedures or analytical results. Soil sampling results are discussed in: Section 2.1 - Summary of Soil Remedial Investigation Findings Section 5.0 - Description of the Remedial Action
1.6(b) 3	A description of the results and implications of field measurements or area-specific changes in sampling protocol due to field conditions;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Not Applicable for this Site
1.6(b) 4	A list of: i. All variances from the requirements of this chapter submitted pursuant to N.J.A.C. 7:26E-1.7; and ii. All rationales submitted for deviations from any technical guidance pursuant to N.J.A.C. 7:26C-1.2(a)3;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Not Applicable for this Site
1.6(b) 5	The applicable regulatory timeframe, including: i. Regulatory citation of the regulatory timeframe; and ii. Calendar date of the regulatory timeframe;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Master Schedule, referenced in Section 1.0

Regulatory Cross Reference Table
Remedial Action Report
Phase 3B South and Portions of Site 133 East and Halladay Street South
Garfield Avenue Group
PPG, Jersey City, New Jersey

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Regulation	Description	Document Location	
N.J.A.C. 7:26E-5.7	Remedial Action Report Requirements	Report	Location
1.6(b) 6	A summary table(s), organized by area of concern, of all sampling results, including sample location, medium, sample depth, field and laboratory identification numbers, analytical results, and comparison to remediation standards, and the following: i. Identification of each contaminant concentration exceeding a remediation standard; ii. Identification of each sample with a method detection limit or a practical quantitation level that exceeds a remediation standard, along with an explanation in the table key; and iii. A report of all soils and solids sample results in milligrams per kilogram on a dry weight basis, aqueous sample results in micrograms per liter, and air results in micrograms per cubic meter;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Tables 5-1 through 5-3 - Analytical Results for In-Place Soil
1.6(b) 7	For soil borings, test pits and monitoring wells: i. Stratigraphic logs, which include soil/rock physical descriptions and field instrument readings detected during drilling for each soil boring, test pit and monitoring well; ii. State permit numbers and as-built specifications, if applicable; and iii. Monitoring well certification forms A (the well construction as built certification) and B (the well location certification) available on the Department's website at www.nj.gov/dep/srp/regs/guidance.htm ;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	i. Appendix G - Boring Logs ii and iii. Not Applicable
1.6(b) 8	Maps and figures, with map scale and orientation, including: i. Site location, land use, receptor evaluation, and area of concern maps; ii. Sample location map(s), that include the following: (1) Field identification numbers for all samples; (2) Sample locations, sample depths and contaminant concentrations plotted on the map; and (3) If data for more than 25 samples are presented for an area of concern, soil, ground water and sediment contaminant isopleth maps and cross section diagram(s), including the horizontal and vertical distribution of contaminants in each media, with sample point location numbers and contaminant concentrations; and iii. Ground water elevation contour maps showing the location of all monitoring wells, piezometers, or other ground water sampling points, for each set of static ground water level measurements for each aquifer;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	i. Site Location - Figure 1-1 - USGS Site Location Map Areas of Concern - Figure 1-2 - Site Plan Land Use – Regulatory Forms – Receptor Evaluation ii. Sample Location Maps: Figures 5-1 through 5-3 - Phase 3B South and Portions of Site 133 East and Halladay Street South Sample Maps iii. Groundwater maps - Not Applicable
1.6(b) 9	A discussion of the usability of laboratory analytical data;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Section 6.0 - Reliability of Data: Data Validation and Usability
1.6(b) 10	A description of the significance of information generated in the library search of tentatively identified compounds and unknown compounds.	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Not Applicable for this Site
5.7(b) 2	A presentation and discussion of all of the information identified or collected, pursuant to N.J.A.C. 7:26E-1.10 through 1.16 and an updated receptor evaluation on a form found on the Department's website at www.nj.gov/dep/srp/srra/forms ;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Regulatory Forms - Receptor Evaluation and Section 8.0 - Receptor Evaluation Update

Regulatory Cross Reference Table
Remedial Action Report
Phase 3B South and Portions of Site 133 East and Halladay Street South
Garfield Avenue Group
PPG, Jersey City, New Jersey

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Regulation	Description	Document Location	
N.J.A.C. 7:26E-5.7	Remedial Action Report Requirements	Report	Location
5.7(b) 3	A summary of the findings and recommendations for each area of concern from the remedial investigation report prepared pursuant to N.J.A.C. 7:26E-4.9;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Section 2.1 - Summary of Soil Remedial Investigation Findings Section 2.4 - Recommended Remedial Action
5.7(b) 4	A description, by area of concern, of each remedial action implemented;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Section 5.0 - Description of Remedial Action
5.7(b) 5	A list, by remedial action, of the remediation standards that apply to each remedial action;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Section 3.0 - Identification of Applicable Remedial Standards/Criteria and Table 3-1 - Soil Remediation Standards/Criteria
5.7(b) 6	Documentation, by area of concern, that each remedial action is effective in protecting the public health and safety and the environment by: i. Providing an overview of the data to establish the remedial action is operating as designed; or ii. Demonstrating compliance with the applicable remediation standards;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Section 7.0 - Documentation of the Protectiveness of the Remedial Action
5.7(b) 7	A remedial action permit application prepared pursuant to N.J.A.C. 7:26C-7, if applicable;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Following NJDEP approval of the final RAR, a Remedial Action Permit application will be submitted to NJDEP.
5.7(b) 8	"As-built" diagrams for any permanent structures associated with the remedial action including, without limitation, caps or other structures associated with the remedial action and engineering controls, if applicable;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Section 7.1 - As-Built Diagrams Appendix K - As-Built Diagrams
5.7(b) 9	A detailed description of site restoration activities, if applicable;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Section 7.2 - Description of Restoration Activities
5.7(b) 10	The total remediation costs through the implementation of the remedial action;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Section 7.3 - Total Remedial Action Cost

Regulatory Cross Reference Table
Remedial Action Report
Phase 3B South and Portions of Site 133 East and Halladay Street South
Garfield Avenue Group
PPG, Jersey City, New Jersey

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Regulation	Description	Document Location	
N.J.A.C. 7:26E-5.7	Remedial Action Report Requirements	Report	Location
5.7(b) 11	Documentation of all types and quantities of waste generated by the remedial action, including copies of fully executed manifests or bill(s) of lading documenting any off-site transport of waste;	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Section 7.4 - Documentation of Waste Generation and Disposal
5.7(b) 12	Documentation of the source, type, quantities, and location of each alternative fill and clean fill used as part of the remedial action at the site; and	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Section 7.5 - Documentation of Source, Type, Quantities, and Location of Fill
5.7(b) 13	A description of each permit required and obtained to implement the remedial action.	Remedial Action Report Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B), Soil	Section 7.6 - Identification of Required Permits and Authorizations

Executive Summary

This Remedial Action Report (RAR) has been prepared by AECOM on behalf of PPG to document the remedial action (RA) for Chromate Chemical Production Waste (CCPW)-impacted soil at Phase 3B South and portions of Site 133 East and Halladay Street South (Areas of Concern [AOC] AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B) (**Figures 1-1 and 1-2**).

This RAR documents the RA for the properties, AOCs, and Program Interest (PI) numbers listed below:

Group/Phase	Property Description (Address) (Owner)	AOC	Block Number	Lot Number	Program Interest Number
GA Group Phase 3B South	Former Fishbein Property (816 Garfield Avenue) (PPG)	AOC P3B-1A	21510	11	629388
	Former Ten West Apparel Property (800 Garfield Avenue) (PPG)	AOC P3B-1A	21510	39	777089
	Site 137 South (Portion of 25 Halladay Street) (PPG)	AOC 137-1B	21510	4	G000008753
	Site 133 West (15 Halladay Street) (PPG)	AOC P3B-1A	21510	5	629345
GA Group 3C	Portion of Halladay Street South (City of Jersey City)	AOC HSS-1B	N/A	N/A	G000005480
	Portion of Site 133 East (Portion of 22 Halladay Street) (PPG)	AOC 133E-1B	21509	1	025695

GA – Garfield Avenue

N/A – not applicable

Phase 3B South and portions of Site 133 East and Halladay Street South (the Site) are part of the Garfield Avenue Group (GA Group) Sites, which include Sites 114, 132, 133, 135, 137, 143, and 186, and adjacent roadways and properties (**Figure 1-1** and **Figure 1-2**). Site 114 is the former location of a chromite ore processing facility previously owned by PPG, and the former Halladay Street Gas Works manufactured gas plant (MGP) previously owned by Public Service Electric and Gas Company (PSEG).

The Site is located at 800 and 816 Garfield Avenue, 15 Halladay Street, a portion of 25 Halladay Street, and a portion of 22 Halladay Street, and within a portion of Halladay Street South in Jersey City, New Jersey (NJ) (**Figure 1-2**). The Site is bordered by Site 132 (Block 21510, Lot 2) and the remaining portion of Site 137 (Site 137 North: the remaining portion of Block 21510, Lot 4 and Block 21510, Lot 3) to the north, the remaining portions of Site 133 East (Block 21509, Lot 1) and remaining portions of Halladay Street South to the east, Caven Point Avenue to the south, and Garfield Avenue and two commercial properties along Garfield Avenue (Block 21510, Lots 7 and 10) to the west. The tax block and lot numbers are taken from the Jersey City Parcel Data included in the New Jersey Geographic Information Network (NJGIN), last updated December 13, 2021 (available at: <https://njgin.nj.gov/>, last accessed in March 2023). The total area encompassed by the Site is approximately 4.31 acres.

This RAR addresses only the soil impacts for which PPG is responsible under the *Administrative Consent Order* (ACO) (New Jersey Department of Environmental Protection [NJDEP], 1990) and the *Partial Consent Judgment Concerning the PPG Sites* (Judicial Consent Order [JCO]) (Superior Court of New Jersey Law Division – Hudson County, 2009). PPG is responsible for CCPW-related impacts in Phase 3B South and portions of Site 133 East and Halladay Street South emanating from Site 114.

Constituents covered by this RAR include:

- Hexavalent chromium (Cr⁶⁺); and
- CCPW metals (antimony, total chromium, nickel, thallium, and vanadium).

Under the ACO and JCO, PPG is not responsible for other constituents exceeding the NJDEP Soil Remediation Standards (SRS) or Default Impact to Groundwater Soil Screening Levels (DIGWSSLs) that may be present at the Site. Remediation of non-CCPW-related constituents and constituents not emanating from Site 114 is the responsibility of the property owner, under the Licensed Site Remediation Professional (LSRP) program and will be documented separately.

Based on the findings of the Remedial Investigation (RI), the recommended RA for soil at the Site included excavation and removal of soil with CCPW-related impacts, as described in the *Final Remedial Action Work Plan (Soil) Rev. 4, Garfield Avenue Group Sites, Jersey City, New Jersey* (AECOM, 2018b).

The overall remedial objectives for Cr⁶⁺ and soil with CCPW-related impacts included:

- Elimination of potential exposure to Cr⁶⁺ in CCPW and CCPW-impacted soil due to direct contact or windborne dust;
- Removal of accessible impacted soil to depths greater than 20 feet (ft) below ground surface (bgs) and above the meadow mat;

- Removal of CCPW and certain impacted soil to depths greater than 20 ft bgs but to a maximum of 35 ft bgs where: a) the meadow mat is not present, and b) removal is technically prudent and beneficial to the future groundwater remediation; and
- Establishment of site conditions suitable for future uses of the Site.

For the purposes of planning and implementing the RA, AOC P3B-1A, AOC 137-1B, and a portion of AOC HSS-1B were identified as part of GA Group Phase 3B South (**Figure 1-2**). AOC 133E-1B and the remaining portion of AOC HSS-1B were identified as a part of GA Group Phase 3C. Remedial excavation within AOC 137-1B and the Site 133 West portion of AOC P3B-1A began on August 29, 2018 but was paused due to access concerns. Remedial excavation within AOC 133E-1B, AOC HSS-1B, and the remaining portion of AOC P3B-1A began on April 12, 2021 and was completed on November 11, 2021. The previously excavated areas associated with AOC 137-1B and Site 133 West were also completed on November 11, 2021. Backfilling was completed on November 23, 2021 and restoration activities for the Site were completed on February 28, 2022 (see **Section 7.2**).

Confirmation sampling results presented on figures and tables in this report indicate that the remedial objectives for AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B have been achieved as follows:

- Excavation of soil containing Cr⁺⁶ met the requirements specified in the NJDEP Memorandum entitled *Chromium Moratorium, February 8, 2007* (the Chromium Policy) (NJDEP, 2007) in accordance with the *Updated Method to Determine Compliance with the Department's Chromium Policy, Garfield Avenue – Sites 114, 132, 133, 135, 137, and 143, Jersey City, NJ* (Method to Determine Compliance) (NJDEP, 2013).
- For soil with antimony (Sb) concentrations exceeding the Residential Direct Contact Soil Remediation Standard (RDCSRS) and the Impact to Groundwater Soil Remediation Standard – Garfield Avenue Group (IGWSRS-GAG), compliance averaging was used to attain compliance with these criteria.
- CCPW metals other than Sb (i.e., total chromium, nickel, thallium, and vanadium) are not present at concentrations greater than the applicable remediation criteria.

The soil RA for AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B is effective in protecting public health and safety and the environment, and no further soil remediation is warranted at these AOCs. This RAR demonstrates compliance with the applicable remediation requirements for the soil at AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B and no further action with regard to soil within these AOCs is needed. PPG requests the closure of AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B by the NJDEP through the issuance of a Consent Judgment Compliance Letter.

1.0 Introduction

This Remedial Action Report (RAR) has been prepared by AECOM on behalf of PPG to document the remedial action (RA) for Chromate Chemical Production Waste (CCPW)-related impacts in soil at Phase 3B South and portions of Site 133 East and Halladay Street South (Areas of Concern [AOC] AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B) (**Figures 1-1** and **1-2**). This RAR documents the RA for the properties, AOCs, and Program Interest (PI) numbers listed below:

Table 1-1: Summary of Areas of Concern

Group/Phase	Property Description (Owner)	AOC	Block Number	Lot Number	Program Interest Number
GA Group Phase 3B South	Former Fishbein Property (816 Garfield Avenue) (PPG)	AOC P3B-1A	21510	11	629388
	Former Ten West Apparel Property (800 Garfield Avenue) (PPG)	AOC P3B-1A	21510	39	777089
	Site 137 South (Portion of 25 Halladay Street) (PPG)	AOC 137-1B	21510	4	G000008753
	Site 133 West (15 Halladay Street) (PPG)	AOC P3B-1A	21510	5	629345
GA Group 3C	Halladay Street South (City of Jersey City)	AOC HSS-1B	N/A	N/A	G000005480
	Site 133 East (22 Halladay Street) (PPG)	AOC 133E-1B	21509	1	025695

GA – Garfield Avenue

N/A – not applicable

Phase 3B South and portions of Site 133 East and Halladay Street South (the Site) are part of the Garfield Avenue Group (GA Group) Sites, which include Sites 114, 132, 133, 135, 137, and 143, Phase 4 Roadways, and Phase 5 Off-Site Properties (**Figures 1-1** and **1-2**). Site 114 is the former location of a chromite ore processing facility previously owned by PPG, and the former Halladay

Street Gas Work manufactured gas plant (MGP) previously owned by Public Service Electric and Gas Company (PSEG).

Phase 3B South is comprised of the Former Fishbein Property (Block 21510, Lot 11), the Former Ten West Apparel Property (Block 21510, Lot 39), Site 137 South (a portion of Block 21510, Lot 4), Site 133 West (Block 21510, Lot 5), and a portion of Halladay Street South. The Site also includes two tracts of land that were remediated as part of GA Group Phase 3C: the remaining southern portion of Halladay Street South (AOC HSS-1B) and the southern portion of Site 133 East (Block 21509, Lot 1) (AOC 133E-1B). The northern portions of AOC HSS-1B and AOC 133E-1B were previously excavated during the Halladay Street South and Site 133 East remedial actions, respectively. However, additional excavation or sampling was required for the southern portions of AOC HSS-1B and AOC 133E-1B, which was subsequently implemented along with the Phase 3B South RA; therefore, these AOCs are included herein for closure (**Figure 1-2**).

The Site is located at 800 and 816 Garfield Avenue, 15 Halladay Street, a portion of 25 Halladay Street, and a portion of 22 Halladay Street, and within a portion of Halladay Street in Jersey City, New Jersey (NJ) (**Figure 1-2**). The Site is bordered by Site 132 (Block 21510, Lot 2) and the remaining portion of Site 137 (Site 137 North: Block 21510, Lot 4) to the north, the remaining portions of Site 133 East (Block 21509, Lot 1) and Halladay Street South to the east, Caven Point Avenue to the south, and Garfield Avenue and two commercial properties along Garfield Avenue (Block 21510, Lots 7 and 10) to the west. The tax block and lot numbers are taken from the Jersey City Parcel Data included in the New Jersey Geographic Information Network (NJGIN), last updated December 13, 2021 (available at: <https://njgin.nj.gov/>, last accessed in March 2023). The total area encompassed by the Site is approximately 4.31 acres.

The Former Ten West Apparel Property, the Former Fishbein Property, Site 137 South, and Site 133 are currently vacant land owned by PPG. Halladay Street South is a roadway owned by the City of Jersey City (the City).

In 1990, PPG and the NJDEP entered into an *Administrative Consent Order* (ACO) (NJDEP, 1990) to investigate and remediate locations where CCPW-impacted materials related to former PPG operations may be present. On June 26, 2009, NJDEP, PPG, and the City of Jersey City (the City) entered into a *Partial Consent Judgment Concerning the PPG Sites*, also referred to as the Judicial Consent Order (JCO) (Superior Court of New Jersey Law Division – Hudson County, 2009), with the purpose of remediating soil and sources of contamination at the Hudson County Chromate (HCC) sites. Priority for the remedial activities was given to residential locations where the CCPW-impacted materials were present. The provisions of the original ACO remain in effect with the JCO taking precedence where there are conflicts between the two documents.

As part of the JCO, a judicially-enforceable master schedule was created, establishing RA milestone dates for the NJ Chrome Remediation Sites, including Phase 3B South and portions of Site 133 and Halladay Street South. Since its establishment in 2009, the master schedule has been revised several times. The most recent revision to the Master Schedule was finalized July 27, 2022 (Riccio, 2022).

This RAR presents a summary of the implemented RA for CCPW-related impacts in soil within Phase 3B South and portions of Site 133 East and Halladay Street South, as presented in the Case Inventory Document (CID). The survey limits of AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B are depicted on **Figure 1-2**. Groundwater impacted by CCPW-related material throughout the GA Group Sites is being tracked under the Site 114 PI number G000005480 and is not included on the CID for the Site; documentation of the RA for groundwater for the GA Group Sites will be provided in a separate document. This RAR was prepared in accordance with the requirements set

forth in the *Technical Requirements for Site Remediation* (TRSR), New Jersey Administrative Code (N.J.A.C.), Title 7, Chapter 26E, Subchapter 5.5 (N.J.A.C. 7:26E-5.5) (NJDEP, 1993b), Appendix A of the 1990 ACO (NJDEP, 1990), and the June 26, 2009 JCO (Superior Court of New Jersey Law Division – Hudson County, 2009).

The remainder of this RAR is organized as follows:

- **Section 2** provides the summary of soil remedial investigation (RI) findings and recommendations;
- **Section 3** identifies the applicable remedial standards/criteria;
- **Section 4** presents the summary of pre-remedial action design activities;
- **Section 5** provides the description of the RA implemented;
- **Section 6** discusses the reliability of the data including data validation and usability;
- **Section 7** includes documentation of the protectiveness of the remedy;
- **Section 8** provides the updated receptor evaluation information;
- **Section 9** presents the conclusions and recommendations; and
- **Section 10** lists the references cited in the report.

Supporting information is presented in the appendices.

2.0 Summary of Soil Remedial Investigation Findings and Recommendations

2.1 Summary of Soil Remedial Investigation Findings

Remedial investigation activities performed at the GA Group Sites were detailed in the following reports, including Remedial Investigation Work Plans (RIWPs) and Remedial Investigation Reports (RIRs), previously submitted to the NJDEP:

- April 2003 *Remedial Investigation Work Plan – Site 114* (ENSR, 2003).
- March 2006 *Remedial Investigation Report – Site 114* (Site 114 RIR) (ENSR, 2006a).
- March 2006 *Remedial Investigation Work Plan – Site 114 (Off Site)* (ENSR, 2006b).
- September 2006 *Remedial Investigation Work Plan – Sites 132, 133, 135, 137 and 143* (ENSR, 2006c).
- December 2007 *Remedial Investigation Report Former Halladay Street Gas Works, Jersey City, New Jersey* (Halladay Street Gas Works RIR) (CMX, 2007).
- July 2008 *Remedial Investigation Report Addendum, Supplemental Offsite Soil Sampling, Former Halladay Street Gas Works, Jersey City, New Jersey* (RIR Addendum) (CMX, 2008).
- December 2009 *Remedial Investigation Report – Non-Residential Chromate Chemical Production Waste Sites, Sites 114, 132, 133, 135, 137, and 143* (AECOM, 2009).
- March 2011 *Soil Remedial Investigation Work Plan – Sites 114, 132, 133, 135, 137, 143 and Site 186* (AECOM, 2011a).
- November 2011 *Draft Remedial Investigation Report – Soil Garfield Avenue Group Non-Residential CCPW Sites 114, 132, 133, 135, 137, 143 and 186* (AECOM, 2011b).
- February 2012 *Remedial Investigation Report – Soil Garfield Avenue Group Non-Residential CCPW Sites 114, 132, 133, 135, 137, 143 and 186* (2012 RIR) (AECOM, 2012a).
- May 2014 *Remedial Investigation Report Former Halladay Street Gas Works Jersey City, New Jersey* (AMEC, 2014).
- August 2018 *Supplemental Soil Remedial Investigation Report, Final Revision 1, PPG Garfield Avenue Group, Hudson County Chromium Sites, Jersey City, New Jersey* (August 2018 SSRIR (AECOM, 2018a), as approved by NJDEP on October 22, 2018 (NJDEP, 2018a).

The 2012 RIR provides a detailed summary of the previous RI work throughout the GA Group Sites, including some of the parcels that comprise the Site (Site 133 West, Site 133 East, Site 137 South, and Halladay Street South). These initial investigation results were documented in the 2012 RIR (AECOM, 2012a), and the results from additional investigations within the Former Ten West Apparel Property and the Former Fishbein Property that occurred after the 2012 RIR were documented in the August 2018 SSRIR (AECOM, 2018a).

Impact to Groundwater Soil Remediation Standards - GA Group (IGWSRS-GAGs) for antimony and nickel were developed and presented in the August 2018 SSRIR (AECOM, 2018b).

Remedial Investigation activities were conducted at Site 114 and the southern GA Group Sites (Sites 132, 133, 135, 137, and 143) between 2005 and 2008. The results of these activities were included in the Site 114 RIR (ENSR, 2006a), the Halladay Street Gas Works RIR (CMX, 2007), and the RIR Addendum (CMX, 2008). The RI work was designed to delineate the compounds on or potentially emanating from Site 114 related to the former chromite ore processing operations and related to PPG's former ownership of Site 114. The constituents of concern (COC) present on Site 114 included volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), metals, and hexavalent chromium (Cr^{+6}), as well as CCPW-impacted materials.

The Site was initially targeted for RI activities by PPG due to its proximity to GA Group Sites impacted by Site 114. The RI activities identified the presence of Cr^{+6} in soil within the Site at concentrations greater than the NJDEP Chromium Soil Cleanup Criterion (CrSCC). Most of the Cr^{+6} detected at concentrations greater than the CrSCC was found within the fill material that was placed above the meadow mat or on top of native materials. Concentrations of Cr^{+6} greater than the CrSCC within the Site were generally limited to depths shallower than 17.0 feet (ft) below ground surface (bgs). Visible CCPW (i.e., green-gray mud [GGM] and chromite ore processing residue [COPR]) was also documented within the Site, particularly in the vicinity of the former Morris Canal.

The RI activities also identified the presence of CCPW metals, including antimony (Sb) and vanadium (V) in soil within the Site at concentrations greater than the most stringent NJDEP Soil Remediation Standards (SRS). Nickel (Ni) was identified in soil at concentrations greater than the IGWSRS-GAGs. In general, CCPW metals exceedances, particularly antimony and vanadium, were coincident with Cr^{+6} . None of the RI samples included thallium concentrations that exceeded the NJDEP SRS. Since the completion of the 2012 RIR, the NJDEP has eliminated the SRS for thallium.

For soil within Halladay Street South (AOC HSS-1B), PPG is only responsible for CCPW-related impacts and not for any other constituents exceeding NJDEP SRS that may be present at the Site (e.g., constituents of historic fill). This RA addresses only the soil impacts for which PPG is responsible. Remediation of impacts within AOC HSS-1B that are not subject to the ACO and JCO are to be managed by the City's Licensed Site Remediation Professional (LSRP) under the NJDEP LSRP program.

2.2 Physical Setting of the Site

The GA Group Sites, including the Site, are located in an urban area in Jersey City, Hudson County, NJ between Garfield Avenue, Caven Point Avenue, Pacific Avenue, and the New Jersey Transit Hudson-Bergen Light Rail. The GA Group Sites consist of former industrial and commercial properties and businesses. The GA Group Sites, including the Site, are located within the Canal Crossing Redevelopment Area, which encompasses 111 acres of planned redevelopment space in the southeastern section of Jersey City, New Jersey (City of Jersey City, 2009, amended October 2020).

There is little topographic relief within and surrounding the GA Group Sites, where the topography ranges from elevation (El.) 9 ft to 17 ft relative to the North American Vertical Datum of 1988 (NAVD88). However, west of Garfield Avenue, the land surface slopes upward and reaches approximately El. 100 ft NAVD88 about one-half mile to the west. The topography east of the GA Group Sites is fairly flat, extending to the Hudson River and Upper New York Bay. Due to highly compacted surface soil and other impervious features, storm water runoff within the GA Group Sites is primarily channeled into the municipal storm sewer system (ENSR, 2006a).

The GA Group Sites are located in a section of Jersey City that experienced significant industrial development in the early 1900s. To create more available land, developers filled the surrounding marshlands and estuarine areas. Research indicates that the fill included construction spoils consisting of silts and sands, garbage from New York City, ship ballast, coal ash, and incinerator ash. It is unknown what specific fill material was used in which locations. The meadow mat associated with wetland areas was covered with fill materials and/or removed for building foundations or other improvement projects (ENSR, 2006a).

2.2.1 Topography

The United States Geological Survey (USGS) Jersey City, NJ topographic quadrangle map (**Figure 1-1**) presents the regional topography for the GA Group Sites and surrounding area. The Site has little topographic relief, with ground surface ranging from El. 10 to 16 ft NAVD88. Prior to the RA, the Former 10 West Apparel Property was largely occupied by a single-story warehouse structure, with a finished floor elevation of approximately El. 15 ft NAVD88. To the west of Garfield Avenue, the topography rises approximately 30 to 40 ft in elevation within several hundred yards of the GA Group, and to about El. 100 ft NAVD88 about a half-mile west of the GA Group Sites. As of July 2022, the surface elevation of the Site following soil remediation and restoration ranges from El. 10 to 18 ft NAVD88.

2.2.2 Regional Geology

The regional geology includes unconsolidated sediments of Recent and Pleistocene age. According to the New Jersey Geological Survey, these sediments include alluvial, estuarine, eolian (windblown), and glacial lacustrine deposits, as well as glacial till of late Wisconsin age. The Triassic age bedrock of the Newark Group (Lockatong and Stockton formations) throughout the region is comprised of non-marine sedimentary rocks, consisting mainly of sandstone, mudstone, and conglomerate. A diabase sill (i.e., the Palisades Sill) intruded into the Lockatong formation west of Garfield Avenue approximately 200 million years ago.

2.2.3 Site-Specific Geology

The Site is located on miscellaneous fill material that was used to reclaim the salt marsh for the construction of this portion of Jersey City. Soil boring logs and the NJDEP Historic Fill Map of the Jersey City Quadrangle (NJDEP, 2004) establish that the Site is located within an area of historic fill overlying native sand and silt (AECOM, 2012a). The estuarine native soils beneath fill material include a thick sequence of unconsolidated natural material. The organic meadow mat layer that is present throughout much of the Garfield Avenue Group Sites is also present within the Site. The major geologic units in the area of the Site, from top to bottom, include:

- A non-native fill layer (the shallow zone);
- Native soils consisting of sand, silty sand, and clays (the intermediate zone); generally separated from the fill by organic sediments or meadow mat;
- Till directly above the bedrock underlying sand with occasional gravel lenses generally separated from the intermediate zone by a layer of lower hydraulic conductivity interbedded silts and clayey silts (the deep zone); and
- Bedrock of the Lockatong and Stockton Formations (bedrock zone).

The bedrock surface is relatively shallow west of Garfield Avenue but fairly deep beneath portions of neighboring Site 114. Bedrock was observed at depths less than 10 ft below ground surface (bgs) west of Site 114 and along Garfield Avenue and at depths exceeding 100 ft bgs on Site 114 (AECOM,

2022b). East of the GA Group Sites, the bedrock surface rises to a large bedrock plateau that extends to the shoreline of New York Bay and then slopes downward again east of Ellis Island (Stanford, 1995).

Estuarine organic-rich deposits were identified at a number of boring locations. Shallow soils are comprised of predominantly fill material. Below the fill material, soils are unconsolidated and are characterized by fine to medium sand and silt with clay and some gravel, typical of the current understanding of the geologic depositional history of the area.

2.2.4 Hydrogeology

This RAR only addresses the RA of soil at AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B. Groundwater impacted by CCPW and/or MGP material throughout the GA Group Sites is being tracked under PI number G000005480 for Site 114 (the location of the former chromite ore processing facility and MGP). The status of the groundwater remedial investigation for the GA Group Sites is documented in the *Groundwater Remedial Investigation Report, Final* submitted to the NJDEP on January 26, 2022 (AECOM, 2022b). A separate RAR will be prepared and submitted to document the groundwater RA at the GA Group Sites. The description of hydrogeology is provided herein solely to meet the regulatory requirements of N.J.A.C. 7:26E-5.7(b)1, as specified by N.J.A.C. 7:26E-1.6(b)1.

2.2.4.1 Regional Groundwater Flow

Groundwater occurs regionally in the following geologic formations: the fill, the native unconsolidated overburden soils/meadow mat, and the bedrock. A summary of groundwater flow in these formations is provided below:

- **Fill:** Groundwater in the fill is unconfined and is typically encountered within 10 ft bgs. In general, the shallow zone groundwater flow patterns represent a subdued version of land surface topography. Variations in these flow patterns can be attributed to heterogeneities in the fill. For instance, tightly compacted dredged sediments would be expected to restrict water flow much more than construction debris. Subsurface infrastructure features (e.g., basements, drains, sewers, sheet pile, etc.) also affect shallow groundwater flow patterns. Groundwater elevations in the shallow fill are also influenced by recharge events.
- **Native Unconsolidated Overburden and Meadow Mat:** Groundwater flow in overburden materials is controlled by permeability or flow through the connected pore spaces in the soil matrix. In this zone, groundwater is mostly unconfined, but may be semi-confined to confined in areas with complex stratigraphy consisting of alternating layers of less and more permeable materials. Groundwater generally flows horizontally in these soils but may be influenced by local recharge and discharge zones. The meadow mat is a dense matrix of organic material and fine-grained soils, and this layer generally exhibits permeability that is three or more orders-of-magnitude less than surrounding materials.
- **Bedrock:** Groundwater within bedrock is stored and transmitted along fractures, bedding planes, and interconnected cracks or voids in the rock. In general, although highly fractured, the diabase has low permeability and is understood to be a no-flow boundary. For sedimentary formations (Lockatong and Stockton), groundwater flow occurs primarily along bedding plane fractures with the prevailing direction parallel to bedding strike, with secondary flow along steeply dipping fractures (joints) which are pathways for leakage between bedding fractures; the vertical extent of such leakage between bedding plane fractures is commonly inhibited by the termination of the majority of the joints at bedding plane boundaries.

Regionally, bedrock well yields have been reported to range from several gallons to several hundred gallons per minute, with yields generally decreasing with depth.

2.2.4.2 GA Group Sites Groundwater Flow

Similar to the regional hydrogeology, groundwater at the GA Group Sites (including Phase 3B South and portions of Site 133 East and Halladay Street South) occurs within distinct hydrostratigraphic units (AECOM, 2022b):

- **Shallow Water-Bearing Zone:** consists of fill material; includes groundwater present in the fill from the water table to the top of the meadow mat. Where the fill has been excavated during soil remedial action, the backfill is a more uniform dense-graded aggregate (DGA) material or DGA amended with FerroBlack®-H. In the northeastern corner of Site 114, beyond Forrest Street, a native sandy unit underlies the fill above the intermediate water-bearing zone deposits.
- **Intermediate Water-Bearing Zone:** consists of sandy silts, silty sands, silts, clays, and fine to coarse sand with lenses of gravel extending from the bottom of the meadow mat down to a silt and clay unit of lower hydraulic conductivity; includes groundwater present in the meadow mat, the underlying sand unit, and the underlying silt and clay unit. Where present, the meadow mat is the transition zone between the shallow and intermediate water-bearing zones and generally limits vertical groundwater movement between these zones. Where meadow mat is absent, the shallow and intermediate water-bearing zones are in direct contact. The silt and clay unit is the transition zone between the intermediate and the deep water-bearing zones and, where present, behaves like an aquitard due to its lower permeability. The intermediate water-bearing zone pinches out against the rising bedrock surface west of Garfield Avenue.
- **Deep Water-Bearing Zone:** north of Carteret Avenue, the deep zone consists primarily of sand and gravel with lenses of clay or silt underlain by basal till, extending from the bottom of the overlying silt and clay unit to bedrock; includes groundwater present in the sand and gravel unit and the basal till. South of Carteret Avenue, the deep zone becomes more heterogeneous, consisting of sand and gravel with lenses of clay or silt (like north of Carteret Avenue) as well as thicker sequences of lower permeability materials such as silts, clays, and fine sands with silt and clay. Based on information published by the NJGS and data for the GA Group Sites, the basal till is present on top of bedrock throughout the GA Group Sites. The deep water-bearing zone pinches out against the rising bedrock surface on the western margin of the GA Group Sites (near Garfield Avenue).
- **Bedrock Water-Bearing Zone:** consists primarily of the Lockatong Formation, with the Palisades Sill (diabase) along the western edge of the Project Area and a section of the Stockton Formation in the eastern portion of Site 114; includes groundwater within bedrock fractures, bedding planes, cracks, and voids. Flow within weathered bedrock immediately below overburden materials is similar to porous media flow due to the high degree of interconnectivity between the weathered bedrock elements, except in areas where the weathered rock has higher clay content within fractures which reduces the permeability of the weathered horizon. Flow in competent rock occurs only within interconnected fractures, bedding planes, cracks, or voids in the rock, and not within the rock matrix itself.

Shallow groundwater flow is complex and is affected by various on- and off-site activities and features, including excavations, placement of clean and/or amended fill, sheet pile, implementation of interim

groundwater remedial measures, other subsurface infrastructure, and localized variability in recharge. Groundwater flow patterns within the shallow water-bearing zone are highly variable, and no single dominant horizontal groundwater flow direction is discernible. Vertical groundwater flow directions within the shallow water-bearing zone are dominated by downward hydraulic gradients across most of the Site.

The principal direction of groundwater flow in the intermediate and deep water-bearing zones is from northwest to southeast. Downward vertical hydraulic gradients provide groundwater influx to the intermediate zone from the overlying shallow water-bearing zone and groundwater outflow from the intermediate zone into the underlying deep zone. Groundwater flow into the intermediate water-bearing zone may also occur along upward vertical hydraulic gradients from the underlying deep water-bearing zone, thereby recharging the intermediate zone. Where present, utility corridors may serve as a preferential pathway for groundwater flow. Vertical groundwater flow directions in the deep water-bearing zone are dominated by upward hydraulic gradients into the overlying intermediate water-bearing zone. Groundwater flow in the deeper portions of the deep water-bearing zone is influenced by the shape of the underlying bedrock surface.

Water levels in shallow and intermediate water-bearing zone monitoring wells respond to precipitation events. Seasonal variability in vertical hydraulic gradient directions is evident within the shallow and intermediate water-bearing zones at certain locations, as indicated by occasional reversals in the direction of vertical hydraulic gradients (AECOM, 2022b).

During a May/June 2018 synoptic groundwater elevation gauging event, groundwater elevations throughout the GA Group Sites in the shallow groundwater zone ranged from El. 3.25 to 12.78 ft NAVD88 (AECOM, 2022b).

The groundwater elevation (above which is the unsaturated zone) was estimated as the 50th percentile groundwater elevation from four monitoring wells located on the Site that were gauged between February 2007 and May 2018. The monitoring well locations and data are included in **Appendix A**. The estimated groundwater elevation for the Site is El. 7.5 ft NAVD88.

2.3 Remedial Activities on Adjacent Properties

Within the GA Group Sites, remedial excavations have been completed at several properties adjacent to the Site:

- Halladay Street South (Completed on October 22, 2015)
- Site 133 East (Completed on October 22, 2015)

Documentation of the remedial actions described above are provided in the following reports:

- *The Site 133 East remedial action is documented in the Remedial Action Report Site 133 East (AOC 133E-1A and AOC 133E-2A) and Site 135 (AOC 135-1) Soil, Final (AECOM, 2019c), as approved by NJDEP on October 11, 2019 (NJDEP 2019c).*
- *Remedial Action Report Halladay Street South (AOC HSS-1A and AOC HSS-2A) Soil, Final (Revision 2) (AECOM, 2019d), as approved by NJDEP on November 15, 2019 (NJDEP, 2019d).*

2.4 Recommended Remedial Action

Based on the findings of the RI, the recommended RA for soil at the Site included excavation and removal of CCPW-impacted soil. It was anticipated that the presence of CCPW metals (antimony, total chromium, nickel, thallium, and vanadium) at concentrations greater than the CrSCC, SRS, DIGWSSLs, or the site-specific IGWSRS-GAGs would be resolved as a result of the excavation being driven by the presence of Cr^{+6} at concentrations greater than the CrSCC.

3.0 Identification of Applicable Remedial Standards/Criteria

3.1 Regulatory Requirements, Guidance, and Alternative/Site-Specific Determinations

The RA described in the GA Group Remedial Action Work Plan (RAWP) was performed in accordance with the following regulatory requirements, NJDEP Guidance, and Site-specific determinations:

- N.J.A.C. 7:9D – *Well Construction and Maintenance; Sealing of Abandoned Wells*, last amended January 2, 2018 (NJDEP, 2001).
- N.J.A.C. 7:26C – *Administrative Requirements for the Remediation of Contaminated Sites*, last amended August 6, 2018 (NJDEP, 1993a).
- N.J.A.C. 7:26D – *Soil Remediation Standards*, last amended May 17, 2021 (NJDEP, 2008a).
- N.J.A.C. 7:26E – *Technical Requirements for Site Remediation*, last amended August 6, 2018 (NJDEP, 1993b).
- NJDEP *Field Sampling Procedures Manual*, dated August 2005, last updated April 2011 (NJDEP, 2005).
- NJDEP *Technical Guidance for the Attainment of Remediation Standards and Site-Specific Criteria*, dated September 2012 (NJDEP, 2012).
- NJDEP Memorandum from Lisa P. Jackson to Irene Kropp, Subject: *Chromium Moratorium*, February 8, 2007 (the Chromium Policy) (NJDEP, 2007).
- NJDEP *Chromium Soil Cleanup Criteria*, September 2008, revised April 2010 (NJDEP, 2008b).
- NJDEP *Administrative Consent Order*, dated July 19, 1990 (NJDEP, 1990).
- *Partial Consent Judgment Concerning the PPG Sites* (JCO) between NJDEP, PPG, and the City of Jersey City, June 26, 2009 (Superior Court of New Jersey Law Division - Hudson County, 2009).
- Letter from Mr. Thomas Cozzi to W. Michael McCabe, Subject: *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 (Method to Determine Compliance) (NJDEP, 2013).
- NJDEP Memorandum from Diane Groth to David Doyle, Subject: *PPG Garfield Avenue Group Sites, Adjacent Streets and Nearby Properties, Jersey City, NJ: Alternative Remediation Standard for Vanadium*, December 28, 2016 (NJDEP, 2016).
- August 2018 Supplemental Soil Remedial Investigation Report, Final Revision 1, PPG Garfield Avenue Group, Hudson County Chromium Sites, Jersey City, New Jersey (August 2018 SSRIR) (AECOM, 2018a), which presents the site-specific IGWSRS-GAG for antimony and nickel. The August 2018 SSRIR was approved by NJDEP on October 22, 2018 (NJDEP, 2018a).

3.2 Soil Remediation Standards/Criteria

For on-Site soil, under the ACO and JCO, PPG is responsible for CCPW-related impacts only. Under the ACO/JCO, PPG is also responsible for COCs detected at concentrations exceeding NJDEP regulatory standards, criteria, and/or screening levels that were found to be emanating from Site 114. No non-CCPW-related impacts were identified to be emanating from Site 114 onto the Site (AECOM, 2014; AECOM, 2015a; AECOM, 2015b; AECOM, 2017c; AECOM, 2020a).

Under the ACO and JCO, PPG is not responsible for any other constituents at concentrations exceeding NJDEP SRS, CrSCC, DIGWSSLs, or IGWSRS-GAGs that may be present, including those associated with historic fill remaining at the Site, which is the responsibility of the property owner under the LSRP program. This RAR addresses only the soil impacts for which PPG is responsible under the ACO and JCO.

The NJDEP SRS and other criteria relevant to the remediation at the Site are presented in **Table 3-1**.

For the purposes of determining the applicability of comparing remaining-in-place soil concentrations with the DIGWSSLs or IGWSRS-GAGs, the groundwater elevation (above which is the unsaturated zone) was estimated as the 50th percentile groundwater elevation from four monitoring wells located on-Site that were gauged between February 2007 and May 2018. The monitoring well locations and data are included in **Appendix A**. The estimated groundwater elevation for the Site is El. 7.5 ft NAVD88.

On May 17, 2021, the NJDEP adopted amended Remediation Standards at N.J.A.C. 7:26D, which included amended SRS for soil ingestion-dermal, soil inhalation, and migration-to-groundwater exposure pathways. Sites with an NJDEP-approved RAWP, where no final remediation document has been issued, which includes this Site, must conduct an order-of-magnitude evaluation to determine the protectiveness of the proposed or implemented remedy relative to the new standards pursuant to New Jersey Statutes Annotated (N.J.S.A.) 58:10B-13e.

With regard to the migration to groundwater exposure pathway, none of the parameters that PPG is responsible for at the Site (Cr^{+6} and CCPW metals only) were impacted by an order-of-magnitude or more decrease from the DIGWSSL.

With regard to the soil ingestion-dermal and inhalation pathways (both residential and non-residential), none of the parameters that PPG is responsible for at the Site (Cr^{+6} and CCPW metals only) were impacted by an order-of-magnitude or more decrease from the previous standard.

Based on the order-of-magnitude evaluation conducted specific to the parameters that PPG is responsible for at the Site (Cr^{+6} and CCPW metals only), the remedy is protective pursuant to the new standards.

4.0 Summary of Pre-Remedial Action Design Activities

Based on the findings of the RI (as summarized in **Section 2.0**), the recommended RA for soil at the Site included the excavation and removal of soil with CCPW-related impacts

4.1 Summary of the Remedial Action Work Plan (Soil)

Following the preparation and submittal of the RIR (AECOM, 2012a), PPG developed a RAWP for the GA Group Sites (GA Group RAWP) (AECOM, 2018b), including Phase 3B South and portions of Site 133 East and Halladay Street South, to address CCPW-related impacts in soil.

The overall remedial action for CCPW-related impacts in soil, as stated in the GA Group RAWP, were:

- Elimination of potential exposure to Cr^{+6} in CCPW and CCPW-impacted soil due to direct contact or windborne dust;
- Removal of accessible impacted soil at depths less than 20 ft bgs and above the meadow mat;
- Removal of CCPW and certain impacted soil to depths greater than 20 ft bgs but to a maximum of 35 ft bgs where: a) the meadow mat is not present; and b) removal is technically prudent and beneficial to the future groundwater remediation; and
- Establishment of site conditions suitable for future uses of the Site.

The selected RA for soils at the GA Group Sites, as described in the GA Group RAWP, was excavation and off-site disposal. Excavation of soil containing Cr^{+6} was to meet the Chromium Policy (NJDEP, 2007) by following the Method to Determine Compliance (NJDEP, 2013). Meadow mat, where present, was to be protected to the extent practicable since it provides a natural barrier to chromium migration and can reduce Cr^{+6} to trivalent chromium. In accordance with the GA Group RAWP, excavation areas were to be backfilled with soil suitable for residential, commercial, or other potential uses.

In areas where deemed necessary, a capillary break was to be installed between groundwater and the ground surface to eliminate the possibility of chromate crystallization from impacted groundwater wicking to the surface. Based on the site conditions and the criteria established as part of the *Capillary Break Design Final Report (Revision 2) Addendum 2 - Phase 3B South and a Portion of Site 133 East* (AECOM, 2022a), a capillary break is not required within the Site.

4.2 Summary of Pre-Design Investigation Activities

As part of the pre-RA activities, and in an effort to better define the excavation limits and planned excavation, Pre-Design Investigation (PDI) activities were implemented. These activities included advancing soil borings and conducting test pits, utility surveys, geotechnical assessments, and sampling, and obtaining permits, where required. The goals of these activities were to define the limits of excavation and the locations of underground utilities under adjacent roadways, and to obtain geotechnical data to support the design of excavation.

5.0 Description of the Remedial Action

The RA for the Site included excavation of soil with CCPW-related impacts, off-site transport and disposal of affected soil, backfilling of the excavations, and restoration of the affected areas. It was anticipated that the presence of CCPW metals (antimony, total chromium, nickel, thallium, and vanadium) at concentrations greater than the CrSCC, SRS, and DIGWSSLs, as relevant, would be resolved as a result of the excavation being driven by the presence of Cr⁺⁶ at concentrations greater than the CrSCC. Portions of the Site were backfilled with FerroBlack®-H-amended DGA to serve as a phase of groundwater remediation. These backfill materials were amended with FerroBlack®-H at a rate of 0.7% by mass.

The RA was performed in accordance with the GA Group RAWP (AECOM, 2018b), as described in **Section 4.1**.

Preparatory activities for the remediation of the GA Group Sites, overall, began in 2010 with obtaining regulatory permits and/or approvals to facilitate implementation of RA. Initial mobilization and preparation for RA of the GA Group Sites began in June 2010.

AECOM served as the remediation engineer and provided demolition oversight. Mueser Rutledge Consulting Engineers (MRCE) served as the geotechnical/structural engineer. AECOM served as Construction Manager as Agent (CMAA) to manage and coordinate the work of multiple contractors hired by PPG to perform the required remedial construction and support work.

AECOM performed the air monitoring at the Site during excavation and restoration activities, in accordance with the December 2010 *Revision of the Air Monitoring Workplan for Ground Intrusive Activities at the Garfield Avenue Site in Jersey City, New Jersey* (AECOM, 2010b) and the *Air Monitoring Plan Amendment 37* (AECOM, 2020b).

ENTACT performed the remedial construction activities at the Site. These services consisted of coordination and disconnection of utilities, excavation and backfilling, decontamination, demolition, dewatering, and Site restoration.

ENTACT and AECOM coordinated transportation and disposal of the waste streams generated from the RA activities.

The following subsections summarize the RA activities as implemented.

5.1 Pre-Construction Activities

The following activities were conducted prior to starting excavation of soil with CCPW-related impacts:

- Approval of permit applications and plans submitted to the state and local agencies.
- Implementation of a Soil Erosion and Sediment Control Plan (SESCP).
- Implementation of the Air Monitoring Plan (AMP).
- Development of a site-specific Health and Safety Plan (HASP).
- Site utility clearance.

- Abandonment of monitoring wells located within the extent of excavation.
- Mobilization of equipment and set up of temporary facilities.
- Establishment of work zones.
- Demolition of existing structures.

The necessary permits were obtained from and approved by the state, local, and county agencies prior to initiation of activities covered by the permits as detailed in **Section 7.6**. Necessary permits and approvals are documented in **Appendix B**.

Coordination meetings were held among PPG, AECOM, Jersey City Municipal Utilities Authority (JCMUA), Environmental Remediation and Financial Services, LLC (ERFS), Jersey City Redevelopment Agency (JCRA), and the Site Administrator project manager (PM) during the pre-planning phase.

Pre-construction activities including mobilization and placement of jersey barriers and temporary fencing, implementation of the SESCO, establishment of work zones, and utility clearance were performed. Prior to excavation work, electric and natural gas utilities were disconnected by PSEG and sewer and potable water service was cut and capped under the supervision of JCMUA. As part of the pre-demolition activities of Former Ten West Apparel Property warehouse, building utilities were disconnected and capped at the street.

The AMP was developed to provide specific procedures for measuring, documenting, and responding to potential airborne impacts during remedial activities at the Site. The AMP was approved by NJDEP prior to the initiation of work.

A HASP was developed for the RA at the GA Group Sites in accordance with the Occupational Safety and Health Act (OSHA) 1910.120. The HASP documents policies and procedures to be followed to protect workers and the public from potential hazards posed at the GA Group Sites. The HASP includes training program protocols, a medical surveillance program, equipment maintenance programs, personal hygiene practices, a project air monitoring plan, a dust control plan, and other information.

In addition to contacting the New Jersey One-Call system, a utility survey was conducted prior to intrusive Site activities to mark underground utilities (i.e., gas, sewer, water, phone, cable, electrical, etc.) that exist within the proposed excavation area. The existing underground water main, storm sewer, and gas main within Halladay Street South were capped and removed during excavation.

Monitoring wells 10W-MW101S (permit number E201710694), 10W-MW102S (permit number E201710695), 132-P3A-MW3 (permit number E201410050), 132-P3A-MW105I (permit number E201712013), 132-P3A-MW4 (permit number E201410051), 10W-MW105I (permit number E201712014), 133-MW3A (permit number E201317207), and 133-MW1C (permit number 26-00082-877) were not formally decommissioned during remediation activities. Based on field observations, these wells are believed to have been removed and/or damaged beyond repair during soil remediation activities (i.e., excavation and restoration). In accordance with the NJDEP's *Well Construction and Maintenance; Sealing of Abandoned Wells* (N.J.A.C. 7:9D) (NJDEP, 2001), alternate decommissioning was requested via submission of a memorandum to the Bureau of Water Allocation and Well Permitting. A copy of the memorandum and associated NJDEP approval are included in **Appendix C**.

Equipment was delivered during the initial mobilization phase for the RA activities at the GA Group Sites and on an as-needed basis as work progressed. Temporary facilities including field office trailers, sanitary facilities, and Conex/intermodal boxes for equipment storage were staged on Site 133 East and Site 135.

Work zones were established to exclude unauthorized personnel from entering the Site and to prevent contamination from being tracked off Site or into clean work zones. The following work zones were established:

- A Secure Zone was established to exclude unauthorized personnel from entering the Site. The Secure Zone consisted of a steel chain link fence and locking gates. Warning signs were placed on the fence to prevent unauthorized entry into work areas.
- A Support Zone was established to stage office trailers, sanitary facilities, Conex/intermodal storage boxes, and vehicle parking.
- An Exclusion Zone encompassed areas associated with impacted material and/or heavy equipment hazards. Temporary fencing was installed to isolate the exclusion zones and modified Level D personal protective equipment (PPE), including Tyvek, was required when working in the exclusion zone.
- A Contamination Reduction Zone and a truck decontamination pad were constructed for transition from the Exclusion Zone. The Contamination Reduction Zone prevented the track-out of sediment onto off-Site streets other paved areas, and onto sidewalks from vehicles and personnel exiting the Site.

Demolition of the on-Site buildings was conducted as follows:

- The seven contiguous warehouses on Site 133 East were previously demolished in September and October 2014. The associated building slabs were mostly removed during the earlier remedial excavation activities; however, a small portion of the building slab remained in the portion of Site 133 East remediated as part of Phase 3B South; this slab was removed as part of remediation activities conducted at the Site.
- The single-story concrete block warehouse structure at the Former Ten West Property was demolished in May 2021. MRCE conducted structural monitoring for adjacent buildings during the demolition of the Former Ten West Apparel warehouse to minimize impacts to nearby structures.
- The single-story concrete block building on Site 137 South was demolished down to the concrete slab in August and September 2013, and the concrete slab was removed in April 2014 during earlier remedial excavation activities.

An abatement contractor licensed by the New Jersey Department of Labor removed universal waste materials and asbestos-containing materials (ACM) from the buildings prior to demolition. Following asbestos abatement, a NJ-Certified industrial hygienist certified the post-abatement air quality. The contractor demolished the warehouse down to the concrete slab, segregated the waste streams, and disposed of the waste in accordance with local, state (including New Jersey Department of Transportation [NJDOT]), and federal regulations.

5.2 Excavation

In accordance with the GA Group RAWP (AECOM, 2018b), the Site was excavated in accordance with the Chromium Policy (NJDEP, 2007) and with the Method to Determine Compliance (NJDEP, 2013).

Soil analytical results from the RI soil boring program and the PDI soil boring program were used to develop the vertical and horizontal excavation limits. See **Section 2.0** for further information regarding the RI and **Section 4.0** for further information regarding PDI activities.

Due to access concerns and various technical issues, the remedial excavation activities were conducted in multiple stages between April 21, 2015 and November 11, 2021, as described below. To facilitate constructability, the limits of each excavation stage overlapped with other stages.

- The northern portions of AOC HSS-1B and AOC 133E-1B were previously excavated during the Halladay Street South and Site 133 East RAs, respectively. However, additional excavation was required for the southern portions of AOC HSS-1B and AOC 133E-1B, which was subsequently implemented along with the Phase 3B South RA (**Figure 1-2**). The excavation of the northern portion of AOC HSS-1B began on May 26, 2015 and was completed on October 22, 2015. The excavation of the northern portion of AOC 133E-1B primarily occurred concurrently with Halladay Street South, between April 21, 2015 and October 22, 2015.
- Excavation of Site 137 South and Site 133 West began on August 29, 2018 but could not be completed. Remedial excavation resumed on February 19, 2019 and continued to April 3, 2019. Excavation within the remainder of Site 137 South and Site 133 West was postponed until access to the Former Ten West Apparel Property was obtained and the tenants vacated the property.
- Excavation within the Former Fishbein Property, the Former Ten West Apparel Property, Halladay Street South, Site 133 East, and the remaining portions of Site 137 South and Site 133 West began on April 12, 2021 and was completed on November 11, 2021. Demolition of the Former Ten West Apparel Property building was completed in May 2021.

Soil excavation was performed by ENTACT using excavators. As the removal of CCPW-related impacted material from within the excavation proceeded, an excavator with a hammer attachment was used to break up existing building slabs, concrete, and other concrete obstacles, such as building foundations, within the limits of the excavation to provide access to the underlying soils. Steel sheet piles installed during previous remedial actions along the northern boundary of the Former Fishbein Property, the Site 137 South Property, and the western boundary of Halladay Street South were used as shoring during the RA to reach the target excavation depths. See **Sections 7.4** and **7.5**, respectively for the discussion of waste disposal and clean fill documentation.

Additional excavation beyond what was required to address CCPW-related impacts was conducted at the Site as part of the overall RA. As shown on **Figures 5-1A** through **5-3B**, a portion of the Site did not require excavation for CCPW-related impacts and was excavated for non-CCPW-related impacts only. Non-CCPW-related impacts at the Site are being addressed in separate submittals under the LSRP program.

AECOM implemented dust control measures at the Site, in accordance with the March 2011 Revision of the Dust Control Plan (DCP) and applicable DCP Amendments, during excavation, stockpiling, transportation, backfilling, and associated activities during the RA. Results of the air monitoring and sampling during the RA were documented as part of the activities associated with the larger scale GA

Group Sites in the Annual Air Monitoring Report for the 2021 Reporting Period (AECOM, 2022e) (which is the final annual air monitoring report for the GA Group Sites), available on the Chromium Cleanup Partnership Website (<http://www.chromiumcleanup.com>, last accessed in March 2023). The concentrations and the short-duration metrics demonstrated that the dust control measures were effective at maintaining Cr⁺⁶ in dust at concentrations less than the Acceptable Ambient Concentration (AAC).

ENTACT verified excavation extents using global positioning system (GPS) survey equipment to document that proposed excavation limits were achieved. Before placement of backfill, the excavation was visually inspected by a representative from the Site Administrator's independent technical consultant, Weston Solutions, Inc. (Weston), and an AECOM geologist for the presence of CCPW, as it is a potential source of Cr⁺⁶ and CCPW metals. If no evidence of CCPW was observed through visual inspection, a survey of the inspected area was conducted by a surveyor licensed in the State of New Jersey, post-excavation samples were collected (if required), and the inspected area was backfilled upon review and approval of the survey data by AECOM. See **Section 7.1** for a discussion of the as-built diagrams, which depict the final excavation as-built conditions.

Excavated CCPW-impacted materials were live-loaded into lined dump trucks where possible. During times when excavation was progressing, but trucks were not on-site, temporary day piles were created adjacent to, or within, the excavation in areas that had not yet been remediated. The ground surface was pitched so that liquid that may have drained out of the soil returned into the excavation prior to its transport for off-Site disposal (see **Section 7.4** for details related to waste generation and disposal).

Concrete was stockpiled to be sized prior to load out in accordance with the Soil and Stockpile Management Plan for the GA Group Sites included in the GA Group RAWP (AECOM, 2018b). The stockpiles were located on un-remediated portions of the Site. Since the stockpile locations were to undergo excavation as part of a subsequent phase of work, post-removal soil samples were not collected from below the stockpiles.

Surface water runoff, storm water, groundwater entering the excavation, and decontamination wastewater were transferred by pump to the GA Group Sites GWTP located on Site 137.

5.3 Post-Excavation Soil Sampling

During the course of RA activities, post-excavation pit bottom samples were collected, if required, consistent with the requirements set forth in the Method to Determine Compliance (NJDEP, 2013), the August 10, 2015 email from Weston to AECOM, Subject: *RE: Sidewall Sampling Exceedance Procedure* (Weston, 2015), and the GA Group RAWP (AECOM, 2018b) to document post-excavation conditions. **Figures 5-1A** through **5-3B** depict the post-excavation pit bottom sample locations, if required, and final excavation as-built conditions.

Where the excavation sidewalls varied by more than 2 ft vertically, sidewall samples were collected every 30 linear ft and at 2-ft depth intervals. Where excavation sidewalls were enclosed by shoring, or where the excavation sidewalls varied by less than 2 ft vertically, sidewall sampling was not conducted.

The post-excavation/confirmation samples were analyzed for:

- Cr⁺⁶ using United States Environmental Protection Agency (USEPA) SW-846 Method 3060A digestion and USEPA SW-846 Method 7196A or 7199, as modified by NJDEP;

- pH using USEPA SW-846 Method 9045C, D;
- Redox Potential using American Society for Testing and Materials (ASTM) International Method D1498-76M; and
- Total chromium, antimony, nickel, thallium, and vanadium using USEPA SW-846 Method 6010C (in 10% of selected samples only per the GA Group RAWP [see **Section 4.1** for the GA Group RAWP submittal history] and Field Change Notification SWTEP 1 discussed in **Section 5.4**).

Figures 5-1A through **5-3B** presents the remaining-in-place sample locations on the Site. **Tables 5-1** through **5-3** present data for remaining-in-place sample locations within the Site. In addition, locations from outside the Site boundary and/or removed samples may be shown to demonstrate compliance with the RA objectives. Laboratory analytical reports and data validation reports for the data presented in **Tables 5-1** through **5-3** are included in **Appendices D** and **E**, respectively. The laboratory electronic data deliverables (EDDs) have been submitted to the NJDEP database, as documented in **Appendix D-2**.

5.4 Field Change Notifications

Field changes made during implementation of the RA at the GA Groups Sites were documented in Field Change Notification forms. Field Change Notifications submitted relevant to the RA activities at the Site are listed in **Table 5-4**.

6.0 Reliability of Data: Data Validation and Usability

6.1 Data Validation

Data validation was performed by AECOM to evaluate whether the analytical data collected to demonstrate compliance with the RAR objectives were scientifically defensible, properly documented, of known quality, and met RAR objectives. Data validation included the review of analytical procedures, quality control (QC) results, calibration procedures, data reduction, and completeness of the laboratory data packages as specified in the soil RIWP (AECOM, 2011a) and Field Sampling Plan – Quality Assurance Project Plan (FSP-QAPP) (AECOM, 2010a). Deficiencies noted were communicated to the laboratory and resolutions were documented in the data validation reports. If appropriate, data were qualified for use as described later in this section.

The laboratory analytical data packages (**Appendix D-1**) were reviewed in accordance with the FSP-QAPP (AECOM, 2010a), the NJDEP validation Standard Operating Procedures (SOPs) for Cr⁺⁶ and inorganic data, and USEPA Region 2 metals validation guidelines. The following NJDEP validation guidelines served as the basis for the actions taken during validation:

- NJDEP Office of Data Quality *SOP 5.A.10, Rev 3 (September 2009), SOP for Analytical Data Validation of Hexavalent Chromium – for USEPA SW-846 Method 3060A, USEPA SW-846 Method 7196A and USEPA SW-846 Method 7199* (NJDEP, 2009); and
- NJDEP Office of Data Quality *SOP 5.A.16, Rev 1 (May 2002), Quality Assurance Data Validation of Analytical Deliverables for Inorganics (based on USEPA SW-846 Methods)* (NJDEP, 2002).

Where USEPA Region 2 inorganic validation guidelines were also used in assessing metals, the most current guidance in effect at the time of validation was used; the specific revision used is listed in each data validation report provided in **Appendix E**. The link to Region 2 validation guidance on the USEPA website is shown below:

- <https://www.epa.gov/quality/region-2-quality-assurance-guidance-and-standard-operating-procedures> (last accessed in September 2022).

The level of validation ranged from a comprehensive validation according to the NJDEP guidelines to a limited validation based on QC summary information or completeness reviews, depending on the analyte and matrix. The validation procedures for the Cr⁺⁶ data included full validation, which involved a comprehensive review of both summary forms and raw data, whereas the metals data received limited validation. Limited validation for metals data was based on information provided by the laboratory on its QC summary forms and did not include raw data review. At a minimum, limited validation included validation of the following data elements:

- Agreement of analyses conducted with chain-of-custody requests;
- Holding times and sample preservation;
- Method blanks/field equipment blanks/trip blanks;
- Surrogate spike recoveries;

- Laboratory control samples (LCS) or equivalent results;
- Matrix spike (MS)/matrix spike duplicate (MSD) results;
- Laboratory duplicate results;
- Field duplicate results; and
- Quantitation limits and sample results (limited to evaluating dilutions and re-analyses).

Full validation was conducted on the Cr⁺⁶ data. Full validation included each of the data elements listed for limited validation along with review of calibration data and raw data and spot checks for verification of calculations.

Validation reports were prepared for each data package that was validated. The validation reports are provided in **Appendix E**. The reports summarize the samples reviewed, parameters reviewed, nonconformance with the established criteria, and validation actions (including application of data qualifiers) presented in accordance with the NJDEP “hit list” format. Validation data qualifiers were based on the USEPA Region 2 validation guidelines for organic data and the NJDEP validation SOPs for the Cr⁺⁶ and inorganic data. The following qualifiers are used in data validation:

- J Indicates the result was an estimated value; the associated numerical value was an approximate concentration of the analyte in the sample. J+ or J- is used when the direction of bias can be determined.
- U Indicates the analyte was not detected in the sample above the sample reporting limit.
- UJ Indicates the analyte was not detected above the reporting limit and the reporting limit was approximate.
- UB The analyte concentration is less than or equal to three (3) times the concentration in the associated method/preparation blank. The presence of the analyte in the sample is negated due to laboratory blank contamination.
- JB The analyte concentration is greater than three (3) times, but less than or equal to ten (10) times the concentration in the associated method/preparation blank. The presence of that analyte in the sample is considered “real” but the concentration is quantitatively estimated due to method blank contamination.
- R The sample result was rejected due to serious deficiencies; the presence or absence of the analyte could not be confirmed.
- RA The sample result was rejected due to NJ-specific data validation QC requirements; however, the result is usable for project objectives. Refer to the Data Quality and Usability section of the data validation report for further information.

In addition, some of the data validation performed 2004-2006 included the following qualifiers:

- B The presence of the analyte in the sample is negated (B) due to laboratory blank contamination since the analyte concentration in the sample was less than three (3) times the maximum blank contamination.

JF Overall qualification of “JF” since the analyte concentration is greater than three (3) times, but less than or equal to ten (10) times the concentration in the associated field blank.

6.2 Data Usability Assessment

Soil samples collected to demonstrate compliance with the RAR objectives were sent to Test America Laboratories in Edison, NJ (NJ certification 12028), Eurofins Test America Laboratories in Lancaster, PA (NJ Certification PA011), or SGS-Accutest Laboratories in Dayton, NJ (NJ Certification 12129). The analyses were performed in accordance with USEPA- and NJDEP-approved analytical protocols in place at the time the analyses were performed. Quality assurance analytical measures were implemented in accordance with the NJDEP TRSR (N.J.A.C. 7:26E) (NJDEP, 1993b) and complied with the requirements for a NJDEP-certified laboratory specified in *Regulations Governing the Certification of Laboratories and Environmental Measurements* (NJDEP, 1981--). Specific quality control issues identified during validation are documented in the individual data validation reports provided in **Appendix E**. Results of the data validation indicated that, in general, the analytical data were of adequate quality to meet the project objectives. However, there were some quality assurance (QA)/QC issues identified during data validation that resulted in rejection of data or qualification of data as estimated.

Data usability was evaluated using the data quality indicators of precision, accuracy, representativeness, comparability, completeness, and sensitivity. Data that were not rejected during validation are regarded as usable.

Certain Cr⁺⁶ results that were rejected due to failure of the matrix spikes to meet the NJDEP-specified control limits of 50-150% were qualified “RA” to indicate that the result may have value for information purposes. This qualifier is typically used for Cr⁺⁶ where the spiked sample matrix appears to be reducing and would not be expected to support the presence of Cr⁺⁶. The presence of other indicators of a reducing environment such as total organic carbon (TOC), sulfide, or ferrous iron is a factor in the decision to utilize the “RA” qualifier for Cr⁺⁶ data.

6.2.1 Precision

Precision is the measure of agreement among repeated measurements of the same property under identical or substantially similar conditions and includes both field and analytical components. The information used to evaluate precision included results for field duplicates, matrix duplicates, laboratory duplicates, and serial dilutions. For the RAR data set, relative percent difference (RPD) non-conformances were observed for field and laboratory duplicates associated with Cr⁺⁶ and CCPW metals.

Field precision was assessed through the collection and analysis of field duplicates and expressed as the RPD of the sample and field duplicate pair results. Approximately 17.7% of the Cr⁺⁶ results and 5.9% of the CCPW metals results included field duplicate precision as a reason for qualification. Seven of the CCPW metals results were qualified “RA” to indicate the results were rejected since the RPD was > 120%; these results may provide further information for project decisions but should be used with an understanding of the QC issues identified.

Laboratory precision was assessed through the RPD results for MS/MSDs, LCS/laboratory control sample duplicate (LCSD) pairs, and duplicate sample analyses. MS/MSDs and duplicate sample analyses do not reflect laboratory precision as purely as LCS/LCSDs since sample homogeneity, which can be a significant issue for soil samples, can impact the precision of sample and matrix spike duplicates. However, no differentiation of the applied reason code is made between LCS/LCSDs and MS/MSDs or sample duplicates. Overall, 4.6% of the Cr⁺⁶ results were qualified on the basis of

laboratory precision. One Cr⁺⁶ result was also qualified for failure to meet the 20% RPD criteria between duplicate injection results associated with the ion chromatography analysis used in Method 7199. For the CCPW metals, 2.5% of the data were qualified on the basis of laboratory precision.

One CCPW metals result for chromium was qualified (J) as estimated based on serial dilution results.

6.2.2 Accuracy

Accuracy is the degree of agreement between an observed value and an accepted reference or true value. The results of LCS data, method blanks, and MS/MSDs were used as the primary indicators of accuracy; information such as sample container type, preservation, and holding time was also considered as impacting to analytical accuracy. Some of this information was assessed by the laboratory at the time of receipt (container type and preservation); other parameters were evaluated during the validation process.

Approximately 22.2% of the Cr⁺⁶ results reported for the RAR were qualified “RA” to indicate the results were rejected since both initial and reanalysis spike recoveries fell outside of the control limits of 50-150%. Since the sample matrix appeared to be reducing and therefore unable to support the presence of Cr⁺⁶, these results may provide further information for project decisions but should be used with an understanding of the QC issues identified. Five Cr⁺⁶ results (approximately 0.41% of the results reported for the RAR) were rejected on this basis and are unusable since the sample matrix appeared to be oxidizing and therefore able to support the presence of Cr⁺⁶.

This dataset included results for 12 (0.5%) non-detect CCPW metals results that were rejected based on hold time exceedances and are not usable for project objectives. Twenty-three (1.0%) detected metals results were rejected based on hold time exceedances and were qualified “RA” to indicate the results were rejected but deemed usable. One Cr⁺⁶ result (0.08%) was qualified as “RA” and four Cr⁺⁶ results (0.33%) were qualified as estimated (J/UJ) due to hold time exceedances. These Cr⁺⁶ results are usable for project objectives.

Qualification of data as estimated (J/J-/UJ) for accuracy was related to issues such as field or laboratory blank contamination, LCS results, MS results, and percent solids. A summary of the validation findings is presented by QC parameter type below.

The presence of target analytes in laboratory blanks and blanks related to field activities (i.e., field blanks) was cited as a reason for qualification of selected CCPW metals results (approximately 0.7% of reported values) and Cr⁺⁶ results (approximately 0.7% of reported values). For those blanks in which contaminants were detected, action levels were established per the NJDEP or USEPA Region 2 validation guidance documents. Associated sample results were qualified accordingly.

Seven CCPW antimony results associated with the dataset were qualified for negative instrument drift with the potential for a false negative result.

In the CCPW metals fraction, 10.6% of the results were qualified based on MS and/or MSD recoveries. Approximately 63.5% of the Cr⁺⁶ results were flagged as estimated based on the results of soluble and/or insoluble spike recoveries outside the range of 75-125% but within the limits of 50-150%. Data points impacted by MS and/or MSD recoveries within this range were flagged as J/J- or UJ; individual validation reports address the potential for high or low bias to sample results based on matrix interferences.

Approximately 1.2% of the Cr⁺⁶ results associated with this dataset were qualified as estimated based on the results of soluble and/or insoluble LCS and/or LCSD recoveries outside the range of 80-120%. Data points impacted by LCS and/or LCSD recoveries outside of this range were flagged as J/UJ; individual validation reports address the potential for high or low bias to sample results. There were no CCPW metals results qualified due to LCS recoveries.

Moisture content greater than 50% resulted in selected data points being qualified. Approximately 5.6% of the CCPW metals results and 9.8% of the Cr⁺⁶ results were qualified on the basis of low percent solids.

6.2.3 Representativeness

The representativeness of any field program is a function of the planning and procedures used to collect the samples and the locations and density of samples collected. Sampling and preservation methods were based on established methods and SOPs outlined in the soil RIWP (AECOM, 2011a) and FSP-QAPP (AECOM, 2010a), which are known to minimize error associated with the disturbance of environmental samples from their natural setting.

Factors to be considered in evaluating representativeness are the use of standard analytical procedures, sample preservation, and the use of the appropriate sample container. The analytical methods, preservation procedures, and containers used in this program were as specified in the FSP-QAPP.

Environmental samples are generally shipped so that the samples are maintained at a temperature of approximately 4°Celsius. All sample receipt temperatures were compliant and no discrepancies in sample containment were noted.

The moisture content of samples is also a factor in the representativeness of the data. In accordance with USEPA Region 2 validation guidance, samples containing more than 50% moisture were qualified as estimated. As noted previously, this requirement resulted in the qualification of approximately 5.6% of the metals results and 9.8% of the Cr⁺⁶ results.

6.2.4 Comparability

Comparability of the data in the RAR data set was maximized by using standard methods for sampling, analysis, and data validation.

6.2.5 Completeness

Completeness is the measure of the amount of valid data obtained from a measurement system; valid data are defined as those data judged to be usable (i.e., not rejected as a result of the validation process). For the RAR, 3,468 individual data points were generated. Of those data points, 270 Cr⁺⁶ results (7.8% of the total results generated) and 30 CCPW results (0.9% of the total results generated) were qualified as “RA” to indicate that although QC exceedances were identified, the results still had value for understanding Site conditions. There were five rejected Cr⁺⁶ results and 12 rejected CCPW metals results qualified as “R” to indicate that the data points are not usable for Site decisions due to serious nonconformances. Over 99.5% of the results are considered usable for Site decisions with an understanding of the quality issues identified during validation.

6.2.6 Sensitivity

Analytical dilutions can be necessary due to the sample matrix or elevated concentrations of target or non-target analytes. The detection limits reported by the laboratory were adjusted to reflect dilution factors. Limitations in analytical methodologies and/or low percent solids content for some soil samples can result in detection limits that exceed either the CrSCC, RDCSRS, Nonresidential Direct Contact Soil Remediation Standard (NRDCRS), DIGWSSL, or the IGWSRS-GAGs. One individual Cr⁺⁶ result had a detection limit greater than the CrSCC. No non-detect CCPW metals had detection limits greater than the RDCSRS or NRDCRS.

6.2.7 Data Quality/Data Usability Conclusions

The findings of this Data Quality Assessment and Data Usability Evaluation indicate that the data used to demonstrate compliance with the RAR objectives are sufficiently representative of actual conditions and may be used to support decisions with the exceptions identified below:

- Cr⁺⁶ results qualified “RA” due to matrix spike recoveries outside the range of 50-150% may provide useful information for Site decisions based on the apparent reducing nature of the matrix but should be used with an understanding of the data limitations.
- One Cr⁺⁶ result was qualified “RA” due to a hold time exceedance for the reanalysis. Since the reanalysis result was higher than the initial analysis result within hold time, the result was deemed usable and may provide useful information for Site decisions.
- Results for CCPW metals qualified “RA” due to field duplicate RPDs >120% or hold time exceedances were deemed usable and may provide useful information for Site decisions.
- Results for Cr⁺⁶ and CCPW metals qualified R are considered to have serious quality deficiencies and should not be used for project decisions.

Data qualifiers and reason codes were applied by the data validator to identify data limitations found in the validation process. Specific details regarding analytes and samples can be found in the individual data validation reports in **Appendix E**.

7.0 Documentation of the Protectiveness of the Remedial Action

The locations of samples used to demonstrate compliance with the remediation goals for the Site are depicted on **Figures 5-1A** through **5-3B**. **Tables 5-1** through **5-3** present the analytical results for samples used to demonstrate compliance with the remediation goals. Documentation of compliance averaging used to achieve SRS compliance for antimony in soil is provided in **Appendix F**. Laboratory analytical reports and data validation reports for the data presented in these tables are included in **Appendices D** and **E**, respectively. As discussed in **Section 6.0**, the laboratory analytical data for the collected samples were found to be usable for the purposes of defining the extents of the remedial excavation. **Appendix G** presents the available boring logs from the locations of samples that were used to demonstrate compliance with the remediation goals.

AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B have been remediated as follows:

- Excavation of soil containing Cr⁺⁶ met the requirements specified in the NJDEP Memorandum entitled *Chromium Moratorium, February 8, 2007* (the Chromium Policy) (NJDEP, 2007) in accordance with the *Updated Method to Determine Compliance with the Department's Chromium Policy, Garfield Avenue – Sites 114, 132, 133, 135, 137, and 143, Jersey City, NJ* (Method to Determine Compliance) (NJDEP, 2013).
- For soil with Sb concentrations exceeding the RDCSRS and the IGWSRS-GAG, compliance averaging was used to attain compliance with these criteria, as discussed in **Appendix F**.
- CCPW metals other than Sb (i.e., total chromium, nickel, thallium, and vanadium) are not present at concentrations greater than the applicable remediation criteria.

Waste manifests for soil and other materials that were loaded for off-Site disposal are presented in **Appendices H** and **I**. The compliance averaging evaluation used to attain Sb compliance with the RDCSRS and IGWSRS-GAG is included in **Appendix F**. Clean fill documentation is provided in **Appendix J**.

7.1 As-Built Diagrams

The following as-built diagrams are included in **Appendix K**:

- An as-built diagram depicting the final extents of the excavation; and
- An as-built diagram of the final Site grades following restoration of the Site.

7.2 Description of Site Restoration Activities

After completion of the excavation activities, clean fill was placed within the excavation and compacted to final backfill subgrades. Portions of the site backfill were amended by ENTACT with FerroBlack®-H at a rate of 0.7% by mass, in accordance with the plans and specifications. The placement of FerroBlack®-H serves as a phase of groundwater remediation as documented in the *Progress Report for Groundwater Pilot Study and FerroBlack®-H Amended Backfill Permits-By-Rule - 2016 Fourth Quarter (October to December)* (AECOM, 2017a).

As described in **Section 1.0** and **Section 5.2**, the remediation was completed in multiple phases. As a result, the backfilling activities were completed in separate phases as described below:

- The northern portions of AOC HSS-1B and AOC 133E-1B were previously excavated and backfilled as part of the Halladay Street South and Site 133 East RAs, respectively. Backfilling activities for Halladay Street South were conducted between August 8, 2017 and January 31, 2018. Backfilling activities for Site 133 East were conducted between July 10, 2017 and February 15, 2018.
- In Site 137 South and Site 133 West, where the initial excavation in 2018 was not completed due to logistical issues, backfilling commenced on February 26, 2019 and was completed on April 25, 2019.
- Backfilling of the remaining portions of the Site including the Former Fishbein Property, the Former Ten West Apparel Property, Halladay Street South, Site 133 East, and the remaining portions of Site 137 South and Site 133 West, commenced on April 28, 2021 and was completed on November 23, 2021.

Clean fill for site restoration consisted of DGA backfill material supplied by Tilcon. Information regarding the source and quality of the backfill material is provided in **Section 7.5**. Based on the 90% standard proctor minimum compaction requirement, specified in the construction specifications, ENTACT satisfactorily completed compaction of the backfill placed within the Site limits. Final compaction results ranged from 95.0% to 101.9%, exceeding the 90% compaction criteria.

The Site was backfilled and restored in accordance with the *Restoration Technical Execution Plan, Garfield Avenue Group (Revision 1)* (Restoration TEP), dated August 2017 (AECOM, 2017b) and the PPG/AECOM memorandum entitled *Response to NJDEP/Weston's 08/31/17 Comments and the City of Jersey City/ERFS's 09/12/17 Comments on the Restoration Technical Execution Plan, Garfield Avenue Group (Revision 1)*, dated October 16, 2017 (AECOM, 2017d). Restoration activities for the Site were completed on February 28, 2022.

In accordance with the Restoration TEP (AECOM, 2017b), PPG committed to restoring Halladay Street South to match the pre-construction conditions, consistent with the City standard construction details and storm drains that were removed during the remediation of Halladay Street South. Restoration of the final surface finish and storm drains for Halladay Street South is addressed as part of the infrastructure restoration agreement between PPG and the City and, therefore, is not documented in this RAR.

7.3 Total Remedial Action Cost

PPG's total remediation cost for implementation of the RA at AOC P3B 1A, AOC 133-1B, AOC 137-1B, and HSS-1B was approximately \$40 million. This includes the costs for RI implementation, engineering, excavation and backfilling, restoration, air monitoring, construction management, groundwater management and treatment, waste transportation and disposal, and overall project management and reporting.

7.4 Documentation of Waste Generation and Disposal

The approximate in-place volume of soil that was excavated from AOC P3B-1A, AOC 133-1B, AOC 137-1B, and HSS-1B and disposed off-Site is 105,000 tons.

Waste manifests and bills of lading (BOLs) for the time period during remedial excavation (August 31, 2018 to November 11, 2021) are included in **Appendix H** (Hazardous Waste Disposal Documentation) and **Appendix I** (Non-Hazardous Waste Disposal Documentation).

Other materials generated as a result of the RA activities included contaminated debris and groundwater treatment plant sludge.

The following facilities were used for the off-Site disposal of waste materials generated during RA activities:

Hazardous Waste Materials

- Stablex, Canada Inc. in Blainville, Québec, Canada;
- Environmental Quality (EQ) Company - Michigan Disposal Waste Treatment Plant in Belleville, Michigan;
- EQ Detroit, Inc. in Detroit, Michigan;
- Heritage Environmental Services in Indianapolis, Indiana;
- Envirite of Pennsylvania, Inc. in York, Pennsylvania;
- Fairless Landfill/Grand Central Landfill in Morrisville, Pennsylvania; and,
- Clean Earth of New Jersey in Kearny, NJ.

Non-Hazardous Waste Materials

- Cumberland County Improvements Authority Landfill, Deerfield Township, New Jersey;
- Cape May County Municipal Utility Authority in Woodbine, New Jersey;
- Clean Earth of Philadelphia in Philadelphia, Pennsylvania;
- EQ Detroit, Inc. in Detroit, Michigan;
- Envirite of Pennsylvania, Inc. in York, Pennsylvania;
- BayShore Recycling Corp. in Keasbey, New Jersey; and,
- Wayne Disposal, Inc. in Belleville, Michigan.

Water

- Pre-treatment through the on-Site treatment plant located on Sites 137A and 137B followed by discharge to the public sewer system (conveyed via JCMUA system) to the Passaic Valley Sewerage Commission (PVSC) Wastewater Treatment Plant, Newark, NJ (under the PVSC Sewer Use Permit #31630035, included in **Appendix B**) for final treatment and discharge.

Copies of fully executed manifests, BOLs, and certificates of disposal documenting the off-Site transport of waste material are presented in the following appendices:

- **Appendix H** – Hazardous Waste Disposal Documentation. This appendix includes fully executed manifests and certificates of disposal (if provided) documenting the off-Site transport of hazardous soil, sludge, and debris, such as asbestos.
- **Appendix I** – Non-Hazardous Waste Disposal Documentation. This appendix includes BOLs documenting the off-Site transport of non-hazardous soil, brick, concrete, asphalt, and sludge.

7.5 Documentation of Source, Type, Quantities, and Location of Fill

Licensed quarry material was utilized for backfill and restoration and consisted of ¾-inch open grade stone, 2.5-inch stone, 3 to 6-inch gabion stone, and DGA supplied by Tilcon from the following mine facilities:

- 625 Mt. Hope Road, Wharton, NJ;
- Broad Street, Pompton Lakes, NJ; and
- 125 Hamburg Turnpike, Riverdale, NJ.

These sites are licensed quarry facilities permitted to operate as commercial quarries by NJDEP.

To meet the minimum requirements of the NJDEP TRSR (NJDEP, 1993b) during the remedial activities, the sources of imported fill were certified by the supplier as clean from a virgin source, based on their knowledge of the place of origin and history.

In accordance with Field Change Notification #16A dated July 24, 2015, each quarry was required to submit, on an annual basis, its license (mining certificate) and annual certification that the imported material was from a clean, virgin source along with analytical results provided by the quarry/mine in accordance with NJDEP's Fill Material Guidance for Site Remediation Program (SRP) Sites (NJDEP, 2015).

The concentrations of the analytes in samples collected from the quarry material were less than the NJDEP RDCSRS and the quarry material did not pose a potential impact to groundwater (per NJDEP's Fill Material Guidance for SRP Sites [NJDEP, 2015]), indicating that the material was acceptable for on-Site use.

In addition, AECOM implemented a stringent visual inspection process, conducted by on-Site AECOM personnel, to verify the quality of the backfill. Visual inspection criteria included size of the individual stones, presence of foreign debris, ratio of fines in the material, and significant differences in color.

A list of the quarry material load reports is provided in **Appendix J-1** and the analytical reports, mine certificates, and annual certifications are provided in **Appendix J-2**.

Some of the DGA that was placed within the Site 137 South and Site 133 West excavation area in 2018 was stockpiled for reuse and sampled to confirm the absence of Cr⁺⁶ at concentrations greater than the CrSCC prior to reuse. Placement of this material was restricted to Site 137 South and Site 133 West where the material was previous excavated. Laboratory analytical reports and data validation reports are included in **Appendix J-3**.

7.6 Identification of Required Permits and Authorizations

The permits and approvals needed for the RA at the Site are listed below.

- SESCO approvals from Hudson-Essex-Passaic County Soil Conservation District.
- Notice of Non-Applicability, Discharge to Surface Water General Permit for Construction Activity - Stormwater (5G3), NJDEP, Division of Water Quality.
- Flood Hazard Area Individual Permit for GA Group, NJDEP, Division of Land Use Regulation.
- Flood Hazard Area Minor Technical Permit Modification, NJDEP, Division of Land Use Regulation.

- Water Use Registration, NJDEP, Division of Water Supply.
- Emergency Approval for Water Use Registration, NJDEP, Division of Water Supply & Geoscience.
- Water Allocation Permit, NJDEP, Division of Water Supply & Geoscience
- Permit-By-Rule Discharge Authorization for Site-wide FerroBlack®-H Backfill Amendment, NJDEP, Site Remediation Program.
- Community Right-to-Know Survey for 2018, 2019, and 2021, NJDEP.
- PVSC Sewer Use Permit #31630035 (groundwater treatment plant – Sites 137A and 137B).

The necessary permits were obtained from and approved by the state, local, and county agencies prior to initiation of the activities covered by the permits. Necessary permits and approvals are documented in **Appendix B**.

Permits that are not included in **Appendix B** include local road closure, street opening permits (which were renewed approximately every 6 months), and demolition permits (Site 133 East [22 Halladay Street] Permit No. 2014-2811, Former Ten West Apparel Property [800 Garfield Avenue] Permit No. 2021-0868 and Site 137 South [25 Halladay Street] Permit No. 2013-3177).

8.0 Receptor Evaluation Update

The purpose of a receptor evaluation (RE) is to document the existence of human or ecological receptors, and the actions taken to protect those receptors, at contaminated sites. Pursuant to N.J.A.C. 7:25E-1.12, REs must include general site information, an evaluation of surrounding land use, a description of contamination, a discussion of groundwater use in the area, an evaluation of vapor intrusion potential, and an ecological evaluation.

The Receptor Evaluation Report, Rev. 3, Non-Residential Chromate Chemical Production Waste Sites 114, 132, 133, 135, 137, 143 and 186 Jersey City, New Jersey (AECOM, 2012b), dated March 20, 2012, was submitted to the NJDEP on March 23, 2012. The Final Garfield Avenue Group RE/Ground Water RE/Baseline Ecological Evaluation Reports were submitted to the NJDEP on July 22, 2013. The updated RE form and required attachments are provided with this RAR.

9.0 Conclusions and Recommendations

This RAR documents that the soil RA for AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B is effective in protecting public health and safety and the environment and remedial objectives have been achieved as follows:

- Excavation of soil containing Cr⁺⁶ met the requirements specified in the NJDEP Memorandum entitled *Chromium Moratorium, February 8, 2007* (the Chromium Policy) (NJDEP, 2007) in accordance with the *Updated Method to Determine Compliance with the Department's Chromium Policy, Garfield Avenue – Sites 114, 132, 133, 135, 137, and 143, Jersey City, NJ* (Method to Determine Compliance) (NJDEP, 2013).
- For soil with Sb concentrations exceeding the RDCSRS and the IGWSRS-GAG, compliance averaging was used to attain compliance with these criteria, as discussed in **Appendix F**.
- CCPW metals other than Sb (i.e., total chromium, nickel, thallium, and vanadium) are not present at concentrations greater than the applicable remediation criteria.

On this basis, PPG, the responsible party, has demonstrated compliance with the applicable remediation requirements for the soil within Phase 3B South and portions of Site 133 East and Halladay Street South, and no further action with regard to AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B soil is needed. PPG requests the closure of AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B, by the NJDEP through the issuance of a Consent Judgment Compliance Letter.

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Remedial Action Report – Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B) – Soil, Final
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PPG, Jersey City, New Jersey

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Remedial Action Report – Phase 3B South and Portions of Site 133 East and Halladay Street South (AOC P3B-1A, AOC 133E-1B, AOC HSS-1B, and AOC 137-1B) – Soil, Final
Garfield Avenue Group
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Tables

Table 3-1
Soil Remediation Standards/Criteria
Phase 3B South and Portions of Site 133 East and Halladay Street South
Garfield Avenue Group
PPG, Jersey City, New Jersey

Constituent	CrSCC (mg/kg)	RDCSRS (mg/kg)	RDCSRS- GAG¹ (mg/kg)	NRDCSRS (mg/kg)	DIGWSSL (mg/kg)	IGWSRS- GAG² (mg/kg)
Hexavalent Chromium	20	N/A	N/A	N/A	N/A	N/A
Antimony	N/A	31	N/A	450	N/A	62.7
Chromium (total) ³	N/A	120,000	N/A	N/A	N/A	N/A
Nickel	N/A	1,600	N/A	23,000	N/A	170
Thallium	N/A	N/A	N/A	N/A	3	N/A
Vanadium	N/A	N/A	390	1,100	N/A	N/A

Notes:

¹RDCSRS-GAG is an alternative remediation standard approved by the NJDEP on December 28, 2016 (NJDEP, 2016).

²IGWSRS-GAG is an alternative remediation standard proposed in the *Supplemental Soil Remedial Investigation Report, Final Revision 1* on August 30, 2018 (AECOM, 2018b) and approved by NJDEP on October 22, 2018 (NJDEP, 2018a).

³There is currently no NJDEP SRS and no NJDEP SCC for total chromium. Therefore, total chromium results are compared to the interim NJDEP Residential SCC for trivalent chromium of 120,000 mg/kg as the cleanup criterion for soil at the Garfield Avenue Group Sites. There is no non-residential SCC for trivalent chromium.

CrSCC - Chromium Soil Cleanup Criterion

DIGWSSL - Default Impact to Groundwater Soil Screening Level

GAG - Garfield Avenue Group

IGWSRS-GAG - Impact to Groundwater Soil Remediation Standard - Garfield Avenue Group

mg/kg - milligrams per kilogram

N/A - not applicable

NJDEP - New Jersey Department of Environmental Protection

NRDCSRS - Non-Residential Direct Contact Soil Remediation Standard

RDCSRS - Residential Direct Contact Soil Remediation Standard

RDCSRS-GAG - Residential Direct Contact Soil Remediation Standard - Garfield Avenue Group

SCC - Soil Cleanup Criterion

SRS - Soil Remediation Standard

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
0+69	313R	133-P3C-R48A	12.2	133-P3C-R48A-4.5-5.0	4.5 - 5.0	7.7	7.2	JB63772-5R	JB63772R	04/03/2014	Remaining	N	Y		2.6	J		
0+69	313R	133-P3C-R48A	12.2	133-P3C-R48A-6.5-7.0	6.5 - 7.0	5.7	5.2	JB63772-6R	JB63772R	04/03/2014	Remaining	N	Y		1.6	J		
0+69	313R	133-P3C-R48A	12.2	133-P3C-R48A-8.5-9.0	8.5 - 9.0	3.7	3.2	JB63772-7	JB63772	04/03/2014	Remaining	N	Y		2.0	J		
0+69	313R	133-P3C-R48A	12.2	133-P3C-R48A-10.5-11.0	10.5 - 11.0	1.7	1.2	JB63772-8R	JB63772R	04/03/2014	Remaining	N	Y		0.28	J		
0+69	313R	133-P3C-R48A	12.2	133-P3C-R48A-11.7-12.2	11.7 - 12.2	0.5	0.0	JB63772-9	JB63772	04/03/2014	Remaining	N	Y		0.78	J		
0+69	313R	133-P3C-R48A	12.2	133-P3C-R48A-12.2-12.7	12.2 - 12.7	0.0	-0.5	JB63772-10R	JB63772R	04/03/2014	Remaining	N	Y		2.4	J		
0+83	251R	P3BS-PDI-TP0+80-250R	11.0	P3BS-PDI-TP-0+80-250R-0.8-1.3	0.8 - 1.3	10.2	9.7	410-19676-1	410196731	12/09/2020	Removed	N	Y		2.7		S1	
0+83	251R	P3BS-PDI-TP0+80-250R	11.0	P3BS-PDI-TP-0+80-250R-2.2-2.7	2.2 - 2.7	8.8	8.3	410-19676-2	410196731	12/09/2020	Remaining	N	Y		2.3	J		
0+83	251R	P3BS-PDI-TP0+80-250R	11.0	P3BS-PDI-TP-0+80-250R-2.2-2.7X	2.2 - 2.7	8.8	8.3	410-19676-3	410196731	12/09/2020	Remaining	FD	Y		2.8			
0+83	251R	P3BS-PDI-TP0+80-250R	11.0	P3BS-PDI-TP-0+80-250R-2.7-3.2	2.7 - 3.2	8.3	7.8	410-19676-4	410196731	12/09/2020	Remaining	N	Y		5.9			
0+87	253R	133-P3C-P47A	10.8	133-P3C-P47A-14.5-15.0	14.5 - 15.0	-3.7	-4.2	JC4369-2R	JC4369R	09/21/2015	Remaining	N	Y		0.44	J		
0+87	253R	133-P3C-P47A	10.8	133-P3C-P47A-15.0-15.5	15.0 - 15.5	-4.2	-4.7	JC4369-3R	JC4369R	09/21/2015	Remaining	N	Y		0.77	J		
0+87	253R	133-P3C-P47A	10.8	133-P3C-P47A-15.5-16.0	15.5 - 16.0	-4.7	-5.2	JC4369-4	JC4369	09/21/2015	Remaining	N	Y		< 0.37	UJ		
0+87	253R	133-P3C-P47AR	10.8	133-P3C-P47AR-4.5-5.0	4.5 - 5.0	6.3	5.8	JB82342-3R	JB82342R	11/20/2014	Remaining	N	Y		12.4	J		
0+87	253R	133-P3C-P47AR	10.8	133-P3C-P47AR-6.5-7.0	6.5 - 7.0	4.3	3.8	JB82342-4R	JB82342R	11/20/2014	Remaining	N	Y		0.32	J		
0+87	253R	133-P3C-P47AR	10.8	133-P3C-P47AR-8.5-9.0	8.5 - 9.0	2.3	1.8	JB82342-5	JB82342	11/20/2014	Remaining	N	Y		0.24	J		
0+87	253R	133-P3C-P47AR	10.8	133-P3C-P47AR-10.5-11.0	10.5 - 11.0	0.3	-0.2	JB82342-6	JB82342	11/20/2014	Remaining	N	Y		< 0.19	UJ		
0+87	253R	133-P3C-P47AR	10.8	133-P3C-P47AR-12.5-13.0	12.5 - 13.0	-1.7	-2.2	JB82342-7	JB82342	11/20/2014	Remaining	N	Y		0.19	J		
0+87	253R	133-P3C-P47AR	10.8	133-P3C-P47AR-14.5-15.0	14.5 - 15.0	-3.7	-4.2	JB82342-8	JB82342	11/20/2014	Remaining	N	Y		0.59	J		
0+87	253R	133-P3C-P47AR	10.8	133-P3C-P47AR-16.5-17.0	16.5 - 17.0	-5.7	-6.2	JB82342-9	JB82342	11/20/2014	Remaining	N	Y		< 0.30	UJ		
0+89	312R	133-P3C-R47A	12.2	133-P3C-R47A-3.0-3.5	3.0 - 3.5	9.2	8.7	JB64106-9R	JB64106R	04/08/2014	Remaining	N	Y		0.14	J		
0+89	312R	133-P3C-R47A	12.2	133-P3C-R47A-5.0-5.5	5.0 - 5.5	7.2	6.7	JB64106-10	JB64106	04/08/2014	Remaining	N	Y		< 0.097	UJ		
0+89	312R	133-P3C-R47A	12.2	133-P3C-R47A-7.0-7.5	7.0 - 7.5	5.2	4.7	JB64106-11R	JB64106R	04/08/2014	Remaining	N	Y		0.47	J		
0+89	312R	133-P3C-R47A	12.2	133-P3C-R47A-7.0-7.5X	7.0 - 7.5	5.2	4.7	JB64106-16	JB64106	04/08/2014	Remaining	FD	Y		0.50	J		
0+89	312R	133-P3C-R47A	12.2	133-P3C-R47A-9.0-9.5	9.0 - 9.5	3.2	2.7	JB64106-12R	JB64106R	04/08/2014	Remaining	N	Y		0.32	J		
0+89	312R	133-P3C-R47A	12.2	133-P3C-R47A-11.0-11.5	11.0 - 11.5	1.2	0.7	JB64106-13R	JB64106R	04/08/2014	Remaining	N	Y		0.41	J		
0+89	312R	133-P3C-R47A	12.2	133-P3C-R47A-13.0-13.5	13.0 - 13.5	-0.9	-1.4	JB64106-14R	JB64106R	04/08/2014	Remaining	N	Y		0.23	J		
0+89	312R	133-P3C-R47A	12.2	133-P3C-R47A-13.5-14.0	13.5 - 14.0	-1.4	-1.9	JB64106-15	JB64106	04/08/2014	Remaining	N	Y		0.41	J		
0+95	257R	EF-91	10.6	EF-B091-4.0-4.5	4.0 - 4.5	6.6	6.1	JB15125-1	JB15125	08/30/2012	Remaining	N	Y		0.74			
0+95	257R	EF-91	10.6	EF-B091-4.0-4.5X	4.0 - 4.5	6.6	6.1	JB15125-2	JB15125	08/30/2012	Remaining	FD	Y		0.89			
0+95	286R	133-P3C-Q47A	12.1	133-P3C-Q47A-3.0-3.5	3.0 - 3.5	9.1	8.6	JB64106-7R	JB64106R	04/08/2014	Remaining	N	Y		12.4	J		
0+95	286R	133-P3C-Q47A-R	10.8	133-P3C-Q47A-R-3.0-3.5	3.0 - 3.5	7.8	7.3	JB64871-6R	JB64871R	04/16/2014	Remaining	N	Y		19.4	J		
0+95	286R	133-P3C-Q47A-R	10.8	133-P3C-Q47A-R-5.0-5.5	5.0 - 5.5	5.8	5.3	JB64871-7R	JB64871R	04/16/2014	Remaining	N	Y		16.5	J		
0+95	286R	133-P3C-Q47A-R	10.8	133-P3C-Q47A-R-6.0-6.5	6.0 - 6.5	4.8	4.3	JB64871-8R	JB64871R	04/16/2014	Remaining	N	Y		0.48	J		
0+95	286R	133-P3C-Q47A-R	10.8	133-P3C-Q47A-R-8.0-8.5	8.0 - 8.5	2.8	2.3	JB64871-9	JB64871	04/16/2014	Remaining	N	Y		0.099	J		
0+95	286R	133-P3C-Q47A-R	10.8	133-P3C-Q47A-R-8.0-8.5X	8.0 - 8.5	2.8	2.3	JB64871-10	JB64871	04/16/2014	Remaining	FD	Y		0.91	J		
0+95	286R	133-P3C-Q47A-R	10.8	133-P3C-Q47A-R-10.0-10.5	10.0 - 10.5	0.8	0.3	JB64871-3	JB64871	04/16/2014	Remaining	N	Y		0.28	J		
0+95	286R	133-P3C-Q47A-R	10.8	133-P3C-Q47A-R-11.3-11.8	11.3 - 11.8	-0.5	-1.0	JB64871-4	JB64871	04/16/2014	Remaining	N	Y		0.26	J		
0+95	286R	133-P3C-Q47A-R	10.8	133-P3C-Q47A-R-11.8-12.3	11.8 - 12.3	-1.0	-1.5	JB64871-5	JB64871	04/16/2014	Remaining	N	Y		0.75	J		
0+99	232R	P4-HAL-O47A	11.1	P4-HAL-O47A-2.0-2.5	2.0 - 2.5	9.1	8.6	JB76432-10R	JB76432R	09/12/2014	Removed	N	Y		6.3	J	S2, S3	
0+99	232R	P4-HAL-O47A	11.1	P4-HAL-O47A-4.0-4.5	4.0 - 4.5	7.1	6.6	JB76432-11R	JB76432R	09/12/2014	Remaining	N	Y		11.2	J	S3	
0+99	232R	P4-HAL-O47A	11.1	P4-HAL-O47A-6.0-6.5	6.0 - 6.5	5.1	4.6	JB76432-12R	JB76432R	09/12/2014	Remaining	N	Y		1.0	J	S3	
0+99	232R	P4-HAL-O47A	11.1	P4-HAL-O47A-6.0-6.5X	6.0 - 6.5	5.1	4.6	JB76432-17	JB76432	09/12/2014	Remaining	FD	Y		0.77	J		
0+99	232R	P4-HAL-O47A	11.1	P4-HAL-O47A-8.0-8.5	8.0 - 8.5	3.1	2.6	JB76432-13R	JB76432R	09/12/2014	Remaining	N	Y		< 0.20	UJ		
0+99	232R	P4-HAL-O47A	11.1	P4-HAL-O47A-10.0-10.5	10.0 - 10.5	1.1	0.6	JB76432-14R	JB76432R	09/12/2014	Remaining	N	Y		0.22	J		
0+99	232R	P4-HAL-O47A	11.1	P4-HAL-O47A-12.0-12.5	12.0 - 12.5	-0.9	-1.4	JB76432-15R	JB76432R	09/12/2014	Remaining	N	Y		0.25	J		
0+99	232R	P4-HAL-O47A	11.1	P4-HAL-O47A-13.5-14.0	13.5 - 14.0	-2.4	-2.9	JB76432-16R	JB76432R	09/12/2014	Remaining	N	Y		0.27	J		
0+99	232R	P4-HAL-O47A	11.1	P4-HAL-O47A-14.0-14.5	14.0 - 14.5	-2.9	-3.4	JB76432-18	JB76432	09/12/2014	Remaining	N	Y		< 0.24	UJ		

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
1+06	255R	133-B7	10.5	133B7C(4.5-5.0)J48474-16	4.5 - 5.0	6.0	5.5	J48474-16	J48474	12/07/2006	Remaining	N	Y		< 1.4	U		
1+06	255R	133-B7	10.5	PPG-133-B7D_8.5-9.5	8.5 - 9.5	2.0	1.0	793194	A808	12/13/2006	Remaining	N	Y		< 2.29	UJ		
1+06	255R	133-B7	10.5	PPG-133-B7E_12.5-13.0	12.5 - 13.0	-2.0	-2.5	793195	A808	12/13/2006	Remaining	N	Y		< 4.35	UJ		
1+06	255R	133-B7	10.5	PPG-133-B7F_16.5-17.0	16.5 - 17.0	-6.0	-6.5	793196	A808	12/13/2006	Remaining	N	Y		< 3.4	UJ		
1+06	255R	133-B7	10.5	PPG-133-B7G_20.5-21.0	20.5 - 21.0	-10.0	-10.5	793197	A808	12/13/2006	Remaining	N	Y		< 3.23	UJ		
1+06	255R	133-B7	10.5	PPG-133-B7H_22.3-22.8	22.3 - 22.8	-11.8	-12.3	793198	A808	12/13/2006	Remaining	N	Y		< 2.66	UJ		
1+07	254R	133-P3C-P46AR	10.8	133-P3C-P46AR-3.0-3.5	3.0 - 3.5	7.8	7.3	JB82342-1	JB82342	11/20/2014	Removed	N	Y		< 0.21	UJ	S2	
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-1.0-1.5	1.0 - 1.5	11.0	10.5	JB64984-9	JB64984	04/17/2014	Remaining	N	Y		2.9	RA		
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-3.0-3.5	3.0 - 3.5	9.0	8.5	JB64984-10	JB64984	04/17/2014	Remaining	N	Y		0.37	RA		
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-5.0-5.5	5.0 -5.5	7.0	6.5	JB64984-11	JB64984	04/17/2014	Remaining	N	Y		0.18	RA		
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-7.0-7.5	7.0 - 7.5	5.0	4.5	JB64984-12	JB64984	04/17/2014	Remaining	N	Y		< 0.11	RA		
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-9.0-9.5	9.0 -9.5	3.0	2.5	JB64984-13	JB64984	04/17/2014	Remaining	N	Y		0.24	RA		
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-11.0-11.5	11.0 - 11.5	1.0	0.5	JB64984-14	JB64984	04/17/2014	Remaining	N	Y		0.30	RA		
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-11.0-11.5X	11.0 - 11.5	1.0	0.5	JB64984-15	JB64984	04/17/2014	Remaining	FD	Y		0.61	RA		
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-11.5-12.0	11.5 - 12.0	0.5	0.0	JB64984-16	JB64984	04/17/2014	Remaining	N	Y		0.66	RA		
1+19	189R	133-P3B-N46A	11.1	133-P3B-N46A-2.0-2.5	2.0 - 2.5	9.1	8.6	JB64984-26	JB64984	04/17/2014	Remaining	N	Y		0.35	RA		
1+19	189R	133-P3B-N46A	11.1	133-P3B-N46A-4.0-4.5	4.0 - 4.5	7.1	6.6	JB64984-27T	JB64984T	04/17/2014	Remaining	N	Y		0.86	RA	S4	
1+19	189R	133-P3B-N46A	11.1	133-P3B-N46A-6.0-6.5	6.0 - 6.5	5.1	4.6	JB64984-28	JB64984	04/17/2014	Remaining	N	Y		0.44	RA	S4	
1+19	189R	133-P3B-N46A	11.1	133-P3B-N46A-8.0-8.5	8.0 - 8.5	3.1	2.6	JB64984-29	JB64984	04/17/2014	Remaining	N	Y		0.24	RA	S4	
1+19	189R	133-P3B-N46A	11.1	133-P3B-N46A-10.0-10.5	10.0 - 10.5	1.1	0.6	JB64984-30	JB64984	04/17/2014	Remaining	N	Y		0.17	RA		
1+19	189R	133-P3B-N46A	11.1	133-P3B-N46A-10.5-11.0	10.5 - 11.0	0.6	0.1	JB64984-31	JB64984	04/17/2014	Remaining	N	Y		0.66	RA		
1+19	189R	133-P3B-N46A	11.1	133-P3B-N46A-10.5-11.0X	10.5 - 11.0	0.6	0.1	JB64984-32	JB64984	04/17/2014	Remaining	FD	Y		1.2	RA		
1+19	189R	133-P3B-N46A	11.1	133-P3B-N46A-11.0-11.5	11.0 - 11.5	0.1	-0.4	JB64984-33	JB64984	04/17/2014	Remaining	N	Y		1.3	RA		
1+19	252R	P3BS-PDI-1+20-250R	10.9	P3BS-PDI-1+20-250R-4-4.5	4.0 - 4.5	6.9	6.4	410-14446-3	410144461	09/18/2020	Remaining	N	Y		8.2	RA		
1+19	252R	P3BS-PDI-1+20-250R	10.9	P3BS-PDI-1+20-250R-6-6.5	6.0 - 6.5	4.9	4.4	410-14446-4	410144461	09/18/2020	Remaining	N	Y		2.0	RA		
1+19	252R	P3BS-PDI-1+20-250R	10.9	P3BS-PDI-1+20-250R-8-8.5	8.0 - 8.5	2.9	2.4	410-14446-5	410144461	09/18/2020	Remaining	N	Y		4.4	J-		
1+19	252R	P3BS-PDI-1+20-250R	10.9	P3BS-PDI-1+20-250R-10-10.5	10.0 - 10.5	0.9	0.4	410-14446-6	410144461	09/18/2020	Remaining	N	Y		< 0.16	UJ		
1+19	252R	P3BS-PDI-1+20-250R	10.9	P3BS-PDI-1+20-250R-10-10.5X	10.0 - 10.5	0.9	0.4	410-14446-7	410144461	09/18/2020	Remaining	FD	Y		1.9	J-		
1+19	252R	P3BS-PDI-1+20-250R	10.9	P3BS-PDI-1+20-250R-12-12.5	12.0 - 12.5	-1.1	-1.6	410-14446-8	410144461	09/18/2020	Remaining	N	Y		< 0.16	UJ		
1+19	252R	P3BS-PDI-1+20-250R	10.9	P3BS-PDI-1+20-250R-12.5-13	12.5 - 13.0	-1.6	-2.1	410-14446-9	410144461	09/18/2020	Remaining	N	Y		< 0.52	UJ		
1+19	312R	133-P3C-R46A	12.1	133-P3C-R46A-2.5-3.0	2.5 - 3.0	9.6	9.1	JB63899-3	JB63899	04/04/2014	Removed	N	Y		0.50	J	S2	
1+19	312R	133-P3C-R46A	12.1	133-P3C-R46A-4.5-5.0	4.5 - 5.0	7.6	7.1	JB63899-4	JB63899	04/04/2014	Remaining	N	Y		0.28	J		
1+19	312R	133-P3C-R46A	12.1	133-P3C-R46A-6.5-7.0	6.5 - 7.0	5.6	5.1	JB63899-5R	JB63899R	04/04/2014	Remaining	N	Y		0.12	J		
1+19	312R	133-P3C-R46A	12.1	133-P3C-R46A-8.5-9.0	8.5 - 9.0	3.6	3.1	JB63899-6	JB63899	04/04/2014	Remaining	N	Y		0.42	J		
1+19	312R	133-P3C-R46A	12.1	133-P3C-R46A-10.5-11.0	10.5 - 11.0	1.6	1.1	JB63899-7R	JB63899R	04/04/2014	Remaining	N	Y		0.42	J		
1+19	312R	133-P3C-R46A	12.1	133-P3C-R46A-12.0-12.5	12.0 - 12.5	0.1	-0.4	JB63899-8R	JB63899R	04/04/2014	Remaining	N	Y		0.36	J		
1+19	312R	133-P3C-R46A	12.1	133-P3C-R46A-12.5-13.0	12.5 - 13.0	-0.4	-0.9	JB63899-9	JB63899	04/04/2014	Remaining	N	Y		1.1	J		
1+20	282R	133-P3C-Q46A	12.2	133-P3C-Q46A-2.5-3.0	2.5 - 3.0	9.7	9.2	JB64006-13	JB64006	04/07/2014	Removed	N	Y		< 0.088	UJ	S2	
1+20	282R	133-P3C-Q46A	12.2	133-P3C-Q46A-4.5-5.0	4.5 - 5.0	7.7	7.2	JB64006-14	JB64006	04/07/2014	Remaining	N	Y		1.5	J		
1+20	282R	133-P3C-Q46A	12.2	133-P3C-Q46A-6.5-7.0	6.5 - 7.0	5.7	5.2	JB64006-15	JB64006	04/07/2014	Remaining	N	Y		0.087	J		
1+20	282R	133-P3C-Q46A	12.2	133-P3C-Q46A-8.5-9.0	8.5 - 9.0	3.7	3.2	JB64006-16R	JB64006R	04/07/2014	Remaining	N	Y		< 0.13	UJ		
1+20	282R	133-P3C-Q46A	12.2	133-P3C-Q46A-10.5-11.0	10.5 - 11.0	1.7	1.2	JB64006-17	JB64006	04/07/2014	Remaining	N	Y		< 0.093	UJ		
1+20	282R	133-P3C-Q46A	12.2	133-P3C-Q46A-12.8-13.3	12.8 - 13.3	-0.6	-1.1	JB64006-18	JB64006	04/07/2014	Remaining	N	Y		< 0.082	UJ		
1+20	282R	133-P3C-Q46A	12.2	133-P3C-Q46A-13.3-13.8	13.3 - 13.8	-1.1	-1.6	JB64006-19	JB64006	04/07/2014	Remaining	N	Y		2.0	J		
1+26	224R	P4-HAL-O46A	10.9	P4-HAL-O46A-2.5-3.0	2.5 - 3.0	8.4	7.9	JB76432-2R	JB76432R	09/12/2014	Removed	N	Y		33.1	J	S3	
1+26	224R	P4-HAL-O46A	10.9	P4-HAL-O46A-4.5-5.0	4.5 - 5.0	6.4	5.9	JB76432-3R	JB76432R	09/12/2014	Remaining	N	Y		2.8	J	S3, S4	
1+26	224R	P4-HAL-O46A	10.9	P4-HAL-O46A-6.5-7.0	6.5 - 7.0	4.4	3.9	JB76432-4R	JB76432R	09/12/2014	Remaining	N	Y		1.8	J	S4	
1+26	224R	P4-HAL-O46A	10.9	P4-HAL-O46A-8.5-9.0	8.5 - 9.0	2.4	1.9	JB76432-5R	JB76432R	09/12/2014	Remaining	N	Y		0.41	J	S4	

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
1+26	224R	P4-HAL-O46A	10.9	P4-HAL-O46A-10.5-11.0	10.5 - 11.0	0.4	-0.1	JB76432-6R	JB76432R	09/12/2014	Remaining	N	Y		0.37	J		
1+26	224R	P4-HAL-O46A	10.9	P4-HAL-O46A-12.5-13.0	12.5 - 13.0	-1.6	-2.1	JB76432-7R	JB76432R	09/12/2014	Remaining	N	Y		< 0.19	UJ		
1+26	224R	P4-HAL-O46A	10.9	P4-HAL-O46A-13.0-13.5	13.0 - 13.5	-2.1	-2.6	JB76432-8	JB76432	09/12/2014	Remaining	N	Y		< 0.39	UJ		
1+30	315R	133-B8	12.1	PPG-133-B8B_5.0-6.0_797778	5.0 - 6.0	7.1	6.1	797778	B560	01/05/2007	Remaining	N	Y			R		
1+30	315R	133-B8	12.1	PPG-133-B8C_9.0-10.0_797779	9.0 - 10.0	3.1	2.1	797779	B560	01/05/2007	Remaining	N	Y			R		
1+30	315R	133-B8	12.1	PPG-133-B8CD_9.0-10.0_797780	9.0 - 10.0	3.1	2.1	797780	B560	01/05/2007	Remaining	FD	Y			R		
1+30	315R	133-B8	12.1	PPG-133-B8D_13.0-13.5_797781	13.0 - 13.5	-0.9	-1.4	797781	B560	01/05/2007	Remaining	N	Y			R		
1+30	315R	133-B8	12.1	PPG-133-B8E_13.5-14.0_797782	13.5 - 14.0	-1.4	-1.9	797782	B560	01/05/2007	Remaining	N	Y			R		
1+35	119R	P3BS-PDI-TP1+35-125R	13.0	P3BS-PDI-TP-1+35-125R-3.2-3.7	3.2 - 3.7	9.8	9.3	410-19476-4	410194761	11/04/2020	Remaining	N	Y		1.2	J-		
1+42	78R	P3BS-J45A-SW-W2	14.1	P3BS-J45A-SW-0.1-0.6	0.1 - 0.6	14.0	13.5	410-39487-2	410394871	05/12/2021	Remaining	N	Y		1.0	J-		
1+44	79R	P3BS-J45A-SW-W1	14.2	P3BS-J45A-SW-2-2.5	2.0 - 2.5	12.2	11.7	410-39487-1	410394871	05/12/2021	Remaining	N	Y		< 0.62	UJ		
1+47	246R	P4-HAL-P45A	11.3	P4-HAL-P45A-2.5-3.0	2.5 - 3.0	8.8	8.3	JB76597-2R	JB76597R	09/15/2014	Removed	N	Y		0.34	RA	S3	
1+47	246R	P4-HAL-P45A	11.3	P4-HAL-P45A-4.5-5.0	4.5 - 5.0	6.8	6.3	JB76597-3R	JB76597R	09/15/2014	Removed	N	Y		2.6	RA	S3	
1+47	246R	P4-HAL-P45A	11.3	P4-HAL-P45A-6.5-7.0	6.5 - 7.0	4.8	4.3	JB76597-4R	JB76597R	09/15/2014	Remaining	N	Y		0.22	RA		
1+47	246R	P4-HAL-P45A	11.3	P4-HAL-P45A-8.5-9.0	8.5 - 9.0	2.8	2.3	JB76597-5	JB76597	09/15/2014	Remaining	N	Y		< 0.22	RA		
1+47	246R	P4-HAL-P45A	11.3	P4-HAL-P45A-10.5-11.0	10.5 - 11.0	0.8	0.3	JB76597-6R	JB76597R	09/15/2014	Remaining	N	Y		0.78	RA		
1+47	246R	P4-HAL-P45A	11.3	P4-HAL-P45A-12.5-13.0	12.5 - 13.0	-1.2	-1.7	JB76597-7R	JB76597R	09/15/2014	Remaining	N	Y		0.28	RA		
1+47	246R	P4-HAL-P45A	11.3	P4-HAL-P45A-12.5-13.0X	12.5 - 13.0	-1.2	-1.7	JB76597-8R	JB76597R	09/15/2014	Remaining	FD	Y		0.21	RA		
1+47	246R	P4-HAL-P45A	11.3	P4-HAL-P45A-13.5-14.0	13.5 - 14.0	-2.2	-2.7	JB76597-9	JB76597	09/15/2014	Remaining	N	Y		0.23	RA		
1+47	246R	P4-HAL-P45A	11.3	P4-HAL-P45A-14.0-14.5	14.0 - 14.5	-2.7	-3.2	JB76597-10	JB76597	09/15/2014	Remaining	N	Y		0.55	RA		
1+47	292R	133-P3C-Q45A	12.2	133-P3C-Q45A-7.0-7.5	7.0 - 7.5	5.2	4.7	JB64006-5R	JB64006R	04/07/2014	Remaining	N	Y		< 0.13	UJ		
1+47	292R	133-P3C-Q45A	12.2	133-P3C-Q45A-9.0-9.5	9.0 - 9.5	3.2	2.7	JB64006-6	JB64006	04/07/2014	Remaining	N	Y		< 0.080	UJ		
1+47	292R	133-P3C-Q45A	12.2	133-P3C-Q45A-11.0-11.5	11.0 - 11.5	1.2	0.7	JB64006-7	JB64006	04/07/2014	Remaining	N	Y		0.10	J		
1+47	292R	133-P3C-Q45A	12.2	133-P3C-Q45A-11.0-11.5X	11.0 - 11.5	1.2	0.7	JB64006-8R	JB64006R	04/07/2014	Remaining	FD	Y		< 0.12	UJ		
1+47	292R	133-P3C-Q45A	12.2	133-P3C-Q45A-13.0-13.5	13.0 - 13.5	-0.8	-1.3	JB64006-9R	JB64006R	04/07/2014	Remaining	N	Y		< 0.14	UJ		
1+47	292R	133-P3C-Q45A	12.2	133-P3C-Q45A-14.5-15.0	14.5 - 15.0	-2.3	-2.8	JB64006-10	JB64006	04/07/2014	Remaining	N	Y		< 0.081	UJ		
1+47	292R	133-P3C-Q45A	12.2	133-P3C-Q45A-15.0-15.5	15.0 - 15.5	-2.8	-3.3	JB64006-11	JB64006	04/07/2014	Remaining	N	Y		0.61	J		
1+49	153R	10W-M45A	11.4	10W-M45A-3.0-3.5	3.0 - 3.5	8.4	7.9	JB67912-27R	JB67912R	05/28/2014	Remaining	N	Y		0.73	J		
1+49	153R	10W-M45A	11.4	10W-M45A-5.0-5.5	5.0 - 5.5	6.4	5.9	JB67912-28R	JB67912R	05/28/2014	Remaining	N	Y		2.4	J		
1+49	153R	10W-M45A	11.4	10W-M45A-7.0-7.5	7.0 - 7.5	4.4	3.9	JB67912-29R	JB67912R	05/28/2014	Remaining	N	Y		0.62	J		
1+49	153R	10W-M45A	11.4	10W-M45A-9.0-9.5	9.0 - 9.5	2.4	1.9	JB67912-30R	JB67912R	05/28/2014	Remaining	N	Y		1.6	J		
1+49	153R	10W-M45A	11.4	10W-M45A-11.0-11.5	11.0 - 11.5	0.4	-0.1	JB67912-31R	JB67912R	05/28/2014	Remaining	N	Y		0.41	J		
1+49	153R	10W-M45A	11.4	10W-M45A-11.5-12.0	11.5 - 12.0	-0.1	-0.6	JB67912-32R	JB67912R	05/28/2014	Remaining	N	Y		0.59	J		
1+49	192R	133-P3B-N45A	11.1	133-P3B-N45A-2.0-2.5	2.0 - 2.5	9.1	8.6	JB64984-18T	JB64984T	04/17/2014	Remaining	N	Y		0.96	RA		
1+49	192R	133-P3B-N45A	11.1	133-P3B-N45A-4.0-4.5	4.0 - 4.5	7.1	6.6	JB64984-19T	JB64984T	04/17/2014	Remaining	N	Y		2.0	RA	S4	
1+49	192R	133-P3B-N45A	11.1	133-P3B-N45A-6.0-6.5	6.0 - 6.5	5.1	4.6	JB64984-20	JB64984	04/17/2014	Remaining	N	Y		0.10	RA	S4	
1+49	192R	133-P3B-N45A	11.1	133-P3B-N45A-8.0-8.5	8.0 - 8.5	3.1	2.6	JB64984-21	JB64984	04/17/2014	Remaining	N	Y		0.22	RA	S4	
1+49	192R	133-P3B-N45A	11.1	133-P3B-N45A-10.0-10.5	10.0 - 10.5	1.1	0.6	JB64984-22	JB64984	04/17/2014	Remaining	N	Y		1.2	RA		
1+49	192R	133-P3B-N45A	11.1	133-P3B-N45A-11.0-11.5	11.0 - 11.5	0.1	-0.4	JB64984-23	JB64984	04/17/2014	Remaining	N	Y		0.29	RA		
1+49	192R	133-P3B-N45A	11.1	133-P3B-N45A-11.5-12.0	11.5 - 12.0	-0.4	-0.9	JB64984-24	JB64984	04/17/2014	Remaining	N	Y		1.2	RA		
1+49	199R	133-P3BS-N44A45A-SWA	11.1	133-P3BS-N44A45A-SWA-3.2-3.7	3.1 - 3.6	8.0	7.5	410-45257-1	410452571	06/28/2021	Remaining	N	Y		14	J	S4	
1+49	219R	P3BS-PDI-1+50-220R	11.2	P3BS-PDI-1+50-220R-6-6.5	6.0 - 6.5	5.2	4.7	410-14007-4	410140071	09/15/2020	Removed	N	Y		< 0.19	UJ	S2	
1+49	219R	P3BS-PDI-1+50-220R	11.2	P3BS-PDI-1+50-220R-8-8.5	8.0 - 8.5	3.2	2.7	410-14007-5	410140071	09/15/2020	Remaining	N	Y		< 0.17	UJ		
1+49	219R	P3BS-PDI-1+50-220R	11.2	P3BS-PDI-1+50-220R-10-10.5	10.0 - 10.5	1.2	0.7	410-14007-6	410140071	09/15/2020	Remaining	N	Y		< 0.21	UJ		
1+49	219R	P3BS-PDI-1+50-220R	11.2	P3BS-PDI-1+50-220R-10-10.5X	10.0 - 10.5	1.2	0.7	410-14007-13	410140071	09/15/2020	Remaining	FD	Y		< 0.18	UJ		
1+49	219R	P3BS-PDI-1+50-220R	11.2	P3BS-PDI-1+50-220R-12-12.5	12.0 - 12.5	-0.8	-1.3	410-14007-7	410140071	09/15/2020	Remaining	N	Y		< 0.18	UJ		
1+49	219R	P3BS-PDI-1+50-220R	11.2	P3BS-PDI-1+50-220R-14-14.5	14.0 - 14.5	-2.8	-3.3	410-14007-8	410140071	09/15/2020	Remaining	N	Y		2.5	J-		
1+49	219R	P3BS-PDI-1+50-220R	11.2	P3BS-PDI-1+50-220R-16-16.5	16.0 - 16.5	-4.8	-5.3	410-14007-9	410140071	09/15/2020	Remaining	N	Y		< 0.18	UJ		

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
1+49	219R	P3BS-PDI-1+50-220R	11.2	P3BS-PDI-1+50-220R-18-18.5	18.0 - 18.5	-6.8	-7.3	410-14007-10	410140071	09/15/2020	Remaining	N	Y		< 0.19	UJ		
1+49	219R	P3BS-PDI-1+50-220R	11.2	P3BS-PDI-1+50-220R-18.5-19.0	18.5 - 19.0	-7.3	-7.8	410-14007-11	410140071	09/15/2020	Remaining	N	Y		< 1.6	UJ		
1+49	312R	133-P3C-R45A	12.2	133-P3C-R45A-6.0-6.5	6.0 - 6.5	6.2	5.7	JB64006-34	JB64006	04/07/2014	Remaining	N	Y		2.1	J		
1+49	312R	133-P3C-R45A	12.2	133-P3C-R45A-8.0-8.5	8.0 - 8.5	4.2	3.7	JB64006-35	JB64006	04/07/2014	Remaining	N	Y		0.10	J		
1+49	312R	133-P3C-R45A	12.2	133-P3C-R45A-10.0-10.5	10.0 - 10.5	2.2	1.7	JB64006-36	JB64006	04/07/2014	Remaining	N	Y		0.10	J		
1+49	312R	133-P3C-R45A	12.2	133-P3C-R45A-12.0-12.5	12.0 - 12.5	0.2	-0.3	JB64006-37	JB64006	04/07/2014	Remaining	N	Y		0.28	J		
1+49	312R	133-P3C-R45A	12.2	133-P3C-R45A-13.5-14.0	13.5 - 14.0	-1.3	-1.8	JB64006-38	JB64006	04/07/2014	Remaining	N	Y		1.1	J		
1+49	312R	133-P3C-R45A	12.2	133-P3C-R45A-14.0-14.5	14.0 - 14.5	-1.8	-2.3	JB64006-39	JB64006	04/07/2014	Remaining	N	Y		4.1	J		
1+50	161R	133-P3B-M45A	11.4	133-P3B-M45A-4.0-4.5	4.0 - 4.5	7.4	6.9	JB64984-4	JB64984	04/17/2014	Remaining	N	Y		0.43	RA		
1+50	161R	133-P3B-M45A	11.4	133-P3B-M45A-6.0-6.5	6.0 - 6.5	5.4	4.9	JB64984-5	JB64984	04/17/2014	Remaining	N	Y		0.23	RA		
1+50	161R	133-P3B-M45A	11.4	133-P3B-M45A-8.0-8.5	8.0 - 8.5	3.4	2.9	JB64984-6	JB64984	04/17/2014	Remaining	N	Y		0.30	RA		
1+50	161R	133-P3B-M45A	11.4	133-P3B-M45A-10.2-10.7	10.2 - 10.7	1.2	0.7	JB64984-7R	JB64984R	04/17/2014	Remaining	N	Y		< 0.13	RA		
1+50	161R	133-P3B-M45A	11.4	133-P3B-M45A-10.7-11.2	10.7 - 11.2	0.7	0.2	JB64984-8	JB64984	04/17/2014	Remaining	N	Y		1.3	RA		
1+55	199R	133-P3BS-N44A45A-SWB	11.2	133-P3BS-N44A45A-SWB-5.4-5.9	5.2 - 5.7	6.0	5.5	410-45257-2	410452571	06/28/2021	Removed	N	Y	FILL (FILL)	44	J	S4, S5	
1+55	199R	133-P3BS-N44-SWB-RS	11.2	133-P3BS-N44A45A-SWB-RS-6.4-6.9	6.2 - 6.7	5.0	4.5	410-46939-6	410469391	07/13/2021	Removed	N	Y	FILL (FILL)	36	RA	S4, S5	
1+55	199R	133-P3BS-N44-SWB-RS2	11.2	133-P3BS-N44A45A-SWB-RS2	7.0 - 7.5	4.2	3.7	410-48301-6	410483011	07/22/2021	Remaining	N	Y		< 1.1	U	S4	
1+56	52R	10W-I44A	16.8	10W-I44A-13.5-14.0	13.5 - 14.0	3.3	2.8	JC99900-15R	JC99900	12/09/2019	Remaining	N	Y		4.6	J		
1+56	93R	10W-K45A	15.6	10W-K45A-6.5-7.0	6.5 - 7.0	9.1	8.6	JB66773-20	JB66773	05/12/2014	Remaining	N	Y		0.99	J		
1+56	93R	10W-K45A	15.6	10W-K45A-8.5-9.0	8.5 - 9.0	7.1	6.6	JB66773-21R	JB66773R	05/12/2014	Remaining	N	Y		0.40	J		
1+56	93R	10W-K45A	15.6	10W-K45A-9.5-10.0	9.5 - 10.0	6.1	5.6	JB66773-22R	JB66773R	05/12/2014	Remaining	N	Y		0.29	J		
1+56	93R	10W-K45A	15.6	10W-K45A-10.5-11.0	10.5 - 11.0	5.1	4.6	JB66773-23	JB66773	05/12/2014	Remaining	N	Y		0.25	J		
1+56	93R	10W-K45A	15.6	10W-K45A-12.5-13.0	12.5 - 13.0	3.1	2.6	JB66773-24R	JB66773R	05/12/2014	Remaining	N	Y		0.46	J		
1+56	93R	10W-K45A	15.6	10W-K45A-12.5-13.0X	12.5 - 13.0	3.1	2.6	JB66773-25R	JB66773R	05/12/2014	Remaining	FD	Y		0.15	J		
1+56	93R	10W-K45A	15.6	10W-K45A-14.5-15.0	14.5 - 15.0	1.1	0.6	JB66773-26	JB66773	05/12/2014	Remaining	N	Y		0.59	J		
1+56	93R	10W-K45A	15.6	10W-K45A-16.5-17.0	16.5 - 17.0	-0.9	-1.4	JB66773-27R	JB66773R	05/12/2014	Remaining	N	Y		< 0.20	UJ		
1+56	93R	10W-K45A	15.6	10W-K45A-18.5-19.0	18.5 - 19.0	-2.9	-3.4	JB66773-28	JB66773	05/12/2014	Remaining	N	Y		0.33	J		
1+56	93R	10W-K45A	15.6	10W-K45A-19.5-20.0	19.5 - 20.0	-3.9	-4.4	JB66773-29	JB66773	05/12/2014	Remaining	N	Y		0.23	J		
1+56	93R	10W-K45A	15.6	10W-K45A-20.5-21.0	20.5 - 21.0	-4.9	-5.4	JB66773-30	JB66773	05/12/2014	Remaining	N	Y		0.37	J		
1+56	93R	10W-K45A	15.6	10W-K45A-21.0-21.5	21.0 - 21.5	-5.4	-5.9	JB66773-31	JB66773	05/12/2014	Remaining	N	Y		0.84	J		
1+56	93R	10W-K45A	15.6	10W-K45A-21.5-22.0	21.5 - 22.0	-5.9	-6.4	JB66773-32	JB66773	05/12/2014	Remaining	N	Y		0.53	J		
1+57	141R	ICO-18	11.4	ICO-B018-3.0	3.0 - 3.5	8.4	7.9	JB3648-36R	JB3648R	04/06/2012	Remaining	N	Y		< 0.26	RA		
1+57	141R	ICO-18	11.4	ICO-B018-5.0	5.0 - 5.5	6.4	5.9	JB3648-37R	JB3648R	04/06/2012	Remaining	N	Y		0.56	RA		
1+57	141R	ICO-18	11.4	ICO-B018-7.0	7.0 - 7.5	4.4	3.9	JB3648-38R	JB3648R	04/06/2012	Remaining	N	Y		0.99	RA		
1+57	141R	ICO-18	11.4	ICO-B018-10.0	10.0 - 10.5	1.4	0.9	JB3648-39R	JB3648R	04/06/2012	Remaining	N	Y		< 0.30	RA		
1+60	84R	10W-J45A	15.6	10W-J45A-5.5-6.0	5.5 - 6.0	10.1	9.6	JB66880-6R	JB66880R	05/13/2014	Remaining	N	Y		1.6	RA		
1+60	84R	10W-J45A	15.6	10W-J45A-6.5-7.0	6.5 - 7.0	9.1	8.6	JB66880-7R	JB66880R	05/13/2014	Remaining	N	Y		3.9	RA		
1+60	84R	10W-J45A	15.6	10W-J45A-8.5-9.0	8.5 - 9.0	7.1	6.6	JB66880-8R	JB66880R	05/13/2014	Remaining	N	Y		1.1	RA		
1+60	84R	10W-J45A	15.6	10W-J45A-10.5-11.0	10.5 - 11.0	5.1	4.6	JB66880-9R	JB66880R	05/13/2014	Remaining	N	Y		< 0.15	RA		
1+60	84R	10W-J45A	15.6	10W-J45A-12.5-13.0	12.5 - 13.0	3.1	2.6	JB66880-10	JB66880	05/13/2014	Remaining	N	Y		0.31	RA		
1+60	84R	10W-J45A	15.6	10W-J45A-14.5-15.0	14.5 - 15.0	1.1	0.6	JB66880-11R	JB66880R	05/13/2014	Remaining	N	Y		< 0.14	RA		
1+60	84R	10W-J45A	15.6	10W-J45A-16.5-17.0	16.5 - 17.0	-0.9	-1.4	JB66880-12	JB66880	05/13/2014	Remaining	N	Y		0.29	RA		
1+60	84R	10W-J45A	15.6	10W-J45A-18.5-19.0	18.5 - 19.0	-2.9	-3.4	JB66880-13	JB66880	05/13/2014	Remaining	N	Y		0.40	RA		
1+60	84R	10W-J45A	15.6	10W-J45A-19.7-20.2	19.7 - 20.2	-4.1	-4.6	JB66880-14	JB66880	05/13/2014	Remaining	N	Y		0.40	RA		
1+60	84R	10W-J45A	15.6	10W-J45A-20.2-20.7	20.2 - 20.7	-4.6	-5.1	JB66880-15	JB66880	05/13/2014	Remaining	N	Y		0.42	RA		
1+61	169R	133-P3BS-M44A45A-SWA	11.2	133-P3BS-M44A45A-SWA-3.1-3.6	3.2 - 3.7	8.0	7.5	410-45257-5	410452571	06/28/2021	Remaining	N	Y		5.8	J		
1+61	169R	133-P3BS-M44A45A-SWA	11.2	133-P3BS-M44A45A-SWA-3.1-3.6X	3.2 - 3.7	8.0	7.5	410-45257-9	410452571	06/28/2021	Remaining	FD	Y		7.4	J		
1+62	70R	TWA-7	15.6	TWA-B007-5.0	5.0 - 5.5	10.6	10.1	JB3579-21R	JB3579R	04/06/2012	Remaining	N	Y		0.37	J		
1+62	70R	TWA-7	15.6	TWA-B007-10.0	10.0 - 10.5	5.6	5.1	JB3579-22R	JB3579R	04/06/2012	Remaining	N	Y		< 0.26	UJ		

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20	
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes
1+62	70R	TWA-7	15.6	TWA-B007-12.0	12.0 - 12.5	3.6	3.1	JB3579-23R	JB3579R	04/06/2012	Remaining	N	Y		< 0.25	UJ	
1+62	70R	TWA-7	15.6	TWA-B007-15.0	15.0 - 15.5	0.6	0.1	JB3579-24R	JB3579R	04/06/2012	Remaining	N	Y		< 0.23	UJ	
1+62	70R	TWA-7	15.6	TWA-B007-17.0	17.0 - 17.5	-1.4	-1.9	JB3579-25R	JB3579R	04/06/2012	Remaining	N	Y		0.49	J	
1+62	70R	TWA-7	15.6	TWA-B007-19.0	19.0 - 19.5	-3.4	-3.9	JB3579-26R	JB3579R	04/06/2012	Remaining	N	Y		< 0.30	UJ	
1+62	70R	TWA-7	15.6	TWA-B007-21.0	21.0 - 21.5	-5.4	-5.9	JB3579-27R	JB3579R	04/06/2012	Remaining	N	Y		< 0.33	UJ	
1+62	70R	TWA-7	15.6	TWA-B007-23.0	23.0 - 23.5	-7.4	-7.9	JB3579-28R	JB3579R	04/06/2012	Remaining	N	Y		< 0.32	UJ	
1+62	70R	TWA-7	15.6	TWA-B007-23.0X	23.0 - 23.5	-7.4	-7.9	JB3579-29R	JB3579R	04/06/2012	Remaining	FD	Y		0.47	J	
1+69	199R	133-P3BS-N44A45A-SWC	11.6	133-P3BS-N44A45A-SWC-7.6-8.1	7.6 - 8.1	4.0	3.5	410-45257-3	410452571	06/28/2021	Removed	N	Y		3.5	J	S5
1+70	169R	133-P3BS-M44A45A-SWB	11.4	133-P3BS-M44A45A-SWB-5.2-5.7	5.4 - 5.9	6.0	5.5	410-45257-6	410452571	06/28/2021	Remaining	N	Y		1.5	J	
1+74	202R	133-MW1C	11.9	133-MW1CC_9.0-10.0_822615	9.0 - 10.0	2.9	1.9	822615	F201	04/19/2007	Remaining	N	Y		< 2.51	UJ	
1+74	202R	133-MW1C	11.9	133-MW1CCD_9.0-10.0_822616	9.0 - 10.0	2.9	1.9	822616	F201	04/19/2007	Remaining	FD	Y		< 2.6	UJ	
1+74	202R	133-MW1C	11.9	133-MW1CD_13.0-14.0_822617	13.0 - 14.0	-1.1	-2.1	822617	F201	04/19/2007	Remaining	N	Y		< 3.72	UJ	
1+74	202R	133-MW1C	11.9	133-MW1CE_15.0-15.5_822618	15.0 - 15.5	-3.1	-3.6	822618	F201	04/19/2007	Remaining	N	Y		< 3.53	UJ	
1+74	202R	133-MW1C	11.9	133-MW1CF_17.0-18.0_823270	17.0 - 18.0	-5.1	-6.1	823270	F446	04/23/2007	Remaining	N	Y		< 3.65	UJ	
1+74	202R	133-MW1C	11.9	133-MW1CG_19.0-20.0_823271	19.0 - 20.0	-7.1	-8.1	823271	F446	04/23/2007	Remaining	N	Y		< 3.39	UJ	
1+74	202R	133-MW1C	11.9	133-MW1CGD_19.0-20.0_823272	19.0 - 20.0	-7.1	-8.1	823272	F446	04/23/2007	Remaining	FD	Y		< 3.57	UJ	
1+74	202R	133-MW1C	11.9	133-MW1CH_21.0-21.5_823273	21.0 - 21.5	-9.1	-9.6	823273	F446	04/23/2007	Remaining	N	Y		< 3.6	UJ	
1+74	202R	133-MW1C	11.9	133-MW1CI_23.0-23.5_823274	23.0 - 23.5	-11.1	-11.6	823274	F446	04/23/2007	Remaining	N	Y		< 2.3	UJ	
1+76	169R	133-P3BS-M44A45A-SWC	11.6	133-P3BS-M44A45A-SWC-7.6-8.1	7.6 - 8.1	4.0	3.5	410-45257-7	410452571	06/28/2021	Remaining	N	Y		3.8	J	
1+76	257R	P4-HAL-P44A	11.5	P4-HAL-P44A-8.5-9.0	8.5 - 9.0	3.0	2.5	JB76021-7	JB76021	09/09/2014	Removed	N	Y		0.22	J	S6
1+76	257R	P4-HAL-P44A	11.5	P4-HAL-P44A-10.5-11.0	10.5 - 11.0	1.0	0.5	JB76021-8R	JB76021R	09/09/2014	Remaining	N	Y		0.65	J	
1+76	257R	P4-HAL-P44A	11.5	P4-HAL-P44A-12.5-13.0	12.5 - 13.0	-1.0	-1.5	JB76021-9R	JB76021R	09/09/2014	Remaining	N	Y		0.32	J	
1+76	257R	P4-HAL-P44A	11.5	P4-HAL-P44A-14.5-15.0	14.5 - 15.0	-3.0	-3.5	JB76021-10R	JB76021R	09/09/2014	Remaining	N	Y		0.24	J	
1+76	257R	P4-HAL-P44A	11.5	P4-HAL-P44A-15.0-15.5	15.0 - 15.5	-3.5	-4.0	JB76021-11	JB76021	09/09/2014	Remaining	N	Y		2.3	J	
1+80	14R	P3BS-PDI-1+80-15R	15.6	P3BS-PDI-1+80-15R-2.0-2.5	2.0 - 2.5	13.6	13.1	410-20160-2	410201601	11/10/2020	Remaining	N	Y		< 1.7	UJ	
1+80	14R	P3BS-PDI-1+80-15R	15.6	P3BS-PDI-1+80-15R-4.0-4.5	4.0 - 4.5	11.6	11.1	410-20160-3	410201601	11/10/2020	Remaining	N	Y		< 0.80	UJ	
1+80	14R	P3BS-PDI-1+80-15R	15.6	P3BS-PDI-1+80-15R-6.0-6.5	6.0 - 6.5	9.6	9.1	410-20160-4	410201601	11/10/2020	Remaining	N	Y		< 2.1	UJ	
1+80	14R	P3BS-PDI-1+80-15R	15.6	P3BS-PDI-1+80-15R-8.0-8.5	8.0 - 8.5	7.6	7.1	410-20160-5	410201601	11/10/2020	Remaining	N	Y		< 2.3	UJ	
1+80	14R	P3BS-PDI-1+80-15R	15.6	P3BS-PDI-1+80-15R-10.0-10.5	10.0 - 10.5	5.6	5.1	410-20160-6	410201601	11/10/2020	Remaining	N	Y		< 0.81	UJ	
1+80	14R	P3BS-PDI-1+80-15R	15.6	P3BS-PDI-1+80-15R-10.0-10.5X	10.0 - 10.5	5.6	5.1	410-20160-7	410201601	11/10/2020	Remaining	FD	Y		< 0.16	UJ	
1+80	14R	P3BS-PDI-1+80-15R	15.6	P3BS-PDI-1+80-15R-12.0-12.5	12.0 - 12.5	3.6	3.1	410-20160-8	410201601	11/10/2020	Remaining	N	Y		< 0.17	UJ	
1+80	14R	P3BS-PDI-1+80-15R	15.6	P3BS-PDI-1+80-15R-14.0-14.5	14.0 - 14.5	1.6	1.1	410-20160-9	410201601	11/10/2020	Remaining	N	Y		< 0.20	UJ	
1+80	14R	P3BS-PDI-1+80-15R	15.6	P3BS-PDI-1+80-15R-16.0-16.5	16.0 - 16.5	-0.4	-0.9	410-20160-10	410201601	11/10/2020	Remaining	N	Y		< 0.17	UJ	
1+80	14R	P3BS-PDI-1+80-15R	15.6	P3BS-PDI-1+80-15R-18.0-18.5	18.0 - 18.5	-2.4	-2.9	410-20160-11	410201601	11/10/2020	Remaining	N	Y		< 0.82	UJ	
1+80	14R	P3BS-PDI-1+80-15R	15.6	P3BS-PDI-1+80-15R-18.5-19.0	18.5 - 19.0	-2.9	-3.4	410-20160-12	410201601	11/10/2020	Remaining	N	Y		< 0.23	UJ	
1+80	162R	133-P3B-M44A	11.5	133-P3B-M44A-9.0-9.5	9.0 - 9.5	2.5	2.0	JB64513-22R	JB64513R	04/11/2014	Removed	N	Y		0.15	RA	S6
1+80	162R	133-P3B-M44A	11.5	133-P3B-M44A-11.0-11.5	11.0 - 11.5	0.5	0.0	JB64513-23	JB64513	04/11/2014	Remaining	N	Y		0.44	RA	
1+80	162R	133-P3B-M44A	11.5	133-P3B-M44A-12.0-12.5	12.0 - 12.5	-0.5	-1.0	JB64513-24R	JB64513R	04/11/2014	Remaining	N	Y		0.19	RA	
1+80	162R	133-P3B-M44A	11.5	133-P3B-M44A-12.5-13.0	12.5 - 13.0	-1.0	-1.5	JB64513-25	JB64513	04/11/2014	Remaining	N	Y		< 0.11	RA	
1+80	191R	133-P3B-N44A	12.0	133-P3B-N44A-6.0-6.5	6.0 - 6.5	6.0	5.5	JB64513-26R	JB64513R	04/11/2014	Removed	N	Y		0.17	RA	S4
1+80	191R	133-P3B-N44A	12.0	133-P3B-N44A-8.0-8.5	8.0 - 8.5	4.0	3.5	JB64513-27R	JB64513R	04/11/2014	Removed	N	Y		0.31	RA	S4
1+80	191R	133-P3B-N44A	12.0	133-P3B-N44A-10.0-10.5	10.0 - 10.5	2.0	1.5	JB64513-28R	JB64513R	04/11/2014	Remaining	N	Y		0.15	RA	
1+80	191R	133-P3B-N44A	12.0	133-P3B-N44A-12.0-12.5	12.0 - 12.5	0.0	-0.5	JB64513-29R	JB64513R	04/11/2014	Remaining	N	Y		0.76	RA	
1+80	191R	133-P3B-N44A	12.0	133-P3B-N44A-14.0-14.5	14.0 - 14.5	-2.0	-2.5	JB64513-30R	JB64513R	04/11/2014	Remaining	N	Y		2.1	RA	
1+80	191R	133-P3B-N44A	12.0	133-P3B-N44A-15.0-15.5	15.0 - 15.5	-3.0	-3.5	JB64513-31R	JB64513R	04/11/2014	Remaining	N	Y		1.3	RA	
1+80	191R	133-P3B-N44A	12.0	133-P3B-N44A-15.0-15.5X	15.0 - 15.5	-3.0	-3.5	JB64513-32R	JB64513R	04/11/2014	Remaining	FD	Y		0.85	RA	
1+80	191R	133-P3B-N44A	12.0	133-P3B-N44A-15.5-16.0	15.5 - 16.0	-3.5	-4.0	JB64513-33R	JB64513R	04/11/2014	Remaining	N	Y		1.1	RA	
1+80	342R	133-P3C-S44A	12.1	133-P3C-S44A-8.5-9.0	8.5 - 9.0	3.6	3.1	JB63899-14R	JB63899R	04/04/2014	Removed	N	Y		0.27	J	S7

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20	
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes
1+80	342R	133-P3C-S44A	12.1	133-P3C-S44A-10.5-11.0	10.5 - 11.0	1.6	1.1	JB63899-15	JB63899	04/04/2014	Remaining	N	Y		0.45	J	
1+80	342R	133-P3C-S44A	12.1	133-P3C-S44A-10.5-11.0X	10.5 - 11.0	1.6	1.1	JB63899-16R	JB63899R	04/04/2014	Remaining	FD	Y		0.43	J	
1+80	342R	133-P3C-S44A	12.1	133-P3C-S44A-12.5-13.0	12.5 - 13.0	-0.4	-0.9	JB63899-17	JB63899	04/04/2014	Remaining	N	Y		0.37	J	
1+80	342R	133-P3C-S44A	12.1	133-P3C-S44A-14.5-15.0	14.5 - 15.0	-2.4	-2.9	JB63899-18	JB63899	04/04/2014	Remaining	N	Y		0.26	J	
1+80	342R	133-P3C-S44A	12.1	133-P3C-S44A-15.5-16.0	15.5 - 16.0	-3.4	-3.9	JB63899-19	JB63899	04/04/2014	Remaining	N	Y		1.9	J	
1+80	342R	133-P3C-S44A	12.1	133-P3C-S44A-16.0-16.5	16.0 - 16.5	-3.9	-4.4	JB63899-20	JB63899	04/04/2014	Remaining	N	Y		2.3	J	
1+81	199R	133-P3BS-N44A45A-SWD	11.6	133-P3BS-N44A45A-SWD-9.7-10.2	9.6 - 10.1	2.0	1.5	410-45257-4	410452571	06/28/2021	Remaining	N	Y		6.6	J	
1+81	222R	133-P3B-O44A	11.6	133-P3B-O44A-12.7-13.2	12.7 - 13.2	-1.1	-1.6	JB64330-18R	JB64330R	04/10/2014	Remaining	N	Y		0.71	RA	
1+81	222R	133-P3B-O44A	11.6	133-P3B-O44A-13.2-13.7	13.2 - 13.7	-1.6	-2.1	JB64330-19	JB64330	04/10/2014	Remaining	N	Y		1.5	RA	
1+81	312R	133-P3C-R44A	12.4	133-P3C-R44A-6.0-6.5	6.0 - 6.5	6.4	5.9	JB64006-23	JB64006	04/07/2014	Removed	N	Y		1.6	J	S2
1+81	312R	133-P3C-R44A	12.4	133-P3C-R44A-8.0-8.5	8.0 - 8.5	4.4	3.9	JB64006-24	JB64006	04/07/2014	Remaining	N	Y		0.68	J	
1+81	312R	133-P3C-R44A	12.4	133-P3C-R44A-10.0-10.5	10.0 - 10.5	2.4	1.9	JB64006-25	JB64006	04/07/2014	Remaining	N	Y		6.5	J	
1+81	312R	133-P3C-R44A	12.4	133-P3C-R44A-12.0-12.5	12.0 - 12.5	0.4	-0.1	JB64006-26	JB64006	04/07/2014	Remaining	N	Y		0.40	J	
1+81	312R	133-P3C-R44A	12.4	133-P3C-R44A-14.0-14.5	14.0 - 14.5	-1.6	-2.1	JB64006-27	JB64006	04/07/2014	Remaining	N	Y		2.9	J	
1+81	312R	133-P3C-R44A	12.4	133-P3C-R44A-15.0-15.5	15.0 - 15.5	-2.6	-3.1	JB64006-28	JB64006	04/07/2014	Remaining	N	Y		0.15	J	
1+81	312R	133-P3C-R44A	12.4	133-P3C-R44A-15.0-15.5X	15.0 - 15.5	-2.6	-3.1	JB64006-29R	JB64006R	04/07/2014	Remaining	FD	Y		0.57	J	
1+81	312R	133-P3C-R44A	12.4	133-P3C-R44A-15.5-16.0	15.5 - 16.0	-3.1	-3.6	JB64006-30	JB64006	04/07/2014	Remaining	N	Y		7.1	J	
1+82	354R	133-T44A-SW-W5	12.2	133-T44A-SW-W-17.0-17.5	17.0 - 17.5	-4.8	-5.3	JB94843-6R	JB94843R	05/15/2015	Remaining	N	Y		2.0	J	
1+83	134R	10W-P3B-L44A-SWA	11.4	10W-P3B-L44A-SWA-3.9-4.4	3.9 - 4.4	7.5	7.0	410-46939-5	410469391	07/13/2021	Remaining	N	Y		0.41	RA	
1+83	169R	133-P3BS-M44A45A-SWD	11.7	133-P3BS-M44A45A-SWD-9.6-10.1	9.7 - 10.2	2.0	1.5	410-45257-8	410452571	06/28/2021	Remaining	N	Y		9.7	J	
1+83	344R	133-T44A-SW-W1	12.2	133-T44A-SW-W-10.5-11.0	10.5 - 11.0	1.7	1.2	JB94843-2	JB94843	05/15/2015	Remaining	N	Y		< 0.24	UJ	
1+83	350R	133-T44A-SW-W3	12.2	133-T44A-SW-W-14.5-15.0	14.5 - 15.0	-2.3	-2.8	JB94843-4	JB94843	05/15/2015	Remaining	N	Y		0.32	J	
1+83	353R	133-T44A-SW-W4	12.2	133-T44A-SW-W-16.5-17.0	16.5 - 17.0	-4.3	-4.8	JB94843-5R	JB94843R	05/15/2015	Remaining	N	Y		0.59	J	
1+84	347R	133-T44A-SW-W2	12.2	133-T44A-SW-W-12.5-13.0	12.5 - 13.0	-0.3	-0.8	JB94843-3	JB94843	05/15/2015	Remaining	N	Y		0.45	J	
1+85	136R	10W-P3B-L44A-SWB	11.4	10W-P3B-L44A-SWB-6.1-6.6	6.0 - 6.5	5.4	4.9	410-46939-4	410469391	07/13/2021	Remaining	N	Y		0.78	RA	
1+86	203R	133-P3B-O45A	11.2	133-P3B-O45A-5.0-5.5	5.0 - 5.5	6.2	5.7	JB64642-3	JB64642	04/14/2014	Removed	N	Y		3.2	J	S4
1+86	203R	133-P3B-O45A	11.2	133-P3B-O45A-7.0-7.5	7.0 - 7.5	4.2	3.7	JB64642-4	JB64642	04/14/2014	Removed	N	Y		< 0.090	UJ	S4
1+86	203R	133-P3B-O45A	11.2	133-P3B-O45A-7.0-7.5X	7.0 - 7.5	4.2	3.7	JB64642-5	JB64642	04/14/2014	Removed	FD	Y		< 0.090	UJ	S4
1+86	203R	133-P3B-O45A	11.2	133-P3B-O45A-9.0-9.5	9.0 - 9.5	2.2	1.7	JB64642-6	JB64642	04/14/2014	Removed	N	Y		< 0.086	UJ	S4
1+86	203R	133-P3B-O45A	11.2	133-P3B-O45A-11.3-11.8	11.3 - 11.8	-0.1	-0.6	JB64642-7	JB64642	04/14/2014	Remaining	N	Y		< 0.089	UJ	
1+86	203R	133-P3B-O45A	11.2	133-P3B-O45A-11.8-12.3	11.8 - 12.3	-0.6	-1.1	JB64642-8R	JB64642R	04/14/2014	Remaining	N	Y		2.7	J	
1+88	139R	10W-P3B-L44A-SWC	11.5	10W-P3B-L44A-SWC-8-8.5	8.0 - 8.5	3.5	3.0	410-46939-3	410469391	07/13/2021	Remaining	N	Y		< 0.21	RA	
1+90	48R	P3BS-PDI-1+90-50R	15.6	P3BS-PDI-1+90-50R-0.5-1.0	0.5 - 1.0	15.1	14.6	410-20006-1	410191851	11/09/2020	Removed	N	Y		< 0.16	U	S1
1+90	48R	P3BS-PDI-1+90-50R	15.6	P3BS-PDI-1+90-50R-2.0-2.5	2.0 - 2.5	13.6	13.1	410-20006-2	410191851	11/09/2020	Removed	N	Y		< 0.16	U	S1
1+90	48R	P3BS-PDI-1+90-50R	15.6	P3BS-PDI-1+90-50R-4.0-4.5	4.0 - 4.5	11.6	11.1	410-20006-3	410191851	11/09/2020	Removed	N	Y		< 0.16	U	S1
1+90	48R	P3BS-PDI-1+90-50R	15.6	P3BS-PDI-1+90-50R-6.0-6.5	6.0 - 6.5	9.6	9.1	410-20006-4	410191851	11/09/2020	Removed	N	Y		< 0.16	U	S1
1+90	48R	P3BS-PDI-1+90-50R	15.6	P3BS-PDI-1+90-50R-8.0-8.5	8.0 - 8.5	7.6	7.1	410-20006-5	410191851	11/09/2020	Removed	N	Y		< 0.19	U	S1
1+90	48R	P3BS-PDI-1+90-50R	15.6	P3BS-PDI-1+90-50R-10.0-10.5	10.0 - 10.5	5.6	5.1	410-20006-6	410191851	11/09/2020	Removed	N	Y		< 1.9	U	S1
1+90	48R	P3BS-PDI-1+90-50R	15.6	P3BS-PDI-1+90-50R-12.0-12.5	12.0 - 12.5	3.6	3.1	410-20006-7	410191851	11/09/2020	Removed	N	Y		< 0.16	U	S1
1+90	48R	P3BS-PDI-1+90-50R	15.6	P3BS-PDI-1+90-50R-14.0-14.5	14.0 - 14.5	1.6	1.1	410-20006-8	410191851	11/09/2020	Remaining	N	Y		< 1.8	U	
1+90	48R	P3BS-PDI-1+90-50R	15.6	P3BS-PDI-1+90-50R-16.0-16.5	16.0 - 16.5	-0.4	-0.9	410-20006-9	410191851	11/09/2020	Remaining	N	Y		< 0.17	U	
1+90	48R	P3BS-PDI-1+90-50R	15.6	P3BS-PDI-1+90-50R-18.0-18.5	18.0 - 18.5	-2.4	-2.9	410-20006-10	410191851	11/09/2020	Remaining	N	Y		< 0.17	U	
1+90	48R	P3BS-PDI-1+90-50R	15.6	P3BS-PDI-1+90-50R-18.5-19.0	18.5 - 19.0	-2.9	-3.4	410-20006-11	410191851	11/09/2020	Remaining	N	Y		< 2.3	U	
1+90	88R	10W-K44A	15.6	10W-K44A-6.5-7.0	6.5 - 7.0	9.1	8.6	JB66773-4	JB66773	05/12/2014	Remaining	N	Y		1.1	J	
1+90	88R	10W-K44A	15.6	10W-K44A-8.5-9.0	8.5 - 9.0	7.1	6.6	JB66773-6	JB66773	05/12/2014	Remaining	N	Y		1.4	J	
1+90	88R	10W-K44A	15.6	10W-K44A-9.5-10.0	9.5 - 10.0	6.1	5.6	JB66773-7	JB66773	05/12/2014	Remaining	N	Y		0.61	J	
1+90	88R	10W-K44A	15.6	10W-K44A-10.5-11.0	10.5 - 11.0	5.1	4.6	JB66773-8	JB66773	05/12/2014	Remaining	N	Y		0.95	J	
1+90	88R	10W-K44A	15.6	10W-K44A-12.5-13.0	12.5 - 13.0	3.1	2.6	JB66773-9	JB66773	05/12/2014	Remaining	N	Y		0.46	J	

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
1+90	88R	10W-K44A	15.6	10W-K44A-14.5-15.0	14.5 - 15.0	1.1	0.6	JB66773-10	JB66773	05/12/2014	Remaining	N	Y		0.56	J		
1+90	88R	10W-K44A	15.6	10W-K44A-16.5-17.0	16.5 - 17.0	-0.9	-1.4	JB66773-11	JB66773	05/12/2014	Remaining	N	Y		1.0	J		
1+90	88R	10W-K44A	15.6	10W-K44A-18.5-19.0	18.5 - 19.0	-2.9	-3.4	JB66773-12	JB66773	05/12/2014	Remaining	N	Y		1.0	J		
1+90	88R	10W-K44A	15.6	10W-K44A-20.5-21.0	20.5 - 21.0	-4.9	-5.4	JB66773-13	JB66773	05/12/2014	Remaining	N	Y		3.0	J		
1+90	88R	10W-K44A	15.6	10W-K44A-21.0-21.5	21.0 - 21.5	-5.4	-5.9	JB66773-14R	JB66773R	05/12/2014	Remaining	N	Y		11.1	J		
1+92	284R	133-B6-EX	10.8	133-B6-EX-10-10.5	10.0 - 10.5	0.8	0.3	410-36494-1	410364941	04/19/2021	Remaining	N	Y		< 0.69	RA		
1+92	284R	133-B6-EX	10.8	133-B6-EX-14.1-14.6	14.1 - 14.6	-3.3	-3.8	410-36494-2	410364941	04/19/2021	Remaining	N	Y		< 0.17	RA		
1+93	285R	133-B6	10.8	PPG-133-B6E_ 8.0-8.5	8.0 - 8.5	2.8	2.3	793184	A808	12/13/2006	Remaining	N	Y		< 3.1	UJ		
1+93	285R	133-B6	10.8	PPG-133-B6F_ 12.0-13.0	12.0 - 13.0	-1.2	-2.2	793185	A808	12/13/2006	Remaining	N	Y		< 2.44	UJ		
1+93	285R	133-B6	10.8	PPG-133-B6FD_ 12.0-13.0	12.0 - 13.0	-1.2	-2.2	793186	A808	12/13/2006	Remaining	FD	Y		< 2.4	UJ		
1+93	285R	133-B6	10.8	PPG-133-B6G_ 13.9-14.4	13.9 - 14.4	-3.1	-3.6	793187	A808	12/13/2006	Remaining	N	Y		< 5.85	UJ		
1+93	285R	133-B6	10.8	PPG-133-B6H_ 18.0-18.5	18.0 - 18.5	-7.2	-7.7	793188	A808	12/13/2006	Remaining	N	Y		< 3.77	UJ		
1+93	285R	133-B6	10.8	PPG-133-B6I_ 22.0-22.5	22.0 - 22.5	-11.2	-11.7	793189	A808	12/13/2006	Remaining	N	Y		< 3.1	UJ		
1+93	285R	133-B6	10.8	PPG-133-B6J_ 24.5-25.5	24.5 - 25.5	-13.7	-14.7	793190	A808	12/13/2006	Remaining	N	Y		< 2.36	UJ		
1+94	138R	10W-P3B-L44A-SWD	11.7	10W-P3B-L44A-SWD-10.4-10.9	10.5 - 11.0	1.2	0.7	410-46939-2	410469391	07/13/2021	Remaining	N	Y		0.98	RA		
2+01	3R	10W-H43A	15.6	10W-H43A-2.5-3.0	2.5 - 3.0	13.1	12.6	JB66966-3	JB66966	05/14/2014	Remaining	N	Y		< 0.19	UJ		
2+01	3R	10W-H43A	15.6	10W-H43A-4.5-5.0	4.5 - 5.0	11.1	10.6	JB66966-4R	JB66966R	05/14/2014	Remaining	N	Y		0.71	J		
2+01	3R	10W-H43A	15.6	10W-H43A-5.0-5.5	5.0 - 5.5	10.6	10.1	JB66966-5R	JB66966R	05/14/2014	Remaining	N	Y		0.16	J		
2+01	3R	10W-H43A	15.6	10W-H43A-6.5-7.0	6.5 - 7.0	9.1	8.6	JB66966-6	JB66966	05/14/2014	Remaining	N	Y		0.24	J		
2+01	3R	10W-H43A	15.6	10W-H43A-7.5-8.0	7.5 - 8.0	8.1	7.6	JB66966-7R	JB66966R	05/14/2014	Remaining	N	Y		0.15	J		
2+01	3R	10W-H43A	15.6	10W-H43A-8.5-9.0	8.5 - 9.0	7.1	6.6	JB66966-8R	JB66966R	05/14/2014	Remaining	N	Y		0.58	J		
2+01	3R	10W-H43A	15.6	10W-H43A-10.5-11.0	10.5 - 11.0	5.1	4.6	JB66966-9R	JB66966R	05/14/2014	Remaining	N	Y		0.54	J		
2+01	3R	10W-H43A	15.6	10W-H43A-12.0-12.5	12.0 - 12.5	3.6	3.1	JB66966-10R	JB66966R	05/14/2014	Remaining	N	Y		0.31	J		
2+01	3R	10W-H43A	15.6	10W-H43A-12.5-13.0	12.5 - 13.0	3.1	2.6	JB66966-11R	JB66966R	05/14/2014	Remaining	N	Y		1.6	J		
2+02	124R	10W-L43A	11.6	10W-L43A-0.5-1.0	0.5 - 1.0	11.1	10.6	JB66880-16	JB66880	05/13/2014	Removed	N	Y		0.26	J	S1	
2+02	124R	10W-L43A	11.6	10W-L43A-2.5-3.0	2.5 -3.0	9.1	8.6	JB66880-17	JB66880	05/13/2014	Removed	N	Y		< 0.20	UJ	S1	
2+02	124R	10W-L43A	11.6	10W-L43A-4.5-5.0	4.5 - 5.0	7.1	6.6	JB66880-18	JB66880	05/13/2014	Removed	N	Y		0.66	J	S1	
2+02	124R	10W-L43A	11.6	10W-L43A-6.5-7.0	6.5 - 7.0	5.1	4.6	JB66880-19	JB66880	05/13/2014	Removed	N	Y		0.42	J	S1	
2+02	124R	10W-L43A	11.6	10W-L43A-8.5-9.0	8.5 - 9.0	3.1	2.6	JB66880-20T	JB66880T	05/13/2014	Removed	N	Y		0.27	J	S1	
2+02	124R	10W-L43A	11.6	10W-L43A-10.0-10.5	10.0 - 10.5	1.6	1.1	JB66880-21	JB66880	05/13/2014	Removed	N	Y		< 0.23	UJ	S1	
2+02	124R	10W-L43A	11.6	10W-L43A-10.0-10.5X	10.0 - 10.5	1.6	1.1	JB66880-22	JB66880	05/13/2014	Removed	FD	Y		0.27	J	S1	
2+02	124R	10W-L43A	11.6	10W-L43A-10.5-11.0	10.5 - 11.0	1.1	0.6	JB66880-23	JB66880	05/13/2014	Remaining	N	Y		0.56	J		
2+02	124R	10W-L43A	11.6	10W-L43A-12.5-13.0	12.5 - 13.0	-0.9	-1.4	JB66880-24T	JB66880T	05/13/2014	Remaining	N	Y		0.72	J		
2+02	124R	10W-L43A	11.6	10W-L43A-14.0-14.5	14.0 - 14.5	-2.4	-2.9	JB66880-25	JB66880	05/13/2014	Remaining	N	Y		0.42	J		
2+02	124R	10W-L43A	11.6	10W-L43A-14.5-15.0	14.5 - 15.0	-2.9	-3.4	JB66880-26	JB66880	05/13/2014	Remaining	N	Y		< 0.30	UJ		
2+04	326R	133-S43A-SW-W	12.2	133-S43A-SW-W-8.5-9.0	8.5 - 9.0	3.7	3.2	JB96575-6	JB96575	06/09/2015	Remaining	N	Y		< 0.27	RA		
2+05	32R	P3BS-PDI-2+05-30R	15.7	P3BS-PDI-2+05-30R-0.5-1.0	0.5 - 1.0	15.2	14.7	410-20158-1	410201581	11/10/2020	Removed	N	Y		3.4		S1	
2+05	32R	P3BS-PDI-2+05-30R	15.7	P3BS-PDI-2+05-30R-2.0-2.5	2.0 - 2.5	13.7	13.2	410-20158-2	410201581	11/10/2020	Removed	N	Y		< 0.78	U	S1	
2+05	32R	P3BS-PDI-2+05-30R	15.7	P3BS-PDI-2+05-30R-2.0-2.5X	2.0 - 2.5	13.7	13.2	410-20158-3	410201581	11/10/2020	Removed	FD	Y		< 0.77	U	S1	
2+05	32R	P3BS-PDI-2+05-30R	15.7	P3BS-PDI-2+05-30R-4.0-4.5	4.0 - 4.5	11.7	11.2	410-20158-4	410201581	11/10/2020	Removed	N	Y		< 0.16	U	S1	
2+05	32R	P3BS-PDI-2+05-30R	15.7	P3BS-PDI-2+05-30R-6.0-6.5	6.0 - 6.5	9.7	9.2	410-20158-5	410201581	11/10/2020	Removed	N	Y		< 0.16	U	S1	
2+05	32R	P3BS-PDI-2+05-30R	15.7	P3BS-PDI-2+05-30R-8.0-8.5	8.0 - 8.5	7.7	7.2	410-20158-6	410201581	11/10/2020	Removed	N	Y		< 1.8	U	S1	
2+05	32R	P3BS-PDI-2+05-30R	15.7	P3BS-PDI-2+05-30R-10.0-10.5	10.0 - 10.5	5.7	5.2	410-20158-7	410201581	11/10/2020	Removed	N	Y		< 0.84	U	S1	
2+05	32R	P3BS-PDI-2+05-30R	15.7	P3BS-PDI-2+05-30R-12.0-12.5	12.0 - 12.5	3.7	3.2	410-20158-8	410201581	11/10/2020	Removed	N	Y		< 1.1	U	S1	
2+05	32R	P3BS-PDI-2+05-30R	15.7	P3BS-PDI-2+05-30R-14.0-14.5	14.0 - 14.5	1.7	1.2	410-20158-9	410201581	11/10/2020	Remaining	N	Y		< 0.96	U		
2+05	32R	P3BS-PDI-2+05-30R	15.7	P3BS-PDI-2+05-30R-16.0-16.5	16.0 - 16.5	-0.3	-0.8	410-20158-10	410201581	11/10/2020	Remaining	N	Y		< 0.16	U		
2+05	32R	P3BS-PDI-2+05-30R	15.7	P3BS-PDI-2+05-30R-17.0-17.5	17.0 - 17.5	-1.3	-1.8	410-20158-11	410201581	11/10/2020	Remaining	N	Y		< 0.18	U		
2+05	32R	P3BS-PDI-2+05-30R	15.7	P3BS-PDI-2+05-30R-17.5-18.0	17.5 - 18.0	-1.8	-2.3	410-20158-12	410201581	11/10/2020	Remaining	N	Y		< 2.4	U		

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
2+05	48R	10W-I43A	15.6	10W-I43A-14.5-15.0	14.5 - 15.0	1.1	0.6	JB66966-22R	JB66966R	05/14/2014	Remaining	N	Y		15.2	J		
2+05	48R	10W-I43A	15.6	10W-I43A-15.5-16.0	15.5 - 16.0	0.1	-0.4	JB66966-23	JB66966	05/14/2014	Remaining	N	Y		12.4	J		
2+05	48R	10W-I43A	15.6	10W-I43A-16.0-16.5	16.0 - 16.5	-0.4	-0.9	JB66966-24R	JB66966R	05/14/2014	Remaining	N	Y		7.7	J		
2+07	74R	P3BS-PDI-2+05-65R	15.6	P3BS-PDI-2+05-65R-0.5-1.0	0.5 - 1.0	15.1	14.6	410-19854-1	410198541	11/06/2020	Removed	N	Y		< 0.15	UJ	S1	
2+07	74R	P3BS-PDI-2+05-65R	15.6	P3BS-PDI-2+05-65R-2.0-2.5	2.0 - 2.5	13.6	13.1	410-19854-2	410198541	11/06/2020	Removed	N	Y		< 0.15	UJ	S1	
2+07	74R	P3BS-PDI-2+05-65R	15.6	P3BS-PDI-2+05-65R-4.0-4.5	4.0 - 4.5	11.6	11.1	410-19854-3	410198541	11/06/2020	Removed	N	Y		7.2	J-	S1	
2+07	74R	P3BS-PDI-2+05-65R	15.6	P3BS-PDI-2+05-65R-6.0-6.5	6.0 - 6.5	9.6	9.6	410-19854-4	410198541	11/06/2020	Removed	N	Y		< 0.16	UJ	S1	
2+07	74R	P3BS-PDI-2+05-65R	15.6	P3BS-PDI-2+05-65R-8.0-8.5	8.0 - 8.5	7.6	7.1	410-19854-5	410198541	11/06/2020	Removed	N	Y		< 0.15	UJ	S1	
2+07	74R	P3BS-PDI-2+05-65R	15.6	P3BS-PDI-2+05-65R-10.0-10.5	10.0 - 10.5	5.6	5.1	410-19854-6	410198541	11/06/2020	Removed	N	Y		< 0.16	UJ	S1	
2+07	74R	P3BS-PDI-2+05-65R	15.6	P3BS-PDI-2+05-65R-12.0-12.5	12.0 - 12.5	3.6	3.1	410-19854-7	410198541	11/06/2020	Removed	N	Y		< 0.17	UJ	S1	
2+07	74R	P3BS-PDI-2+05-65R	15.6	P3BS-PDI-2+05-65R-14.0-14.5	14.0 - 14.5	1.6	1.1	410-19854-8	410198541	11/06/2020	Removed	N	Y		< 0.16	UJ	S1	
2+07	74R	P3BS-PDI-2+05-65R	15.6	P3BS-PDI-2+05-65R-15.0-15.5	15.0 - 15.5	0.6	0.1	410-19854-9	410198541	11/06/2020	Remaining	N	Y		< 0.17	UJ		
2+07	74R	P3BS-PDI-2+05-65R	15.6	P3BS-PDI-2+05-65R-15.5-16.0	15.5 - 16.0	0.1	-0.4	410-19854-10	410198541	11/06/2020	Remaining	N	Y		2.8	J-		
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-1.0	1.0 - 1.5	14.6	14.1	JB3512-1	JB3512	04/05/2012	Remaining	N	Y		< 0.22	U		
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-3.0	3.0 - 3.5	12.6	12.1	JB3512-2	JB3512	04/05/2012	Remaining	N	Y		0.42	J		
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-5.0	5.0 - 5.5	10.6	10.1	JB3512-3	JB3512	04/05/2012	Remaining	N	Y		< 0.23	U		
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-7.0	7.0 - 7.5	8.6	8.1	JB3512-4	JB3512	04/05/2012	Remaining	N	Y		0.41	J		
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-11.0	11.0 - 11.5	4.6	4.1	JB3512-5	JB3512	04/05/2012	Remaining	N	Y		< 0.22	U		
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-13.0	13.0 - 13.5	2.6	2.1	JB3512-6	JB3512	04/05/2012	Remaining	N	Y		< 0.26	U		
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-15.0	15.0 - 15.5	0.6	0.1	JB3512-7	JB3512	04/05/2012	Remaining	N	Y		< 0.23	U		
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-17.0	17.0 - 17.5	-1.4	-1.9	JB3512-8	JB3512	04/05/2012	Remaining	N	Y		< 0.23	U		
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-19.0	19.0 - 19.5	-3.4	-3.9	JB3512-9	JB3512	04/05/2012	Remaining	N	Y		< 0.29	U		
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-21.0	21.0 - 21.5	-5.4	-5.9	JB3512-10	JB3512	04/05/2012	Remaining	N	Y		< 0.32	U		
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-23.0	23.0 - 23.5	-7.4	-7.9	JB3512-11	JB3512	04/05/2012	Remaining	N	Y		0.36	J		
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-23.0X	23.0 - 23.5	-7.4	-7.9	JB3512-12	JB3512	04/05/2012	Remaining	FD	Y		< 0.22	U		
2+09	162R	133-P3B-M43A	12.1	133-P3B-M43A-12.5-13.0	12.5 - 13.0	-0.4	-0.9	JB64513-14	JB64513	04/11/2014	Remaining	N	Y		0.17	RA		
2+09	162R	133-P3B-M43A	12.1	133-P3B-M43A-13.3-13.8	13.3 - 13.8	-1.2	-1.7	JB64513-15	JB64513	04/11/2014	Remaining	N	Y		< 0.096	RA		
2+09	162R	133-P3B-M43A	12.1	133-P3B-M43A-13.3-13.8X	13.3 - 13.8	-1.2	-1.7	JB64513-16R	JB64513R	04/11/2014	Remaining	FD	Y		1.2	RA		
2+09	162R	133-P3B-M43A	12.1	133-P3B-M43A-13.8-14.3	13.8 - 14.3	-1.7	-2.2	JB64513-17R	JB64513R	04/11/2014	Remaining	N	Y		1.7	RA		
2+09	162R	133-P3B-M43A-EX	12.1	133-P3B-M43A-EX-11.4-11.9	11.4 - 11.9	0.7	0.2	410-46406-1	410464061	07/08/2021	Remaining	N	Y		< 0.25	UJ		
2+10	193R	133-P3B-N43A	11.5	133-P3B-N43A-10.3-10.8	10.3 - 10.8	1.2	0.7	JB64330-8	JB64330	04/10/2014	Removed	N	Y		1.6	RA	S2	
2+10	193R	133-P3B-N43A	11.5	133-P3B-N43A-11.0-11.5	11.0 - 11.5	0.5	0.0	JB64330-9	JB64330	04/10/2014	Remaining	N	Y		0.51	RA		
2+10	193R	133-P3B-N43A	11.5	133-P3B-N43A-11.5-12.0	11.5 - 12.0	0.0	-0.5	JB64330-10	JB64330	04/10/2014	Remaining	N	Y		3.6	RA		
2+10	222R	133-P3B-O43A-EX	11.3	133-P3B-O43A-EX-12.9-13.4	13.0 - 13.5	-1.7	-2.2	410-44444-1	410444441	06/22/2021	Remaining	N	Y		< 0.42	RA		
2+10	252R	133-P3B-P43A-EX	10.9	133-P3B-P43A-EX-14.5-15.0	14.5 - 15.0	-3.6	-4.1	410-42744-1	410427441	06/08/2021	Remaining	N	Y		0.78	J-		
2+10	342R	133-P3C-S43A	12.2	133-P3C-S43A-9.5-10.0	9.5 - 10.0	2.7	2.2	JB63393-15R	JB63393R	03/31/2014	Remaining	N	Y		0.47	J		
2+10	342R	133-P3C-S43A	12.2	133-P3C-S43A-11.5-12.0	11.5 - 12.0	0.7	0.2	JB63393-16R	JB63393R	03/31/2014	Remaining	N	Y		0.23	J		
2+10	342R	133-P3C-S43A	12.2	133-P3C-S43A-13.5-14.0	13.5 - 14.0	-1.3	-1.8	JB63393-17	JB63393	03/31/2014	Remaining	N	Y		0.11	J		
2+10	342R	133-P3C-S43A	12.2	133-P3C-S43A-15.5-16.0	15.5 - 16.0	-3.3	-3.8	JB63393-18R	JB63393R	03/31/2014	Remaining	N	Y		0.24	J		
2+10	342R	133-P3C-S43A	12.2	133-P3C-S43A-16.2-16.7	16.2 - 16.7	-4.0	-4.5	JB63393-19R	JB63393R	03/31/2014	Remaining	N	Y		0.55	J		
2+10	342R	133-P3C-S43A	12.2	133-P3C-S43A-16.7-17.2	16.7 - 17.2	-4.5	-5.0	JB63393-20	JB63393	03/31/2014	Remaining	N	Y		1.9	J		
2+11	312R	133-P3C-R43A	12.3	133-P3C-R43A-6.0-6.5	6.0 - 6.5	6.3	5.8	JB63393-3R	JB63393R	03/31/2014	Remaining	N	Y		0.54	J		
2+11	312R	133-P3C-R43A	12.3	133-P3C-R43A-8.0-8.5	8.0 - 8.5	4.3	3.8	JB63393-4R	JB63393R	03/31/2014	Remaining	N	Y		1.1	J		
2+11	312R	133-P3C-R43A	12.3	133-P3C-R43A-10.0-10.5	10.0 - 10.5	2.3	1.8	JB63393-5R	JB63393R	03/31/2014	Remaining	N	Y		1.4	J		
2+11	312R	133-P3C-R43A	12.3	133-P3C-R43A-12.0-12.5	12.0 - 12.5	0.3	-0.2	JB63393-6R	JB63393R	03/31/2014	Remaining	N	Y		1.8	J		
2+11	312R	133-P3C-R43A	12.3	133-P3C-R43A-12.0-12.5X	12.0 - 12.5	0.3	-0.2	JB63393-10R	JB63393R	03/31/2014	Remaining	FD	Y		0.29	J		
2+11	312R	133-P3C-R43A	12.3	133-P3C-R43A-14.0-14.5	14.0 - 14.5	-1.7	-2.2	JB63393-7R	JB63393R	03/31/2014	Remaining	N	Y		0.30	J		
2+11	312R	133-P3C-R43A	12.3	133-P3C-R43A-16.0-16.5	16.0 - 16.5	-3.7	-4.2	JB63393-8R	JB63393R	03/31/2014	Remaining	N	Y		0.53	J		

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
2+11	312R	133-P3C-R43A	12.3	133-P3C-R43A-16.5-17.0	16.5 - 17.0	-4.2	-4.7	JB63393-9R	JB63393R	03/31/2014	Remaining	N	Y		1.9	J		
2+12	283R	P4-HAL-Q43A	11.3	P4-HAL-Q43A-4.5-5.0	4.5 - 5.0	6.8	6.3	JB76021-14R	JB76021R	09/09/2014	Removed	N	Y		4.0	J		
2+12	283R	P4-HAL-Q43A	11.3	P4-HAL-Q43A-6.5-7.0	6.5 - 7.0	4.8	4.3	JB76021-15R	JB76021R	09/09/2014	Removed	N	Y		0.30	J	S6	
2+12	283R	P4-HAL-Q43A	11.3	P4-HAL-Q43A-8.5-9.0	8.5 - 9.0	2.8	2.3	JB76021-16R	JB76021R	09/09/2014	Remaining	N	Y		0.23	J		
2+12	283R	P4-HAL-Q43A	11.3	P4-HAL-Q43A-10.5-11.0	10.5 - 11.0	0.8	0.3	JB76021-17R	JB76021R	09/09/2014	Remaining	N	Y		0.32	J		
2+12	283R	P4-HAL-Q43A	11.3	P4-HAL-Q43A-12.5-13.0	12.5 - 13.0	-1.2	-1.7	JB76021-18R	JB76021R	09/09/2014	Remaining	N	Y		< 0.19	UJ		
2+12	283R	P4-HAL-Q43A	11.3	P4-HAL-Q43A-14.0-14.5	14.0 - 14.5	-2.7	-3.2	JB76021-19	JB76021	09/09/2014	Remaining	N	Y		< 0.20	UJ		
2+12	283R	P4-HAL-Q43A	11.3	P4-HAL-Q43A-14.5-15.0	14.5 - 15.0	-3.2	-3.7	JB76021-20	JB76021	09/09/2014	Remaining	N	Y		0.59	J		
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-0.5-1.0	0.5 - 1.0	15.1	14.6	410-20008-1	410200081	11/09/2020	Removed	N	Y		1.7	RA	S1	
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-2.0-2.5	2.0 - 2.5	13.6	13.1	410-20008-2	410200081	11/09/2020	Removed	N	Y		2.6	RA	S1	
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-2.0-2.5X	2.0 - 2.5	13.6	13.1	410-20008-3	410200081	11/09/2020	Removed	FD	Y		2.2	RA	S1	
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-4.0-4.5	4.0 - 4.5	11.6	11.1	410-20008-4	410200081	11/09/2020	Removed	N	Y		0.45	RA	S1	
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-6.0-6.5	6.0 - 6.5	9.6	9.1	410-20008-5	410200081	11/09/2020	Removed	N	Y		< 0.15	RA	S1	
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-8.0-8.5	8.0 - 8.5	7.6	7.1	410-20008-6	410200081	11/09/2020	Removed	N	Y		< 0.15	RA	S1	
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-10.0-10.5	10.0 - 10.5	5.6	5.1	410-20008-7	410200081	11/09/2020	Removed	N	Y		2.3	RA	S1	
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-12.0-12.5	12.0 - 12.5	3.6	3.1	410-20008-8	410200081	11/09/2020	Removed	N	Y		3.3	RA	S1	
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-14.0-14.5	14.0 - 14.5	1.6	1.1	410-20008-9	410200081	11/09/2020	Remaining	N	Y		< 0.61	RA		
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-16.0-16.5	16.0 - 16.5	-0.4	-0.9	410-20008-10	410200081	11/09/2020	Remaining	N	Y		< 0.18	RA		
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-18.0-18.5	18.0 - 18.5	-2.4	-2.9	410-20008-11	410200081	11/09/2020	Remaining	N	Y		< 0.33	RA		
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-18.5-19.0	18.5 - 19.0	-2.9	-3.4	410-20008-12	410200081	11/09/2020	Remaining	N	Y		0.47	RA		
2+24	131R	P3BS-PDI-2+10-130R	12.6	P3BS-PDI-2+10-130R-4.1-4.6	4.1 - 4.6	8.5	8.0	410-14149-1	410141461	09/16/2020	Removed	N	Y		< 0.18	RA	S1	
2+24	131R	P3BS-PDI-2+10-130R	12.6	P3BS-PDI-2+10-130R-6.1-6.6	6.1 - 6.6	6.5	6.0	410-14149-2	410141461	09/16/2020	Removed	N	Y		< 0.21	RA	S1	
2+24	131R	P3BS-PDI-2+10-130R	12.6	P3BS-PDI-2+10-130R-8.1-8.6	8.1 - 8.6	4.5	4.0	410-14149-3	410141461	09/16/2020	Removed	N	Y		< 0.19	RA	S1	
2+24	131R	P3BS-PDI-2+10-130R	12.6	P3BS-PDI-2+10-130R-10.1-10.6	10.1 - 10.6	2.5	2.0	410-14149-4	410141461	09/16/2020	Removed	N	Y		< 0.18	RA	S1	
2+26	133R	133-P3B-M42A	13.5	133-P3B-M42A-13.0-13.5	13.0 - 13.5	0.5	0.0	JB64513-8R	JB64513R	04/11/2014	Remaining	N	Y		0.50	RA		
2+26	133R	133-P3B-M42A	13.5	133-P3B-M42A-14.8-15.3	14.8 - 15.3	-1.3	-1.8	JB64513-9R	JB64513R	04/11/2014	Remaining	N	Y		1.1	RA		
2+26	133R	133-P3B-M42A	13.5	133-P3B-M42A-15.3-15.8	15.3 - 15.8	-1.8	-2.3	JB64513-10R	JB64513R	04/11/2014	Remaining	N	Y		2.6	RA		
2+26	133R	133-P3B-M42A	13.5	133-P3B-M42A-15.8-16.3	15.8 - 16.3	-2.3	-2.8	JB64513-11R	JB64513R	04/11/2014	Remaining	N	Y		1.7	RA		
2+36	313R	133-HSS-R42A-PB	10.9	133-HSS-R42A-PB-7.1-7.6	7.1 - 7.6	3.8	3.3	JB96908-3	JB96908	06/12/2015	Remaining	N	Y		< 0.22	UJ		
2+39	267R	133-HSS-P42A-SW-E1	11.4	133-HSS-P42A-SW-E-8.8-9.3	8.8 - 9.3	2.6	2.1	JB97371-1R	JB97371R	06/17/2015	Remaining	N	Y		< 0.29	RA		
2+39	269R	133-HSS-P42A-SW-E2	11.4	133-HSS-P42A-SW-E-6.8-7.3	6.8 - 7.3	4.6	4.1	JB97371-2R	JB97371R	06/17/2015	Remaining	N	Y		0.79	RA		
2+40	165R	133-P3B-M42A-EX	13.3	133-P3B-M42A-EX-10.8-11.3	11.1 - 11.6	2.2	1.7	410-46406-4	410464061	07/08/2021	Remaining	N	Y		0.42	J		
2+40	254R	133-HSS-P42A-PB	11.4	133-HSS-P42A-PB-9.3-9.8	9.3 - 9.8	2.1	1.6	JB96908-2R	JB96908R	06/12/2015	Remaining	N	Y		0.47	J		
2+40	79R	P3BS-PDI-2+40-80R	15.4	P3BS-PDI-2+40-80R-6.0-6.5	6.0 - 6.5	9.4	8.9	410-19855-4	410198551	11/06/2020	Remaining	N	Y		< 0.16	UJ		
2+40	79R	P3BS-PDI-2+40-80R	15.4	P3BS-PDI-2+40-80R-6.0-6.5X	6.0 - 6.5	9.4	8.9	410-19855-5	410198551	11/06/2020	Remaining	FD	Y		< 0.16	UJ		
2+40	79R	P3BS-PDI-2+40-80R	15.4	P3BS-PDI-2+40-80R-8.0-8.5	8.0 - 8.5	7.4	6.9	410-19855-6	410198551	11/06/2020	Remaining	N	Y		< 0.16	UJ		
2+40	79R	P3BS-PDI-2+40-80R	15.4	P3BS-PDI-2+40-80R-10.0-10.5	10.0 - 10.5	5.4	4.9	410-19855-7	410198551	11/06/2020	Remaining	N	Y		< 0.16	UJ		
2+40	79R	P3BS-PDI-2+40-80R	15.4	P3BS-PDI-2+40-80R-12.0-12.5	12.0 - 12.5	3.4	2.9	410-19855-8	410198551	11/06/2020	Remaining	N	Y		< 0.16	UJ		
2+40	79R	P3BS-PDI-2+40-80R	15.4	P3BS-PDI-2+40-80R-14.0-14.5	14.0 - 14.5	1.4	0.9	410-19855-9	410198551	11/06/2020	Remaining	N	Y		< 0.15	UJ		
2+40	79R	P3BS-PDI-2+40-80R	15.4	P3BS-PDI-2+40-80R-16.0-16.5	16.0 - 16.5	-0.6	-1.1	410-19855-10	410198551	11/06/2020	Remaining	N	Y		< 0.17	UJ		
2+40	79R	P3BS-PDI-2+40-80R	15.4	P3BS-PDI-2+40-80R-17.5-18.0	17.5 - 18.0	-2.1	-2.6	410-19855-11	410198551	11/06/2020	Remaining	N	Y		< 0.20	UJ		
2+40	79R	P3BS-PDI-2+40-80R	15.4	P3BS-PDI-2+40-80R-18.0-18.5	18.0 - 18.5	-2.6	-3.1	410-19855-12	410198551	11/06/2020	Remaining	N	Y		< 1.2	UJ		
2+41	192R	133-P3B-N42A	11.2	133-P3B-N42A-7.0-7.5	7.0 - 7.5	4.2	3.7	JB64330-3	JB64330	04/10/2014	Removed	N	Y		6.5	RA	S2	
2+41	192R	133-P3B-N42A	11.2	133-P3B-N42A-9.0-9.5	9.0 - 9.5	2.2	1.7	JB64330-4	JB64330	04/10/2014	Remaining	N	Y		0.14	RA		
2+41	192R	133-P3B-N42A	11.2	133-P3B-N42A-10.3-10.8	10.3 - 10.8	0.9	0.4	JB64330-5	JB64330	04/10/2014	Remaining	N	Y		3.5	RA		
2+41	192R	133-P3B-N42A	11.2	133-P3B-N42A-10.8-11.3	10.8 - 11.3	0.4	-0.1	JB64330-6	JB64330	04/10/2014	Remaining	N	Y		4.1	RA		
2+44	283R	P4-HAL-Q42A	11.5	P4-HAL-Q42A-6.5-7.0	6.5 - 7.0	5.0	4.5	JB75934-14R	JB75934R	09/08/2014	Remaining	N	Y		1.4	RA		
2+44	283R	P4-HAL-Q42A	11.5	P4-HAL-Q42A-8.5-9.0	8.5 - 9.0	3.0	2.5	JB75934-15	JB75934	09/08/2014	Remaining	N	Y		2.2	RA		

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
2+44	283R	P4-HAL-Q42A	11.5	P4-HAL-Q42A-10.5-11.0	10.5 - 11.0	1.0	0.5	JB75934-16	JB75934	09/08/2014	Remaining	N	Y		< 0.26	RA		
2+44	283R	P4-HAL-Q42A	11.5	P4-HAL-Q42A-12.5-13.0	12.5 - 13.0	-1.0	-1.5	JB75934-17R	JB75934R	09/08/2014	Remaining	N	Y		< 0.21	RA		
2+44	283R	P4-HAL-Q42A	11.5	P4-HAL-Q42A-14.5-15.0	14.5 - 15.0	-3.0	-3.5	JB75934-18	JB75934	09/08/2014	Remaining	N	Y		< 0.20	RA		
2+44	283R	P4-HAL-Q42A	11.5	P4-HAL-Q42A-14.5-15.0X	14.5 - 15.0	-3.0	-3.5	JB75934-19R	JB75934R	09/08/2014	Remaining	FD	Y		< 0.19	RA		
2+44	283R	P4-HAL-Q42A	11.5	P4-HAL-Q42A-15.0-15.5	15.0 - 15.5	-3.5	-4.0	JB75934-20R	JB75934R	09/08/2014	Remaining	N	Y		< 0.21	RA		
2+44	283R	P4-HAL-Q42A	11.5	P4-HAL-Q42A-15.5-16.0	15.5 - 16.0	-4.0	-4.5	JB75934-21	JB75934	09/08/2014	Remaining	N	Y		5.0	RA		
2+46	248R	133-P3B-P42A	11.4	133-P3B-P42A-8.5-9.0	8.5 - 9.0	2.9	2.4	JB37246-1	JB37246	05/16/2013	Remaining	N	Y		0.63			
2+46	248R	133-P3B-P42A	11.4	133-P3B-P42A-10.5-11.0	10.5 - 11.0	0.9	0.4	JB37246-6	JB37246	05/16/2013	Remaining	N	Y		0.25	J		
2+46	248R	133-P3B-P42A	11.4	133-P3B-P42A-12.7-13.2	12.7 - 13.2	-1.3	-1.8	JB37246-5	JB37246	05/16/2013	Remaining	N	Y		0.13	J		
2+46	248R	133-P3B-P42A	11.4	133-P3B-P42A-13.2-13.7	13.2 - 13.7	-1.8	-2.3	JB37246-4	JB37246	05/16/2013	Remaining	N	Y		1.1	J		
2+48	139R	P3BS-PDI-2+40-140R	15.1	P3BS-PDI-2+40-140R-0.5-1.0	0.5 - 1.0	14.6	14.1	410-19672-1	410196721	11/05/2020	Removed	N	Y		4.5	RA	S1	
2+48	139R	P3BS-PDI-2+40-140R	15.1	P3BS-PDI-2+40-140R-2.0-2.5	2.0 - 2.5	13.1	12.6	410-19672-2	410196721	11/05/2020	Removed	N	Y		5.5	RA	S1	
2+48	139R	P3BS-PDI-2+40-140R	15.1	P3BS-PDI-2+40-140R-4.0-4.5	4.0 - 4.5	11.1	10.6	410-19672-3	410196721	11/05/2020	Removed	N	Y		5.8	RA	S1	
2+48	139R	P3BS-PDI-2+40-140R	15.1	P3BS-PDI-2+40-140R-6.0-6.5	6.0 - 6.5	9.1	8.6	410-19672-4	410196721	11/05/2020	Removed	N	Y		2.1	RA	S1	
2+48	139R	P3BS-PDI-2+40-140R	15.1	P3BS-PDI-2+40-140R-8.0-8.5	8.0 - 8.5	7.1	6.6	410-19672-5	410196721	11/05/2020	Removed	N	Y		< 0.22	RA	S1	
2+48	139R	P3BS-PDI-2+40-140R	15.1	P3BS-PDI-2+40-140R-8.0-8.5X	8.0 - 8.5	7.1	6.6	410-19672-6	410196721	11/05/2020	Removed	FD	Y		< 0.24	RA	S1	
2+48	139R	P3BS-PDI-2+40-140R	15.1	P3BS-PDI-2+40-140R-10.0-10.5	10.0 - 10.5	5.1	4.6	410-19672-7	410196721	11/05/2020	Removed	N	Y		< 0.19	RA	S1	
2+48	139R	P3BS-PDI-2+40-140R	15.1	P3BS-PDI-2+40-140R-12.0-12.5	12.0 - 12.5	3.1	2.6	410-19672-8	410196721	11/05/2020	Removed	N	Y		< 0.21	RA	S6	
2+48	139R	P3BS-PDI-2+40-140R	15.1	P3BS-PDI-2+40-140R-14.0-14.5	14.0 - 14.5	1.1	0.6	410-19672-9	410196721	11/05/2020	Remaining	N	Y		17	RA		
2+48	139R	P3BS-PDI-2+40-140R	15.1	P3BS-PDI-2+40-140R-16.0-16.5	16.0 - 16.5	-0.9	-1.4	410-19672-10	410196721	11/05/2020	Remaining	N	Y		< 0.19	RA		
2+48	139R	P3BS-PDI-2+40-140R	15.1	P3BS-PDI-2+40-140R-17.5-18.0	17.5 - 18.0	-2.4	-2.9	410-19672-11	410196721	11/05/2020	Remaining	N	Y		0.59	RA		
2+48	139R	P3BS-PDI-2+40-140R	15.1	P3BS-PDI-2+40-140R-18.0-18.5	18.0 - 18.5	-2.9	-3.4	410-19672-12	410196721	11/05/2020	Remaining	N	Y		4.5	RA		
2+50	221R	133-B21	11.8	PPG-133-B21E_12.4-13.4_794155	12.4 - 13.4	-0.6	-1.6	794155	A963	12/15/2006	Remaining	N	Y		13.3	J		
2+50	221R	133-B21	11.8	PPG-133-B21ED_12.4-13.4_794156	12.4 - 13.4	-0.6	-1.6	794156	A963	12/15/2006	Remaining	FD	Y		< 5.13	UJ		
2+50	221R	133-B21	11.8	PPG-133-B21F_16.5-17.0_794157	16.5 - 17.0	-4.7	-5.2	794157	A963	12/15/2006	Remaining	N	Y		< 3.5	UJ		
2+50	221R	133-B21	11.8	PPG-133-B21G_20.5-21.0_794158	20.5 - 21.0	-8.7	-9.2	794158	A963	12/15/2006	Remaining	N	Y		< 3.9	UJ		
2+50	221R	133-B21	11.8	PPG-133-B21H_22.0-22.5_794159	22.0 - 22.5	-10.2	-10.7	794159	A963	12/15/2006	Remaining	N	Y		< 2.56	UJ		
2+50	221R	133-B21-EX	11.8	133-B21-EX-10.2-10.7	10.2 - 10.7	1.6	1.1	410-46406-5	410464061	07/08/2021	Remaining	N	Y		4.1	J		
2+55	306R	P4-HAL-R42A	10.9	P4-HAL-R42A-6.5-7.0	6.5 - 7.0	4.4	3.9	JB76177-15	JB76177	09/10/2014	Removed	N	Y		< 0.21	UJ	S2	
2+55	306R	P4-HAL-R42A	10.9	P4-HAL-R42A-8.5-9.0	8.5 - 9.0	2.4	1.9	JB76177-16R	JB76177R	09/10/2014	Remaining	N	Y		0.31	J		
2+55	306R	P4-HAL-R42A	10.9	P4-HAL-R42A-10.5-11.0	10.5 - 11.0	0.4	-0.1	JB76177-17	JB76177	09/10/2014	Remaining	N	Y		0.28	J		
2+55	306R	P4-HAL-R42A	10.9	P4-HAL-R42A-12.5-13.0	12.5 - 13.0	-1.6	-2.1	JB76177-18R	JB76177R	09/10/2014	Remaining	N	Y		0.39	J		
2+55	306R	P4-HAL-R42A	10.9	P4-HAL-R42A-14.5-15.0	14.5 - 15.0	-3.6	-4.1	JB76177-19R	JB76177R	09/10/2014	Remaining	N	Y		1.8	J		
2+55	306R	P4-HAL-R42A	10.9	P4-HAL-R42A-14.5-15.0X	14.5 - 15.0	-3.6	-4.1	JB76177-20R	JB76177R	09/10/2014	Remaining	FD	Y		0.36	J		
2+55	306R	P4-HAL-R42A	10.9	P4-HAL-R42A-15.0-15.5	15.0 - 15.5	-4.1	-4.6	JB76177-21R	JB76177R	09/10/2014	Remaining	N	Y		2.7	J		
2+60	1R	10W-H41A	15.5	10W-H41A-2.5-3.0	2.5 - 3.0	13.0	12.5	JB67098-16	JB67098	05/15/2014	Remaining	N	Y		< 0.19	UJ		
2+60	1R	10W-H41A	15.5	10W-H41A-4.5-5.0	4.5 - 5.0	11.0	10.5	JB67098-17	JB67098	05/15/2014	Remaining	N	Y		< 0.18	UJ		
2+60	1R	10W-H41A	15.5	10W-H41A-6.5-7.0	6.5 - 7.0	9.0	8.5	JB67098-18	JB67098	05/15/2014	Remaining	N	Y		0.27	J		
2+60	1R	10W-H41A	15.5	10W-H41A-8.5-9.0	8.5 - 9.0	7.0	6.5	JB67098-19	JB67098	05/15/2014	Remaining	N	Y		0.36	J		
2+60	1R	10W-H41A	15.5	10W-H41A-10.5-11.0	10.5 - 11.0	5.0	4.5	JB67098-20	JB67098	05/15/2014	Remaining	N	Y		0.99	J		
2+60	1R	10W-H41A	15.5	10W-H41A-12.3-12.8	12.3 - 12.8	3.2	2.7	JB67098-21R	JB67098R	05/15/2014	Remaining	N	Y		< 0.32	UJ		
2+60	1R	10W-H41A	15.5	10W-H41A-12.8-13.3	12.8 - 13.3	2.7	2.2	JB67098-22R	JB67098R	05/15/2014	Remaining	N	Y		< 0.20	UJ		
2+61	123R	10W-L41A	15.1	10W-L41A-6.5-7.0	6.5 - 7.0	8.6	8.1	JB67379-17	JB67379	05/20/2014	Remaining	N	Y		< 0.23	UJ		
2+61	123R	10W-L41A	15.1	10W-L41A-7.0-7.5	7.0 - 7.5	8.1	7.6	JB67379-18	JB67379	05/20/2014	Remaining	N	Y		0.41	J		
2+61	123R	10W-L41A	15.1	10W-L41A-9.0-9.5	9.0 - 9.5	6.1	5.6	JB67379-19	JB67379	05/20/2014	Remaining	N	Y		0.75	J		
2+61	123R	10W-L41A	15.1	10W-L41A-11.0-11.5	11.0 - 11.5	4.1	3.6	JB67379-20	JB67379	05/20/2014	Remaining	N	Y		0.90	J		
2+61	123R	10W-L41A	15.1	10W-L41A-13.0-13.5	13.0 - 13.5	2.1	1.6	JB67379-21	JB67379	05/20/2014	Remaining	N	Y		0.93	J		
2+61	123R	10W-L41A	15.1	10W-L41A-15.0-15.5	15.0 - 15.5	0.1	-0.4	JB67379-22	JB67379	05/20/2014	Remaining	N	Y		0.40	J		

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
2+61	123R	10W-L41A	15.1	10W-L41A-17.0-17.5	17.0 - 17.5	-1.9	-2.4	JB67379-23	JB67379	05/20/2014	Remaining	N	Y		2.8	J		
2+61	123R	10W-L41A	15.1	10W-L41A-19.0-19.5	19.0 - 19.5	-3.9	-4.4	JB67379-24	JB67379	05/20/2014	Remaining	N	Y		< 0.22	UJ		
2+61	123R	10W-L41A	15.1	10W-L41A-19.0-19.5X	19.0 - 19.5	-3.9	-4.4	JB67379-25	JB67379	05/20/2014	Remaining	FD	Y		0.93	J		
2+61	123R	10W-L41A	15.1	10W-L41A-21.0-21.5	21.0 - 21.5	-5.9	-6.4	JB67379-26	JB67379	05/20/2014	Remaining	N	Y		0.79	J		
2+61	123R	10W-L41A	15.1	10W-L41A-21.5-22.0	21.5 - 22.0	-6.4	-6.9	JB67379-27R	JB67379R	05/20/2014	Remaining	N	Y		1.8	J		
2+61	65R	10W-J41A	15.2	10W-J41A-5.0-5.5	5.0 - 5.5	10.2	9.7	JB67304-3R	JB67304R	05/19/2014	Remaining	N	Y		0.46	J		
2+61	65R	10W-J41A	15.2	10W-J41A-6.0-6.5	6.0 - 6.5	9.2	8.7	JB67304-4R	JB67304R	05/19/2014	Remaining	N	Y		0.31	J		
2+61	65R	10W-J41A	15.2	10W-J41A-6.0-6.5X	6.0 - 6.5	9.2	8.7	JB67304-5R	JB67304R	05/19/2014	Remaining	FD	Y		0.52	J		
2+61	65R	10W-J41A	15.2	10W-J41A-7.0-7.5	7.0 - 7.5	8.2	7.7	JB67304-6R	JB67304R	05/19/2014	Remaining	N	Y		0.21	J		
2+61	65R	10W-J41A	15.2	10W-J41A-8.0-8.5	8.0 - 8.5	7.2	6.7	JB67304-7	JB67304	05/19/2014	Remaining	N	Y		0.22	J		
2+61	65R	10W-J41A	15.2	10W-J41A-8.5-9.0	8.5 - 9.0	6.7	6.2	JB67304-8	JB67304	05/19/2014	Remaining	N	Y		0.49	J		
2+65	175R	133-P3B-M41A	13.7	133-P3B-M41A-10.5-11.0	10.5 - 11.0	3.2	2.7	JB42539-3R	JB42539R	07/18/2013	Removed	N	Y		0.57	J	S2	
2+65	175R	133-P3B-M41A	13.7	133-P3B-M41A-12.5-13.0	12.5 - 13.0	1.2	0.7	JB42539-4	JB42539	07/18/2013	Remaining	N	Y		0.24	J		
2+65	175R	133-P3B-M41A	13.7	133-P3B-M41A-14.5-15.0	14.5 - 15.0	-0.8	-1.3	JB42539-5	JB42539	07/18/2013	Remaining	N	Y		0.13	J		
2+65	175R	133-P3B-M41A	13.7	133-P3B-M41A-15.0-15.5	15.0 - 15.5	-1.3	-1.8	JB42539-6	JB42539	07/18/2013	Remaining	N	Y		0.27	J		
2+69	22L	P3BS-PDI-TP-2+70-20L	15.5	P3BS-PDI-TP-2+70-20L-1.0-1.5	1.0 - 1.5	14.5	14.0	410-19185-1	410191851	11/02/2020	Remaining	N	Y		< 0.16	U		
2+69	22L	P3BS-PDI-TP-2+70-20L	15.5	P3BS-PDI-TP-2+70-20L-1.0-1.5X	1.0 - 1.5	14.5	14.0	410-19185-2	410191851	11/02/2020	Remaining	FD	Y		< 0.16	U		
2+70	192R	133-P3B-N41A	12.5	133-P3B-N41A-8.0-8.5	8.0 - 8.5	4.5	4.0	JB41678-18	JB41678	07/10/2013	Removed	N	Y		0.12	J	S2	
2+70	192R	133-P3B-N41A	12.5	133-P3B-N41A-10.0-10.5	10.0 - 10.5	2.5	2.0	JB41678-17	JB41678	07/10/2013	Remaining	N	Y		0.41	J		
2+70	192R	133-P3B-N41A	12.5	133-P3B-N41A-12.0-12.5	12.0 - 12.5	0.5	0.0	JB41678-16	JB41678	07/10/2013	Remaining	N	Y		< 0.099	UJ		
2+70	192R	133-P3B-N41A	12.5	133-P3B-N41A-13.0-13.5	13.0 - 13.5	-0.5	-1.0	JB41678-15	JB41678	07/10/2013	Remaining	N	Y		0.20	J		
2+70	192R	133-P3B-N41A	12.5	133-P3B-N41A-13.5-14.0	13.5 - 14.0	-1.0	-1.5	JB41678-14	JB41678	07/10/2013	Remaining	N	Y		< 0.13	UJ		
2+70	222R	133-P3B-O41A	11.4	133-P3B-O41A-8.5-9.0	8.5 - 9.0	2.9	2.4	JB37246-15	JB37246	05/16/2013	Removed	N	Y		0.13	J	S2	
2+70	222R	133-P3B-O41A	11.4	133-P3B-O41A-10.5-11.0	10.5 - 11.0	0.9	0.4	JB37246-20	JB37246	05/16/2013	Remaining	N	Y		0.34	J		
2+70	222R	133-P3B-O41A	11.4	133-P3B-O41A-12.5-13.0	12.5 - 13.0	-1.1	-1.6	JB37246-19	JB37246	05/16/2013	Remaining	N	Y		< 0.10	U		
2+70	222R	133-P3B-O41A	11.4	133-P3B-O41A-13.0-13.5	13.0 - 13.5	-1.6	-2.1	JB37246-18	JB37246	05/16/2013	Remaining	N	Y		0.35	J		
2+70	252R	133-P3B-P41A	11.7	133-P3B-P41A-8.5-9.0	8.5 - 9.0	3.2	2.7	JB37246-7	JB37246	05/16/2013	Removed	N	Y		0.31	J	S2	
2+70	252R	133-P3B-P41A	11.7	133-P3B-P41A-10.5-11.0	10.5 - 11.0	1.2	0.7	JB37246-14	JB37246	05/16/2013	Remaining	N	Y		0.39	J		
2+70	252R	133-P3B-P41A	11.7	133-P3B-P41A-12.5-13.0	12.5 - 13.0	-0.9	-1.4	JB37246-13	JB37246	05/16/2013	Remaining	N	Y		0.18	J		
2+70	252R	133-P3B-P41A	11.7	133-P3B-P41A-13.2-13.7	13.2 - 13.7	-1.5	-2.0	JB37246-12	JB37246	05/16/2013	Remaining	N	Y		0.21	J		
2+70	252R	133-P3B-P41A	11.7	133-P3B-P41A-13.7-14.2	13.7 - 14.2	-2.0	-2.5	JB37246-11	JB37246	05/16/2013	Remaining	N	Y		< 0.11	U		
2+71	144R	P3BS-PDI-2+70-145R	14.7	P3BS-PDI-2+70-145R-0-0.5	0.0 - 0.5	14.7	14.2	410-14289-1	410142891	09/17/2020	Removed	N	Y		0.92	RA	S1	
2+71	144R	P3BS-PDI-2+70-145R	14.7	P3BS-PDI-2+70-145R-2-2.5	2.0 - 2.5	12.7	12.2	410-14289-2	410142891	09/17/2020	Removed	N	Y		3.6	RA	S1	
2+71	144R	P3BS-PDI-2+70-145R	14.7	P3BS-PDI-2+70-145R-4-4.5	4.0 - 4.5	10.7	10.2	410-14289-3	410142891	09/17/2020	Removed	N	Y		10	RA	S1	
2+71	144R	P3BS-PDI-2+70-145R	14.7	P3BS-PDI-2+70-145R-6-6.5	6.0 - 6.5	8.7	8.2	410-14289-4	410142891	09/17/2020	Removed	N	Y		0.60	RA	S1	
2+71	144R	P3BS-PDI-2+70-145R	14.7	P3BS-PDI-2+70-145R-8-8.5	8.0 - 8.5	6.7	6.2	410-14289-5	410142891	09/17/2020	Removed	N	Y		0.99	RA	S1	
2+71	144R	P3BS-PDI-2+70-145R	14.7	P3BS-PDI-2+70-145R-10.0-10.5X	8.0 - 8.5	4.7	4.2	410-14289-16	410142891	09/17/2020	Removed	FD	Y		< 0.20	RA	S1	
2+71	144R	P3BS-PDI-2+70-145R	14.7	P3BS-PDI-2+70-145R-10-10.5	10.0 - 10.5	4.7	4.2	410-14289-6	410142891	09/17/2020	Removed	N	Y		< 0.19	RA	S1	
2+71	144R	P3BS-PDI-2+70-145R	14.7	P3BS-PDI-2+70-145R-12-12.5	12.0 - 12.5	2.7	2.2	410-14289-7	410142891	09/17/2020	Remaining	N	Y		< 0.20	RA		
2+71	144R	P3BS-PDI-2+70-145R	14.7	P3BS-PDI-2+70-145R-14-14.5	14.0 - 14.5	0.7	0.2	410-14289-8	410142891	09/17/2020	Remaining	N	Y		< 0.19	RA		
2+71	144R	P3BS-PDI-2+70-145R	14.7	P3BS-PDI-2+70-145R-16-16.5	16.0 - 16.5	-1.3	-1.8	410-14289-9	410142891	09/17/2020	Remaining	N	Y		< 0.18	RA		
2+71	144R	P3BS-PDI-2+70-145R	14.7	P3BS-PDI-2+70-145R-17.5-18.0	17.5 - 18.0	-2.8	-3.3	410-14289-10	410142891	09/17/2020	Remaining	N	Y		0.82	RA		
2+71	144R	P3BS-PDI-2+70-145R	14.7	P3BS-PDI-2+70-145R-18.0-18.5	18.0 - 18.5	-3.3	-3.8	410-14289-11	410142891	09/17/2020	Remaining	N	Y		< 0.79	RA		
2+71	148R	10W-P3B-M41A-EX	14.7	10W-P3B-M41A-EX-14.8-15.3	14.9 - 15.4	-0.2	-0.7	410-47705-1	410477051	07/19/2021	Remaining	N	Y		1.5	RA		
2+72	144R	EF-24	14.7	EF-B24-16.0	16.0 - 16.5	-1.3	-1.8	460-25481-34	460254811	04/18/2011	Remaining	N	Y		< 0.93	UJ		
2+72	144R	EF-24	14.7	EF-B24-22.5	22.5 - 23.0	-7.8	-8.3	460-25481-36	460254811	04/18/2011	Remaining	N	Y		< 1.1	UJ		
2+72	144R	EF-24	14.7	EF-B24-22.5X	22.5 - 23.0	-7.8	-8.3	460-25481-37	460254811	04/18/2011	Remaining	FD	Y		< 1.5	UJ		
2+89	52R	TWA-6	15.2	TWA-B006-5.0	5.0 - 5.5	10.2	9.7	JB3579-14R	JB3579R	04/05/2012	Remaining	N	Y		0.48	J		

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
2+89	52R	TWA-6	15.2	TWA-B006-15.0	15.0 - 15.5	0.2	-0.3	JB3579-15	JB3579	04/05/2012	Remaining	N	Y		0.37	J		
2+89	52R	TWA-6	15.2	TWA-B006-17.0	17.0 - 17.5	-1.8	-2.3	JB3579-16	JB3579	04/05/2012	Remaining	N	Y		0.45	J		
2+89	52R	TWA-6	15.2	TWA-B006-20.0	20.0 - 20.5	-4.8	-5.3	JB3579-17	JB3579	04/05/2012	Remaining	N	Y		1.4	J		
2+89	52R	TWA-6	15.2	TWA-B006-22.0	22.0 - 22.5	-6.8	-7.3	JB3579-18R	JB3579R	04/05/2012	Remaining	N	Y		< 0.23	UJ		
2+93	116R	TWA-3/ICO-15	15.1	ICO-B015-10.0	10.0 - 10.5	5.1	4.6	JB3648-44R	JB3648R	04/06/2012	Remaining	N	Y		< 0.26	RA		
2+93	116R	TWA-3/ICO-15	15.1	ICO-B015-12.0	12.0 - 12.5	3.1	2.6	JB3648-45R	JB3648R	04/06/2012	Remaining	N	Y		0.70	RA		
2+93	116R	TWA-3/ICO-15	15.1	ICO-B015-15.0	15.0 - 15.5	0.1	-0.4	JB3648-46R	JB3648R	04/06/2012	Remaining	N	Y		< 0.27	RA		
2+93	116R	TWA-3/ICO-15	15.1	ICO-B015-17.0	17.0 - 17.5	-1.9	-2.4	JB3648-47R	JB3648R	04/06/2012	Remaining	N	Y		< 0.27	RA		
2+93	116R	TWA-3/ICO-15	15.1	ICO-B015-20.0	20.0 - 20.5	-4.9	-5.4	JB3648-48R	JB3648R	04/06/2012	Remaining	N	Y		0.30	RA		
2+93	116R	TWA-3/ICO-15	15.1	ICO-B015-22.0	22.0 - 22.5	-6.9	-7.4	JB3648-49R	JB3648R	04/06/2012	Remaining	N	Y		1.3	RA		
2+93	116R	TWA-3/ICO-15	15.1	ICO-B015-22.0X	22.0 - 22.5	-6.9	-7.4	JB3648-50R	JB3648R	04/06/2012	Remaining	FD	Y		< 0.36	RA		
2+94	21L	TWA-10	15.1	TWA-B010-1.0	1.0 - 1.5	14.1	13.6	JB3579-1R	JB3579R	04/05/2012	Remaining	N	Y		< 0.22	UJ		
2+94	21L	TWA-10	15.1	TWA-B010-3.0	3.0 - 3.5	12.1	11.6	JB3579-2R	JB3579R	04/05/2012	Remaining	N	Y		< 0.21	UJ		
2+94	21L	TWA-10	15.1	TWA-B010-5.0	5.0 - 5.5	10.1	9.6	JB3579-3R	JB3579R	04/05/2012	Remaining	N	Y		< 0.23	UJ		
2+94	21L	TWA-10	15.1	TWA-B010-7.0	7.0 - 7.5	8.1	7.6	JB3579-4	JB3579	04/05/2012	Remaining	N	Y		0.39	J		
2+94	21L	TWA-10	15.1	TWA-B010-10.0	10.0 - 10.5	5.1	4.6	JB3579-5R	JB3579R	04/05/2012	Remaining	N	Y		0.34	J		
2+94	21L	TWA-10	15.1	TWA-B010-12.0	12.0 - 12.5	3.1	2.6	JB3579-6R	JB3579R	04/05/2012	Remaining	N	Y		< 0.24	UJ		
2+94	21L	TWA-10	15.1	TWA-B010-15.0	15.0 - 15.5	0.1	-0.4	JB3579-7R	JB3579R	04/05/2012	Remaining	N	Y		< 0.29	UJ		
2+94	21L	TWA-10	15.1	TWA-B010-17.0	17.0 - 17.5	-1.9	-2.4	JB3579-8R	JB3579R	04/05/2012	Remaining	N	Y		0.62	J		
2+94	21L	TWA-10	15.1	TWA-B010-18.0	18.0 - 18.5	-2.9	-3.4	JB3579-9R	JB3579R	04/05/2012	Remaining	N	Y		< 0.33	UJ		
2+94	21L	TWA-10	15.1	TWA-B010-20.0	20.0 - 20.5	-4.9	-5.4	JB3579-10R	JB3579R	04/05/2012	Remaining	N	Y		0.56	J		
2+94	21L	TWA-10	15.1	TWA-B010-22.0	22.0 - 22.5	-6.9	-7.4	JB3579-11R	JB3579R	04/05/2012	Remaining	N	Y		< 0.23	UJ		
3+00	143R	P3BSPDI-TP3+00-140R1	15.0	P3BS-PDI-TP3+00-140R-EX-16.7-17.2	17.1 - 17.6	-2.1	-2.6	410-50128-3	410501281	08/05/2021	Remaining	N	Y		< 0.19	UJ		
3+00	143R	P3BSPDI-TP3+00-140R1	15.0	P3BS-PDI-TP3+00-140R-EX-17.2-17.7	17.6 - 18.1	-2.6	-3.1	410-50128-4	410501281	08/05/2021	Remaining	N	Y		3.5	J-		
3+00	162R	133-P3B-M40A	13.2	133-P3B-M40A-9.0-9.5	9.0 - 9.5	4.2	3.7	JB41259-6R	JB41259R	07/03/2013	Removed	N	Y		9.3	J	S6	
3+00	162R	133-P3B-M40A	13.2	133-P3B-M40A-10.5-11.0	10.5 - 11.0	2.7	2.2	JB41259-5R	JB41259R	07/03/2013	Remaining	N	Y		0.41	J		
3+00	162R	133-P3B-M40A	13.2	133-P3B-M40A-12.5-13.0	12.5 - 13.0	0.7	0.2	JB41259-4R	JB41259R	07/03/2013	Remaining	N	Y		0.45	J		
3+00	162R	133-P3B-M40A	13.2	133-P3B-M40A-14.5-15.0	14.5 - 15.0	-1.3	-1.8	JB41259-3	JB41259	07/03/2013	Remaining	N	Y		< 0.10	UJ		
3+00	162R	133-P3B-M40A	13.2	133-P3B-M40A-15.0-15.5	15.0 - 15.5	-1.8	-2.3	JB41259-2R	JB41259R	07/03/2013	Remaining	N	Y		0.99	J		
3+00	192R	133-P3B-N40A	10.9	133-P3B-N40A-10.5-11.0	10.5 - 11.0	0.4	-0.1	JB55750-2R	JB55750R	12/16/2013	Remaining	N	Y		< 0.084	UJ		
3+00	192R	133-P3B-N40A	10.9	133-P3B-N40A-12.5-13.0	12.5 - 13.0	-1.6	-2.1	JB55750-3R	JB55750R	12/16/2013	Remaining	N	Y		< 0.080	UJ		
3+00	192R	133-P3B-N40A	10.9	133-P3B-N40A-14.5-15.0	14.5 - 15.0	-3.6	-4.1	JB55750-4	JB55750	12/16/2013	Remaining	N	Y		0.21	J		
3+00	192R	133-P3B-N40A	10.9	133-P3B-N40A-14.5-15.0X	14.5 - 15.0	-3.6	-4.1	JB55750-5R	JB55750R	12/16/2013	Remaining	FD	Y		0.95	J		
3+00	192R	133-P3B-N40A	10.9	133-P3B-N40A-15.0-15.5	15.0 - 15.5	-4.1	-4.6	JB55750-6R	JB55750R	12/16/2013	Remaining	N	Y		0.92	J		
3+00	222R	133-P3B-O40A	11.3	133-P3B-O40A-10.0-10.5	10.0 - 10.5	1.3	0.8	JB55846-4R	JB55846R	12/17/2013	Remaining	N	Y		2.0	J		
3+00	222R	133-P3B-O40A	11.3	133-P3B-O40A-12.0-12.5	12.0 - 12.5	-0.7	-1.2	JB55846-5R	JB55846R	12/17/2013	Remaining	N	Y		1.7	J		
3+00	222R	133-P3B-O40A	11.3	133-P3B-O40A-13.5-14.0	13.5 - 14.0	-2.2	-2.7	JB55846-6	JB55846	12/17/2013	Remaining	N	Y		0.20	J		
3+00	222R	133-P3B-O40A	11.3	133-P3B-O40A-14.0-14.5	14.0 - 14.5	-2.7	-3.2	JB55846-7R	JB55846R	12/17/2013	Remaining	N	Y		0.65	J		
3+00	222R	133-P3B-O40A-EX	11.3	133-P3B-O40A-EX-8.6-9.1	8.6 - 9.1	2.7	2.2	410-46406-2	410464061	07/08/2021	Remaining	N	Y		0.63	J		
3+00	252R	133-P3B-P40A	11.7	133-P3B-P40A-6.5-7.0	6.5 - 7.0	5.2	4.7	JB55846-10R	JB55846R	12/17/2013	Removed	N	Y		1.6	J	S2	
3+00	252R	133-P3B-P40A	11.7	133-P3B-P40A-8.5-9.0	8.5 - 9.0	3.2	2.7	JB55846-11	JB55846	12/17/2013	Remaining	N	Y		0.26	J		
3+00	252R	133-P3B-P40A	11.7	133-P3B-P40A-8.5-9.0X	8.5 - 9.0	3.2	2.7	JB55846-12R	JB55846R	12/17/2013	Remaining	FD	Y		0.91	J		
3+00	252R	133-P3B-P40A	11.7	133-P3B-P40A-10.5-11.0	10.5 - 11.0	1.2	0.7	JB55846-13R	JB55846R	12/17/2013	Remaining	N	Y		0.25	J		
3+00	252R	133-P3B-P40A	11.7	133-P3B-P40A-12.5-13.0	12.5 - 13.0	-0.9	-1.4	JB55846-14R	JB55846R	12/17/2013	Remaining	N	Y		< 0.069	UJ		
3+00	252R	133-P3B-P40A	11.7	133-P3B-P40A-13.5-14.0	13.5 - 14.0	-1.9	-2.4	JB55846-15	JB55846	12/17/2013	Remaining	N	Y		0.27	J		
3+00	252R	133-P3B-P40A	11.7	133-P3B-P40A-14.0-14.5	14.0 - 14.5	-2.4	-2.9	JB55846-16R	JB55846R	12/17/2013	Remaining	N	Y		1.5	J		
3+01	159R	P3BS-PDI-3+00-160R	14.0	P3BS-PDI-3+00-160R-6.0-6.5	6.0 - 6.5	8.0	7.5	410-14289-12	410142891	09/16/2020	Removed	N	Y		5.3	RA	S1	
3+01	159R	P3BS-PDI-3+00-160R	14.0	P3BS-PDI-3+00-160R-8.0-8.5	8.0 - 8.5	6.0	5.5	410-14289-13	410142891	09/16/2020	Removed	N	Y		< 0.19	RA	S1	

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
3+01	159R	P3BS-PDI-3+00-160R	14.0	P3BS-PDI-3+00-160R-16.0-16.5	16.0 - 16.5	-2.0	-2.5	410-14289-14	410142891	09/17/2020	Remaining	N	Y		2.1	RA		
3+03	271R	133-B19	11.9	PPG-133-B19F_13.1-13.6_794163	13.1 - 13.6	-1.2	-1.7	794163	A963	12/15/2006	Remaining	N	Y		< 5.65	UJ		
3+03	271R	133-B19	11.9	PPG-133-B19G_17.0-17.5_794164	17.0 - 17.5	-5.1	-5.6	794164	A963	12/15/2006	Remaining	N	Y		< 3.65	UJ		
3+03	271R	133-B19	11.9	PPG-133-B19H_21.0-21.5_794165	21.0 - 21.5	-9.1	-9.6	794165	A963	12/15/2006	Remaining	N	Y		< 3.66	UJ		
3+03	271R	133-B19	11.9	PPG-133-B19I_23.0-23.5_794166	23.0 - 23.5	-11.1	-11.6	794166	A963	12/15/2006	Remaining	N	Y		< 2.54	UJ		
3+07	174R	133-B22	12.3	PPG-133-B22E_12.0-12.5	12.0 - 12.5	0.3	-0.2	793665	A871	12/14/2006	Remaining	N	Y		< 3.36	UJ		
3+07	174R	133-B22	12.3	PPG-133-B22F_13.2-13.7	13.2 - 13.7	-0.9	-1.4	793666	A871	12/14/2006	Remaining	N	Y		< 3.24	UJ		
3+07	174R	133-B22	12.3	PPG-133-B22G_17.0-17.5_794502	17.0 - 17.5	-4.7	-5.2	794502	B013	12/18/2006	Remaining	N	Y		18.2	J		
3+07	174R	133-B22	12.3	PPG-133-B22H_21.7-22.3_794503	21.7 - 22.3	-9.4	-10.0	794503	B013	12/18/2006	Remaining	N	Y		< 2.5	UJ		
3+07	273R	133-P3B-Q40A	12.0	133-P3B-Q40A-10.0-10.5	10.0 - 10.5	2.0	1.5	JB37135-12R	JB37135R	05/15/2013	Remaining	N	Y		1.1	J		
3+07	273R	133-P3B-Q40A	12.0	133-P3B-Q40A-12.0-12.5	12.0 - 12.5	0.0	-0.5	JB37135-13R	JB37135R	05/15/2013	Remaining	N	Y		0.83	J		
3+07	273R	133-P3B-Q40A	12.0	133-P3B-Q40A-12.5-13.0	12.5 - 13.0	-0.5	-1.0	JB37135-14	JB37135	05/15/2013	Remaining	N	Y		0.63	J		
3+07	273R	133-P3B-Q40A	12.0	133-P3B-Q40A-13.0-13.5	13.0 - 13.5	-1.0	-1.5	JB37135-15	JB37135	05/15/2013	Remaining	N	Y		1.6	J		
3+20	61R	10W-J39A	15.2	10W-J39A-6.5-7.0	6.5 - 7.0	8.7	8.2	JB67196-18T	JB67196T	05/16/2014	Remaining	N	Y		0.53	RA		
3+20	61R	10W-J39A	15.2	10W-J39A-7.0-7.5	7.0 - 7.5	8.2	7.7	JB67196-19	JB67196	05/16/2014	Remaining	N	Y		1.0	RA		
3+20	61R	10W-J39A	15.2	10W-J39A-8.5-9.0	8.5 - 9.0	6.7	6.2	JB67196-20	JB67196	05/16/2014	Remaining	N	Y		0.59	RA		
3+20	61R	10W-J39A	15.2	10W-J39A-10.5-11.0	10.5 - 11.0	4.7	4.2	JB67196-21	JB67196	05/16/2014	Remaining	N	Y		< 0.25	RA		
3+20	61R	10W-J39A	15.2	10W-J39A-12.5-13.0	12.5 - 13.0	2.7	2.2	JB67196-22T	JB67196T	05/16/2014	Remaining	N	Y		< 0.26	RA		
3+20	61R	10W-J39A	15.2	10W-J39A-14.5-15.0	14.5 - 15.0	0.7	0.2	JB67196-23	JB67196	05/16/2014	Remaining	N	Y		0.26	RA		
3+20	61R	10W-J39A	15.2	10W-J39A-16.5-17.0	16.5 - 17.0	-1.3	-1.8	JB67196-24	JB67196	05/16/2014	Remaining	N	Y		< 0.26	RA		
3+20	61R	10W-J39A	15.2	10W-J39A-18.5-19.0	18.5 - 19.0	-3.3	-3.8	JB67196-25	JB67196	05/16/2014	Remaining	N	Y		0.43	RA		
3+20	61R	10W-J39A	15.2	10W-J39A-19.0-19.5	19.0 - 19.5	-3.8	-4.3	JB67196-26	JB67196	05/16/2014	Remaining	N	Y		3.0	RA		
3+21	1R	10W-H39A	15.6	10W-H39A-3.0-3.5	3.0 - 3.5	12.6	12.1	JB67098-4R	JB67098R	05/15/2014	Remaining	N	Y		0.37	J		
3+21	1R	10W-H39A	15.6	10W-H39A-5.0-5.5	5.0 - 5.5	10.6	10.1	JB67098-5	JB67098	05/15/2014	Remaining	N	Y		< 0.23	UJ		
3+21	1R	10W-H39A	15.6	10W-H39A-7.0-7.5	7.0 - 7.5	8.6	8.1	JB67098-6	JB67098	05/15/2014	Remaining	N	Y		0.82	J		
3+21	1R	10W-H39A	15.6	10W-H39A-8.0-8.5	8.0 - 8.5	7.6	7.1	JB67098-7	JB67098	05/15/2014	Remaining	N	Y		0.28	J		
3+21	1R	10W-H39A	15.6	10W-H39A-9.0-9.5	9.0 - 9.5	6.6	6.1	JB67098-8	JB67098	05/15/2014	Remaining	N	Y		0.73	J		
3+21	1R	10W-H39A	15.6	10W-H39A-9.0-9.5X	9.0 - 9.5	6.6	6.1	JB67098-9	JB67098	05/15/2014	Remaining	FD	Y		0.70	J		
3+21	1R	10W-H39A	15.6	10W-H39A-11.0-11.5	11.0 - 11.5	4.6	4.1	JB67098-10	JB67098	05/15/2014	Remaining	N	Y		0.61	J		
3+21	1R	10W-H39A	15.6	10W-H39A-12.0-12.5	12.0 - 12.5	3.6	3.1	JB67098-11	JB67098	05/15/2014	Remaining	N	Y		< 0.19	UJ		
3+21	1R	10W-H39A	15.6	10W-H39A-12.0-12.5X	12.0 - 12.5	3.6	3.1	JB67098-12	JB67098	05/15/2014	Remaining	FD	Y		< 0.20	UJ		
3+21	1R	10W-H39A	15.6	10W-H39A-12.5-13.0	12.5 - 13.0	3.1	2.6	JB67098-13	JB67098	05/15/2014	Remaining	N	Y		0.73	J		
3+22	124R	10W-L39A	15.0	10W-L39A-8.5-9.0	8.5 - 9.0	6.5	6.0	JB67304-14	JB67304	05/19/2014	Remaining	N	Y		< 0.23	UJ		
3+22	124R	10W-L39A	15.0	10W-L39A-10.5-11.0	10.5 - 11.0	4.5	4.0	JB67304-15T	JB67304T	05/19/2014	Remaining	N	Y		0.25	J		
3+22	124R	10W-L39A	15.0	10W-L39A-12.5-13.0	12.5 - 13.0	2.5	2.0	JB67304-16	JB67304	05/19/2014	Remaining	N	Y		< 0.23	UJ		
3+22	124R	10W-L39A	15.0	10W-L39A-14.5-15.0	14.5 - 15.0	0.5	0.0	JB67304-17	JB67304	05/19/2014	Remaining	N	Y		< 0.22	UJ		
3+22	124R	10W-L39A	15.0	10W-L39A-16.5-17.0	16.5 - 17.0	-1.5	-2.0	JB67304-18	JB67304	05/19/2014	Remaining	N	Y		< 0.25	UJ		
3+22	124R	10W-L39A	15.0	10W-L39A-18.5-19.0	18.5 - 19.0	-3.5	-4.0	JB67304-19T	JB67304T	05/19/2014	Remaining	N	Y		0.22	J		
3+22	124R	10W-L39A	15.0	10W-L39A-20.5-21.0	20.5 - 21.0	-5.5	-6.0	JB67304-20T	JB67304T	05/19/2014	Remaining	N	Y		0.27	J		
3+22	124R	10W-L39A	15.0	10W-L39A-22.0-22.5	22.0 - 22.5	-7.0	-7.5	JB67304-21T	JB67304T	05/19/2014	Remaining	N	Y		0.25	J		
3+22	124R	10W-L39A	15.0	10W-L39A-22.5-23.0	22.5 - 23.0	-7.5	-8.0	JB67304-22T	JB67304T	05/19/2014	Remaining	N	Y		3.2	J		
3+27	55L	10W-F39-SW-S	18.0	10W-F39-SW-S-3.9-4.4	4.1 - 4.6	13.9	13.4	410-43474-4	410434741	06/14/2021	Remaining	N	Y		2.2			
3+29	20L	P3BS-PDI-TP-3+30-15L	15.6	P3BS-PDI-TP-3+30-15L-1.5-2.0	1.5 - 2.0	14.1	13.6	410-18991-1	410186471	10/30/2020	Remaining	N	Y		4.8	J-		
3+30	154R	P3BS-PDI-3+30-155R	14.7	P3BS-PDI-3+30-155R-5.7-6.2	5.7 - 6.2	9.0	8.5	410-14146-1	410141461	09/16/2020	Removed	N	Y		< 0.19	RA	S1	
3+30	154R	P3BS-PDI-3+30-155R	14.7	P3BS-PDI-3+30-155R-7.2-7.7	7.2 - 7.7	7.5	7.0	410-14146-2	410141461	09/16/2020	Removed	N	Y		< 0.20	RA	S1	
3+30	154R	P3BS-PDI-3+30-155R	14.7	P3BS-PDI-3+30-155R-9.2-9.7	9.2 - 9.7	5.5	5.0	410-14146-3	410141461	09/16/2020	Removed	N	Y		< 0.19	RA	S1	
3+30	154R	P3BS-PDI-3+30-155R	14.7	P3BS-PDI-3+30-155R-11.2-11.7	11.2 - 11.7	3.5	3.0	410-14146-4	410141461	09/16/2020	Removed	N	Y		< 0.17	RA	S1	
3+30	162R	133-P3B-M39A	12.8	133-P3B-M39A-11.0-11.5	11.0 - 11.5	1.8	1.3	JB41678-13	JB41678	07/10/2013	Removed	N	Y		0.27	J	S1	

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
3+30	162R	133-P3B-M39A	12.8	133-P3B-M39A-11.0-11.5X	11.0 - 11.5	1.8	1.3	JB41678-12R	JB41678R	07/10/2013	Removed	FD	Y		11.7	J	S1	
3+30	162R	133-P3B-M39A	12.8	133-P3B-M39A-13.0-13.5	13.0 - 13.5	-0.2	-0.7	JB41678-11R	JB41678R	07/10/2013	Removed	N	Y		1.3	J	S1	
3+30	162R	133-P3B-M39A	12.8	133-P3B-M39A-15.0-15.5	15.0 - 15.5	-2.2	-2.7	JB41678-10	JB41678	07/10/2013	Remaining	N	Y		0.53	J		
3+30	162R	133-P3B-M39A	12.8	133-P3B-M39A-16.5-17.0	16.5 - 17.0	-3.7	-4.2	JB41678-9	JB41678	07/10/2013	Remaining	N	Y		0.28	J		
3+30	162R	133-P3B-M39A	12.8	133-P3B-M39A-17.0-17.5	17.0 - 17.5	-4.2	-4.7	JB41678-8R	JB41678R	07/10/2013	Remaining	N	Y		1.1	J		
3+30	192R	133-P3B-N39A	10.9	133-P3B-N39A-8.0-8.5	8.0 - 8.5	2.9	2.4	JB37341-7	JB37341	05/17/2013	Removed	N	Y		0.25	RA	S2	
3+30	192R	133-P3B-N39A	10.9	133-P3B-N39A-10.0-10.5	10.0 - 10.5	0.9	0.4	JB37341-8R	JB37341R	05/17/2013	Remaining	N	Y		< 0.33	RA		
3+30	192R	133-P3B-N39A	10.9	133-P3B-N39A-10.0-10.5X	10.0 - 10.5	0.9	0.4	JB37341-9R	JB37341R	05/17/2013	Remaining	FD	Y		< 0.34	RA		
3+30	192R	133-P3B-N39A	10.9	133-P3B-N39A-12.0-12.5	12.0 - 12.5	-1.1	-1.6	JB37341-10	JB37341	05/17/2013	Remaining	N	Y		0.14	RA		
3+30	192R	133-P3B-N39A	10.9	133-P3B-N39A-14.0-14.5	14.0 - 14.5	-3.1	-3.6	JB37341-11	JB37341	05/17/2013	Remaining	N	Y		0.20	RA		
3+30	192R	133-P3B-N39A	10.9	133-P3B-N39A-14.5-15.0	14.5 - 15.0	-3.6	-4.1	JB37341-12	JB37341	05/17/2013	Remaining	N	Y		0.20	RA		
3+30	222R	133-P3B-O39A	11.2	133-P3B-O39A-8.0-8.5	8.0 - 8.5	3.2	2.7	JB41590-14	JB41590	07/09/2013	Remaining	N	Y		0.31	RA		
3+30	222R	133-P3B-O39A	11.2	133-P3B-O39A-10.0-10.5	10.0 - 10.5	1.2	0.7	JB41590-13	JB41590	07/09/2013	Remaining	N	Y		0.23	RA		
3+30	222R	133-P3B-O39A	11.2	133-P3B-O39A-12.0-12.5	12.0 - 12.5	-0.8	-1.3	JB41590-12	JB41590	07/09/2013	Remaining	N	Y		0.10	RA		
3+30	222R	133-P3B-O39A	11.2	133-P3B-O39A-14.0-14.5	14.0 - 14.5	-2.8	-3.3	JB41590-11	JB41590	07/09/2013	Remaining	N	Y		1.0	RA		
3+30	222R	133-P3B-O39A	11.2	133-P3B-O39A-16.2-16.7	16.2 - 16.7	-5.0	-5.5	JB41590-10	JB41590	07/09/2013	Remaining	N	Y		0.85	RA		
3+30	222R	133-P3B-O39A	11.2	133-P3B-O39A-16.7-17.2	16.7 - 17.2	-5.5	-6.0	JB41590-9	JB41590	07/09/2013	Remaining	N	Y		0.85	RA		
3+30	222R	133-P3B-O39A	11.2	133-P3B-O39A-16.7-17.2X	16.7 - 17.2	-5.5	-6.0	JB41590-8	JB41590	07/09/2013	Remaining	FD	Y		1.1	RA		
3+30	252R	133-P3B-P39A	11.6	133-P3B-P39A-8.5-9.0	8.5 - 9.0	3.1	2.6	JB55933-16R	JB55933R	12/18/2013	Remaining	N	Y		0.30	J		
3+30	252R	133-P3B-P39A	11.6	133-P3B-P39A-10.5-11.0	10.5 - 11.0	1.1	0.6	JB55933-17R	JB55933R	12/18/2013	Remaining	N	Y		0.30	J		
3+30	252R	133-P3B-P39A	11.6	133-P3B-P39A-12.5-13.0	12.5 - 13.0	-0.9	-1.4	JB55933-18	JB55933	12/18/2013	Remaining	N	Y		0.37	J		
3+30	252R	133-P3B-P39A	11.6	133-P3B-P39A-13.0-13.5	13.0 - 13.5	-1.4	-1.9	JB55933-19	JB55933	12/18/2013	Remaining	N	Y		0.47	J		
3+30	252R	133-P3B-P39A	11.6	133-P3B-P39A-13.5-14.0	13.5 - 14.0	-1.9	-2.4	JB55933-20	JB55933	12/18/2013	Remaining	N	Y		0.96	J		
3+30	252R	133-P3B-P39A-EX	11.6	133-P3B-P39A-EX-7.9-8.4	7.9 - 8.4	3.7	3.2	410-46406-3	410464061	07/08/2021	Remaining	N	Y		3.2	J		
3+30	39R	P3BS-PDI-TP-3+30-40R	15.4	P3BS-PDI-TP-3+30-40R-6.3-6.8	6.3 - 6.8	9.1	8.6	410-18827-2	410186471	10/29/2020	Remaining	N	Y		< 0.38	UJ		
3+32	278R	133-P3B-Q39A	11.8	133-P3B-Q39A-10.8-11.3	10.8 - 11.3	1.0	0.5	JB37135-9	JB37135	05/15/2013	Removed	N	Y		0.30	J	S2	
3+32	278R	133-P3B-Q39A	11.8	133-P3B-Q39A-12.9-13.4	12.9 - 13.4	-1.1	-1.6	JB37135-10	JB37135	05/15/2013	Remaining	N	Y		0.65	J		
3+32	278R	133-P3B-Q39A	11.8	133-P3B-Q39A-13.4-13.9	13.4 - 13.9	-1.6	-2.1	JB37135-11R	JB37135R	05/15/2013	Remaining	N	Y		1.4	J		
3+38	39L	10W-F39-SW-E	15.3	10W-F39-SW-E-4.0-4.5	1.5 - 2.0	13.8	13.3	410-43474-1	410434741	06/14/2021	Remaining	N	Y		0.89			
3+38	54L	10W-F39A	17.8	10W-F39A-5.0-5.5	5.0 - 5.5	12.8	12.3	JB67999-18	JB67999	05/29/2014	Remaining	N	Y		0.99			
3+38	54L	10W-F39A	17.8	10W-F39A-7.0-7.5	7.0 - 7.5	10.8	10.3	JB67999-19	JB67999	05/29/2014	Remaining	N	Y		0.42	J		
3+38	54L	10W-F39A	17.8	10W-F39A-9.0-9.5	9.0 - 9.5	8.8	8.3	JB67999-20	JB67999	05/29/2014	Remaining	N	Y		1.2			
3+38	54L	10W-F39A	17.8	10W-F39A-9.5-10.0	9.5 - 10.0	8.3	7.8	JB67999-21	JB67999	05/29/2014	Remaining	N	Y		1.0			
3+38	54L	10W-F39A	17.8	10W-F39A-11.0-11.5	11.0 - 11.5	6.8	6.3	JB67999-22	JB67999	05/29/2014	Remaining	N	Y		< 0.20	U		
3+38	54L	10W-F39A	17.8	10W-F39A-11.7-12.2	11.7 - 12.2	6.1	5.6	JB67999-23	JB67999	05/29/2014	Remaining	N	Y		< 0.24	U		
3+38	54L	10W-F39A	17.8	10W-F39A-12.2-12.7	12.2 - 12.7	5.6	5.1	JB67999-24	JB67999	05/29/2014	Remaining	N	Y		< 0.20	U		
3+38	69L	10W-F39-SW-W	17.9	10W-F39-SW-W-3.7-4.2	3.8 - 4.3	14.1	13.6	410-43474-3	410434741	06/14/2021	Remaining	N	Y		< 0.16	U		
3+39	115L	10W-D39A	18.2	10W-D39A-3.0-3.5	3.0 - 3.5	15.2	14.7	JB67999-6	JB67999	05/29/2014	Remaining	N	Y		1.2			
3+39	115L	10W-D39A	18.2	10W-D39A-3.5-4.0	3.5 - 4.0	14.7	14.2	JB67999-7	JB67999	05/29/2014	Remaining	N	Y		0.43	J		
3+39	115L	10W-D39A	18.2	10W-D39A-5.0-5.5	5.0 - 5.5	13.2	12.7	JB67999-8	JB67999	05/29/2014	Remaining	N	Y		0.47			
3+39	115L	10W-D39A	18.2	10W-D39A-7.0-7.5	7.0 - 7.5	11.2	10.7	JB67999-9	JB67999	05/29/2014	Remaining	N	Y		0.78			
3+39	115L	10W-D39A	18.2	10W-D39A-9.0-9.5	9.0 - 9.5	9.2	8.7	JB67999-10	JB67999	05/29/2014	Remaining	N	Y		0.56			
3+39	115L	10W-D39A	18.2	10W-D39A-9.5-10.0	9.5 - 10.0	8.7	8.2	JB67999-11	JB67999	05/29/2014	Remaining	N	Y		0.24	J		
3+39	115L	10W-D39A	18.2	10W-D39A-11.0-11.5	11.0 - 11.5	7.2	6.7	JB67999-12	JB67999	05/29/2014	Remaining	N	Y		0.26	J		
3+39	115L	10W-D39A	18.2	10W-D39A-13.0-13.5	13.0 - 13.5	5.2	4.7	JB67999-13	JB67999	05/29/2014	Remaining	N	Y		0.20	J		
3+39	115L	10W-D39A	18.2	10W-D39A-14.5-15.0	14.5 - 15.0	3.7	3.2	JB67999-14	JB67999	05/29/2014	Remaining	N	Y		0.98			
3+39	115L	10W-D39A	18.2	10W-D39A-15.0-15.5	15.0 - 15.5	3.2	2.7	JB67999-15	JB67999	05/29/2014	Remaining	N	Y		0.31	J		
3+53	54L	10W-F39-SW-N	18.0	10W-F39-SW-N-3.9-4.4	4.1 - 4.6	13.9	13.4	410-43474-2	410434741	06/14/2021	Remaining	N	Y		0.50			

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20	
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes
3+60	162R	133-P3B-M38A	12.3	133-P3B-M38A-8.5-9.0	8.5 - 9.0	3.8	3.3	JB41158-7	JB41158	07/02/2013	Removed	N	Y		0.14	RA	S2
3+60	162R	133-P3B-M38A	12.3	133-P3B-M38A-10.5-11.0	10.5 - 11.0	1.8	1.3	JB41158-6	JB41158	07/02/2013	Remaining	N	Y		0.19	RA	
3+60	162R	133-P3B-M38A	12.3	133-P3B-M38A-12.5-13.0	12.5 - 13.0	-0.2	-0.7	JB41158-1	JB41158	07/02/2013	Remaining	N	Y		0.21	RA	
3+60	162R	133-P3B-M38A	12.3	133-P3B-M38A-14.5-15.0	14.5 - 15.0	-2.2	-2.7	JB41158-5	JB41158	07/02/2013	Remaining	N	Y		0.15	RA	
3+60	162R	133-P3B-M38A	12.3	133-P3B-M38A-16.0-16.5	16.0 - 16.5	-3.7	-4.2	JB41158-4R	JB41158R	07/02/2013	Remaining	N	Y		< 0.10	RA	
3+60	162R	133-P3B-M38A	12.3	133-P3B-M38A-16.7-17.2	16.7 - 17.2	-4.4	-4.9	JB41158-3	JB41158	07/02/2013	Remaining	N	Y		0.90	RA	
3+60	162R	133-P3B-M38A	12.3	133-P3B-M38A-17.2-17.7	17.2 - 17.7	-4.9	-5.4	JB41158-2	JB41158	07/02/2013	Remaining	N	Y		1.3	RA	
3+60	192R	133-P3B-N38A	11.5	133-P3B-N38A-16.0-16.5	16.0 - 16.5	-4.5	-5.0	JB37341-5R	JB37341R	05/17/2013	Remaining	N	Y		< 0.32	RA	
3+60	192R	133-P3B-N38A	11.5	133-P3B-N38A-16.5-17.0	16.5 - 17.0	-5.0	-5.5	JB37341-6	JB37341	05/17/2013	Remaining	N	Y		0.74	RA	
3+60	21L	P3BS-PDI-TP-3+60-20L	15.9	P3BS-PDI-TP-3+60-20L-1.5-2	1.5 - 2.0	14.4	13.9	410-18827-1	410186471	10/29/2020	Remaining	N	Y		< 0.16	UJ	
3+60	222R	133-P3B-O38A	11.2	133-P3B-O38A-9.2-9.7	9.2 - 9.7	2.0	1.5	JB55933-1	JB55933	12/18/2013	Removed	N	Y		2.0	J	S2
3+60	222R	133-P3B-O38A	11.2	133-P3B-O38A-11.2-11.7	11.2 - 11.7	0.0	-0.5	JB55933-2	JB55933	12/18/2013	Remaining	N	Y		5.0	J	
3+60	222R	133-P3B-O38A	11.2	133-P3B-O38A-13.2-13.7	13.2 - 13.7	-2.0	-2.5	JB55933-3	JB55933	12/18/2013	Remaining	N	Y		0.64	J	
3+60	222R	133-P3B-O38A	11.2	133-P3B-O38A-15.2-15.7	15.2 - 15.7	-4.0	-4.5	JB55933-4	JB55933	12/18/2013	Remaining	N	Y		1.5	J	
3+60	222R	133-P3B-O38A	11.2	133-P3B-O38A-15.2-15.7X	15.2 - 15.7	-4.0	-4.5	JB55933-5	JB55933	12/18/2013	Remaining	FD	Y		1.5	J	
3+60	222R	133-P3B-O38A	11.2	133-P3B-O38A-16.5-17.0	16.5 - 17.0	-5.3	-5.8	JB55933-6	JB55933	12/18/2013	Remaining	N	Y		0.95	J	
3+60	222R	133-P3B-O38A	11.2	133-P3B-O38A-17.0-17.5	17.0 - 17.5	-5.8	-6.3	JB55933-7R	JB55933R	12/18/2013	Remaining	N	Y		0.77	J	
3+60	252R	133-P3B-P38A	11.5	133-P3B-P38A-10.5-11.0	10.5 - 11.0	1.0	0.5	JB41590-7R	JB41590R	07/09/2013	Remaining	N	Y		0.75	RA	
3+60	252R	133-P3B-P38A	11.5	133-P3B-P38A-12.5-13.0	12.5 - 13.0	-1.0	-1.5	JB41590-6	JB41590	07/09/2013	Remaining	N	Y		0.24	RA	
3+60	252R	133-P3B-P38A	11.5	133-P3B-P38A-14.5-15.0	14.5 - 15.0	-3.0	-3.5	JB41590-5	JB41590	07/09/2013	Remaining	N	Y		0.64	RA	
3+60	252R	133-P3B-P38A	11.5	133-P3B-P38A-16.5-17.0	16.5 - 17.0	-5.0	-5.5	JB41590-4	JB41590	07/09/2013	Remaining	N	Y		0.73	RA	
3+60	252R	133-P3B-P38A	11.5	133-P3B-P38A-18.0-18.5	18.0 - 18.5	-6.5	-7.0	JB41590-3	JB41590	07/09/2013	Remaining	N	Y		0.65	RA	
3+60	252R	133-P3B-P38A	11.5	133-P3B-P38A-18.5-19.0	18.5 - 19.0	-7.0	-7.5	JB41590-2	JB41590	07/09/2013	Remaining	N	Y		0.76	RA	
3+60	282R	133-P3B-Q38A	11.7	133-P3B-Q38A-10.5-11.0	10.5 - 11.0	1.2	0.7	JB37135-3	JB37135	05/15/2013	Removed	N	Y		1.1	J	S2
3+60	282R	133-P3B-Q38A	11.7	133-P3B-Q38A-12.5-13.0	12.5 - 13.0	-0.8	-1.3	JB37135-4	JB37135	05/15/2013	Remaining	N	Y		0.56	J	
3+60	282R	133-P3B-Q38A	11.7	133-P3B-Q38A-13.2-13.7	13.2 - 13.7	-1.5	-2.0	JB37135-5R	JB37135R	05/15/2013	Remaining	N	Y		< 0.094	UJ	
3+60	282R	133-P3B-Q38A	11.7	133-P3B-Q38A-13.7-14.2	13.7 - 14.2	-2.0	-2.5	JB37135-6	JB37135	05/15/2013	Remaining	N	Y		1.2	J	
3+63	291R	133-B20	11.9	PPG-133-B20G_11.1-11.6_794509	11.1 - 11.6	0.8	0.3	794509	B013	12/18/2006	Remaining	N	Y		< 3.51	UJ	
3+63	291R	133-B20	11.9	PPG-133-B20H_13.0-14.0_794510	13.0 - 14.0	-1.1	-2.1	794510	B013	12/18/2006	Remaining	N	Y		< 3.59	UJ	
3+63	291R	133-B20	11.9	PPG-133-B20I_17.0-17.5_794511	17.0 - 17.5	-5.1	-5.6	794511	B013	12/18/2006	Remaining	N	Y		< 3.91	UJ	
3+63	291R	133-B20	11.9	PPG-133-B20J_18.8-19.3_794512	18.8 - 19.3	-6.9	-7.4	794512	B013	12/18/2006	Remaining	N	Y		< 2.45	UJ	
3+65	139R	10W-P3B-L38A-SW-R	15.2	10W-P3B-L38A-SW-R-7.9-8.4	8.2 - 8.7	7.0	6.5	410-60786-1	410607861	10/27/2021	Remaining	N	Y		6.1	J-	
3+69	36L	10W-F38A	17.8	10W-F38A-3.0-3.5	3.0 - 3.5	14.8	14.3	JB67819-3	JB67819	05/27/2014	Remaining	N	Y		10.4	J	
3+69	36L	10W-F38A	17.8	10W-F38A-4.5-5.0	4.5 - 5.0	13.3	12.8	JB67819-4	JB67819	05/27/2014	Remaining	N	Y		1.3	J	
3+69	36L	10W-F38A	17.8	10W-F38A-5.0-5.5	5.0 - 5.5	12.8	12.3	JB67819-5	JB67819	05/27/2014	Remaining	N	Y		0.40	J	
3+69	36L	10W-F38A	17.8	10W-F38A-7.0-7.5	7.0 - 7.5	10.8	10.3	JB67819-6	JB67819	05/27/2014	Remaining	N	Y		0.40	J	
3+69	36L	10W-F38A	17.8	10W-F38A-9.0-9.5	9.0 - 9.5	8.8	8.3	JB67819-7R	JB67819R	05/27/2014	Remaining	N	Y		0.42	J	
3+69	36L	10W-F38A	17.8	10W-F38A-11.0-11.5	11.0 - 11.5	6.8	6.3	JB67819-8R	JB67819R	05/27/2014	Remaining	N	Y		0.30	J	
3+69	36L	10W-F38A	17.8	10W-F38A-13.0-13.5	13.0 - 13.5	4.8	4.3	JB67819-9	JB67819	05/27/2014	Remaining	N	Y		0.47	J	
3+69	36L	10W-F38A	17.8	10W-F38A-14.5-15.0	14.5 - 15.0	3.3	2.8	JB67819-10	JB67819	05/27/2014	Remaining	N	Y		0.24	J	
3+69	36L	10W-F38A	17.8	10W-F38A-15.0-15.5	15.0 - 15.5	2.8	2.3	JB67819-11	JB67819	05/27/2014	Remaining	N	Y		< 0.22	UJ	
3+70	146R	EF-25	14.9	EF-B25-10.0	10.0 - 10.5	4.9	4.4	460-25481-24	460254811	04/18/2011	Removed	N	Y		< 0.69	U	S2
3+70	146R	EF-25	14.9	EF-B25-11.5	11.5 - 12.0	3.4	2.9	460-25481-25	460254811	04/18/2011	Remaining	N	Y		< 0.68	U	
3+70	146R	EF-25	14.9	EF-B25-16.0	16.0 - 16.5	-1.1	-1.6	460-25481-26	460254811	04/18/2011	Remaining	N	Y		< 0.68	U	
3+70	146R	EF-25	14.9	EF-B25-21.5	21.5 - 22.0	-6.6	-7.1	460-25481-28	460254811	04/18/2011	Remaining	N	Y		< 5.7	UJ	
3+71	63R	10W-J38A	15.2	10W-J38A-4.5-5.0	4.5 - 5.0	10.7	10.2	JB67196-4R	JB67196R	05/16/2014	Remaining	N	Y		0.58	J	
3+71	63R	10W-J38A	15.2	10W-J38A-6.5-7.0	6.5 - 7.0	8.7	8.2	JB67196-5	JB67196	05/16/2014	Remaining	N	Y		1.1	J	
3+71	63R	10W-J38A	15.2	10W-J38A-6.5-7.0X	6.5 - 7.0	8.7	8.2	JB67196-10	JB67196	05/16/2014	Remaining	FD	Y		0.35	J	

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
3+71	63R	10W-J38A	15.2	10W-J38A-7.5-8.0	7.5 - 8.0	7.7	7.2	JB67196-6	JB67196	05/16/2014	Remaining	N	Y		0.71	J		
3+71	63R	10W-J38A	15.2	10W-J38A-8.5-9.0	8.5 - 9.0	6.7	6.2	JB67196-7	JB67196	05/16/2014	Remaining	N	Y		< 0.24	UJ		
3+71	63R	10W-J38A	15.2	10W-J38A-10.5-11.0	10.5 - 11.0	4.7	4.2	JB67196-8	JB67196	05/16/2014	Remaining	N	Y		0.24	J		
3+71	63R	10W-J38A	15.2	10W-J38A-12.5-13.0	12.5 - 13.0	2.7	2.2	JB67196-9R	JB67196R	05/16/2014	Remaining	N	Y		0.55	J		
3+71	63R	10W-J38A	15.2	10W-J38A-14.5-15.0	14.5 - 15.0	0.7	0.2	JB67196-11	JB67196	05/16/2014	Remaining	N	Y		1.2	J		
3+71	63R	10W-J38A	15.2	10W-J38A-16.5-17.0	16.5 - 17.0	-1.3	-1.8	JB67196-12	JB67196	05/16/2014	Remaining	N	Y		0.53	J		
3+71	63R	10W-J38A	15.2	10W-J38A-17.0-17.5	17.0 - 17.5	-1.8	-2.3	JB67196-13	JB67196	05/16/2014	Remaining	N	Y		0.62	J		
3+72	193R	133-B23	12.3	PPG-133-B23F_17.5-18.0	17.5 - 18.0	-5.2	-5.7	793659	A871	12/14/2006	Remaining	N	Y		< 6.13	UJ		
3+72	193R	133-B23	12.3	PPG-133-B23G_21.2-21.7	21.2 - 21.7	-8.9	-9.4	793660	A871	12/14/2006	Remaining	N	Y		< 3.09	UJ		
3+72	193R	133-B23	12.3	PPG-133-B23H_24.0-24.5	24.0 - 24.5	-11.7	-12.2	793661	A871	12/14/2006	Remaining	N	Y		< 2.43	UJ		
3+73	96R	10W-P3BS-K38A-EX	15.1	10W-P3BS-K38A-EX-9.1-9.6	9.1 - 9.6	6.0	5.5	410-45257-11	410452572	06/28/2021	Remaining	N	Y		1.0	J		
3+73	96R	10W-P3BS-K38A-EX	15.1	10W-P3BS-K38A-EX-11.1-11.6	11.1 - 11.6	4.0	3.5	410-45257-12	410452572	06/28/2021	Remaining	N	Y		< 0.22	UJ		
3+73	96R	10W-P3BS-K38A-EX	15.1	10W-P3BS-K38A-EX-13.1-13.6	13.1 - 13.6	2.0	1.5	410-45257-13	410452572	06/28/2021	Remaining	N	Y		0.49	J		
3+73	96R	10W-P3BS-K38A-EX	15.1	10W-P3BS-K38A-EX-15.1-15.6	15.1 - 15.6	0.0	-0.5	410-45257-14	410452572	06/28/2021	Remaining	N	Y		8.0	J		
3+73	96R	10W-P3BS-K38A-EX	15.1	10W-P3BS-K38A-EX-17.1-17.6	17.1 - 17.6	-2.0	-2.5	410-45257-15	410452572	06/28/2021	Remaining	N	Y		< 0.20	UJ		
3+73	96R	10W-P3BS-K38A-EX	15.1	10W-P3BS-K38A-EX-19.1-19.6	19.1 - 19.6	-4.0	-4.5	410-45257-16	410452572	06/28/2021	Remaining	N	Y		3.8	J		
3+73	96R	10W-P3BS-K38A-EX	15.1	10W-P3BS-K38A-EX-20.6-21.1	20.6 - 21.1	-5.5	-6.0	410-45257-17	410452572	06/28/2021	Remaining	N	Y		1.1	J		
3+80	3R	10W-H37A	15.5	10W-H37A-2.5-3.0	2.5 - 3.0	13.0	12.5	JB67912-17R	JB67912R	05/28/2014	Remaining	N	Y		0.30	J		
3+80	3R	10W-H37A	15.5	10W-H37A-2.5-3.0X	2.5 - 3.0	13.0	12.5	JB67912-18R	JB67912R	05/28/2014	Remaining	FD	Y		0.36	J		
3+80	3R	10W-H37A	15.5	10W-H37A-4.5-5.0	4.5 - 5.0	11.0	10.5	JB67912-19	JB67912	05/28/2014	Remaining	N	Y		0.36	J		
3+80	3R	10W-H37A	15.5	10W-H37A-5.5-6.0	5.5 - 6.0	10.0	9.5	JB67912-20	JB67912	05/28/2014	Remaining	N	Y		< 0.24	UJ		
3+80	3R	10W-H37A	15.5	10W-H37A-6.5-7.0	6.5 - 7.0	9.0	8.5	JB67912-21	JB67912	05/28/2014	Remaining	N	Y		< 0.22	UJ		
3+80	3R	10W-H37A	15.5	10W-H37A-8.5-9.0	8.5 - 9.0	7.0	6.5	JB67912-22R	JB67912R	05/28/2014	Remaining	N	Y		0.31	J		
3+80	3R	10W-H37A	15.5	10W-H37A-10.5-11.0	10.5 - 11.0	5.0	4.5	JB67912-23R	JB67912R	05/28/2014	Remaining	N	Y		1.9	J		
3+80	3R	10W-H37A	15.5	10W-H37A-11.5-12.0	11.5 - 12.0	4.0	3.5	JB67912-24	JB67912	05/28/2014	Remaining	N	Y		0.58	J		
3+80	3R	10W-H37A	15.5	10W-H37A-12.0-12.5	12.0 - 12.5	3.5	3.0	JB67912-25R	JB67912R	05/28/2014	Remaining	N	Y		2.7	J		
3+82	126R	10W-L37A	15.0	10W-L37A-8.5-9.0	8.5 - 9.0	6.5	6.0	JB67495-21R	JB67495R	05/21/2014	Removed	N	Y		0.70	RA	S2	
3+82	126R	10W-L37A	15.0	10W-L37A-10.5-11.0	10.5 - 11.0	4.5	4.0	JB67495-22	JB67495	05/21/2014	Remaining	N	Y		5.0	RA		
3+82	126R	10W-L37A	15.0	10W-L37A-12.5-13.0	12.5 - 13.0	2.5	2.0	JB67495-23	JB67495	05/21/2014	Remaining	N	Y		0.39	RA		
3+82	126R	10W-L37A	15.0	10W-L37A-14.5-15.0	14.5 - 15.0	0.5	0.0	JB67495-24	JB67495	05/21/2014	Remaining	N	Y		< 0.23	RA		
3+82	126R	10W-L37A	15.0	10W-L37A-16.5-17.0	16.5 - 17.0	-1.5	-2.0	JB67495-25	JB67495	05/21/2014	Remaining	N	Y		0.40	RA		
3+82	126R	10W-L37A	15.0	10W-L37A-18.5-19.0	18.5 - 19.0	-3.5	-4.0	JB67495-26R	JB67495R	05/21/2014	Remaining	N	Y		0.41	RA		
3+82	126R	10W-L37A	15.0	10W-L37A-20.0-20.5	20.0 - 20.5	-5.0	-5.5	JB67495-27R	JB67495R	05/21/2014	Remaining	N	Y		1.3	RA		
3+82	126R	10W-L37A	15.0	10W-L37A-20.5-21.0	20.5 - 21.0	-5.5	-6.0	JB67495-28	JB67495	05/21/2014	Remaining	N	Y		11.3	RA		
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-1.0	1.0 - 1.5	14.1	13.6	JB3648-1R	JB3648R	04/06/2012	Remaining	N	Y		1.1	J		
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-3.0	3.0 - 3.5	12.1	11.6	JB3648-2R	JB3648R	04/06/2012	Remaining	N	Y		1.3	J		
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-5.0	5.0 - 5.5	10.1	9.6	JB3648-3R	JB3648R	04/06/2012	Remaining	N	Y		< 0.24	UJ		
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-6.0	6.0 - 6.5	9.1	8.6	JB3648-4R	JB3648R	04/06/2012	Remaining	N	Y		< 0.30	UJ		
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-10.0	10.0 - 10.5	5.1	4.6	JB3648-5R	JB3648R	04/06/2012	Remaining	N	Y		< 0.24	UJ		
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-12.0	12.0 - 12.5	3.1	2.6	JB3648-6R	JB3648R	04/06/2012	Remaining	N	Y		< 0.24	UJ		
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-15.0	15.0 - 15.5	0.1	-0.4	JB3648-7R	JB3648R	04/06/2012	Remaining	N	Y		< 0.24	UJ		
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-17.0	17.0 - 17.5	-1.9	-2.4	JB3648-8R	JB3648R	04/06/2012	Remaining	N	Y		0.63	J		
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-19.0	19.0 - 19.5	-3.9	-4.4	JB3648-9R	JB3648R	04/06/2012	Remaining	N	Y		< 0.35	UJ		
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-21.0	21.0 - 21.5	-5.9	-6.4	JB3648-10R	JB3648R	04/06/2012	Remaining	N	Y		2.6	J		
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-23.0	23.0 - 23.5	-7.9	-8.4	JB3648-11R	JB3648R	04/06/2012	Remaining	N	Y		< 0.23	UJ		
3+87	50R	TWA-5	15.2	TWA-B005-6.0	6.0 - 6.5	9.2	8.7	JB3648-23	JB3648	04/06/2012	Remaining	N	Y		0.48	J		
3+87	50R	TWA-5	15.2	TWA-B005-10.0	10.0 - 10.5	5.2	4.7	JB3648-24R	JB3648R	04/06/2012	Remaining	N	Y		1.1	J		
3+87	50R	TWA-5	15.2	TWA-B005-15.0	15.0 - 15.5	0.2	-0.3	JB3648-25R	JB3648R	04/06/2012	Remaining	N	Y		< 0.24	UJ		

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
3+87	50R	TWA-5	15.2	TWA-B005-17.0	17.0 - 17.5	-1.8	-2.3	JB3648-26R	JB3648R	04/06/2012	Remaining	N	Y		< 0.53	UJ		
3+87	50R	TWA-5	15.2	TWA-B005-18.0	18.0 - 18.5	-2.8	-3.3	JB3648-27R	JB3648R	04/06/2012	Remaining	N	Y		0.30	J		
3+87	50R	TWA-5	15.2	TWA-B005-20.0	20.0 - 20.5	-4.8	-5.3	JB3648-28R	JB3648R	04/06/2012	Remaining	N	Y		< 0.25	UJ		
3+87	50R	TWA-5	15.2	TWA-B005-22.0	22.0 - 22.5	-6.8	-7.3	JB3648-29R	JB3648R	04/06/2012	Remaining	N	Y		< 0.24	UJ		
3+90	162R	133-P3B-M37A	11.8	133-P3B-M37A-10.5-11.0	10.5 - 11.0	1.3	0.8	JB41678-6	JB41678	07/10/2013	Remaining	N	Y		1.8	J		
3+90	162R	133-P3B-M37A	11.8	133-P3B-M37A-12.0-12.5	12.0 - 12.5	-0.2	-0.7	JB41678-5R	JB41678R	07/10/2013	Remaining	N	Y		5.2	J		
3+90	162R	133-P3B-M37A	11.8	133-P3B-M37A-14.0-14.5	14.0 - 14.5	-2.2	-2.7	JB41678-4	JB41678	07/10/2013	Remaining	N	Y		0.67	J		
3+90	162R	133-P3B-M37A	11.8	133-P3B-M37A-15.0-15.5	15.0 - 15.5	-3.2	-3.7	JB41678-3	JB41678	07/10/2013	Remaining	N	Y		0.72	J		
3+90	162R	133-P3B-M37A	11.8	133-P3B-M37A-15.5-16.0	15.5 - 16.0	-3.7	-4.2	JB41678-2	JB41678	07/10/2013	Remaining	N	Y		3.6	J		
3+90	192R	133-P3B-N37A	11.2	133-P3B-N37A-15.0-15.5	15.0 - 15.5	-3.8	-4.3	JB37528-1R	JB37528R	05/20/2013	Remaining	N	Y		1.3	RA		
3+90	192R	133-P3B-N37A	11.2	133-P3B-N37A-17.0-17.5	17.0 - 17.5	-5.8	-6.3	JB37528-2R	JB37528R	05/20/2013	Remaining	N	Y		0.92	RA		
3+90	192R	133-P3B-N37A	11.2	133-P3B-N37A-17.0-17.5X	17.0 - 17.5	-5.8	-6.3	JB37528-3R	JB37528R	05/20/2013	Remaining	FD	Y		0.31	RA		
3+90	192R	133-P3B-N37A	11.2	133-P3B-N37A-17.6-18.1	17.6 - 18.1	-6.4	-6.9	JB37528-4	JB37528	05/20/2013	Remaining	N	Y		0.23	RA		
3+90	192R	133-P3B-N37A	11.2	133-P3B-N37A-18.1-18.6	18.1 - 18.6	-6.9	-7.4	JB37528-5	JB37528	05/20/2013	Remaining	N	Y		0.78	RA		
3+90	222R	133-P3B-O37A	11.5	133-P3B-O37A-12.5-13.0	12.5 - 13.0	-1.1	-1.6	JB41590-19R	JB41590R	07/09/2013	Remaining	N	Y		11.8	RA		
3+90	222R	133-P3B-O37A	11.5	133-P3B-O37A-14.5-15.0	14.5 - 15.0	-3.1	-3.6	JB41590-18R	JB41590R	07/09/2013	Remaining	N	Y		0.62	RA		
3+90	222R	133-P3B-O37A	11.5	133-P3B-O37A-16.5-17.0	16.5 - 17.0	-5.1	-5.6	JB41590-17	JB41590	07/09/2013	Remaining	N	Y		0.14	RA		
3+90	222R	133-P3B-O37A	11.5	133-P3B-O37A-18.0-18.5	18.0 - 18.5	-6.6	-7.1	JB41590-16	JB41590	07/09/2013	Remaining	N	Y		0.19	RA		
3+90	222R	133-P3B-O37A	11.5	133-P3B-O37A-18.5-19.0	18.5 - 19.0	-7.1	-7.6	JB41590-15R	JB41590R	07/09/2013	Remaining	N	Y		1.5	RA		
3+90	252R	133-P3B-P37A	12.0	133-P3B-P37A-9.6-10.1	9.6 - 10.1	2.4	1.9	JB55933-8	JB55933	12/18/2013	Removed	N	Y		1.7	J	S2	
3+90	252R	133-P3B-P37A	12.0	133-P3B-P37A-11.6-12.1	11.6 - 12.1	0.4	-0.1	JB55933-9	JB55933	12/18/2013	Remaining	N	Y		0.84	J		
3+90	252R	133-P3B-P37A	12.0	133-P3B-P37A-13.6-14.1	13.6 - 14.1	-1.6	-2.1	JB55933-10	JB55933	12/18/2013	Remaining	N	Y		1.7	J		
3+90	252R	133-P3B-P37A	12.0	133-P3B-P37A-15.5-16.0	15.5 - 16.0	-3.5	-4.0	JB55933-11	JB55933	12/18/2013	Remaining	N	Y		0.54	J		
3+90	252R	133-P3B-P37A	12.0	133-P3B-P37A-16.0-16.5	16.0 - 16.5	-4.0	-4.5	JB55933-12	JB55933	12/18/2013	Remaining	N	Y		0.43	J		
3+90	252R	133-P3B-P37A	12.0	133-P3B-P37A-16.5-17.0	16.5 - 17.0	-4.5	-5.0	JB55933-13	JB55933	12/18/2013	Remaining	N	Y		0.62	J		
3+90	282R	133-P3B-Q37A	12.5	133-P3B-Q37A-10.8-11.3	10.8 - 11.3	1.7	1.2	JB37528-6R	JB37528R	05/20/2013	Remaining	N	Y		< 0.59	RA		
3+90	282R	133-P3B-Q37A	12.5	133-P3B-Q37A-12.8-13.3	12.8 - 13.3	-0.3	-0.8	JB37528-7	JB37528	05/20/2013	Remaining	N	Y		1.2	RA		
3+90	282R	133-P3B-Q37A	12.5	133-P3B-Q37A-14.8-15.3	14.8 - 15.3	-2.3	-2.8	JB37528-8	JB37528	05/20/2013	Remaining	N	Y		0.30	RA		
3+90	282R	133-P3B-Q37A	12.5	133-P3B-Q37A-16.5-17.0	16.5 - 17.0	-4.0	-4.5	JB37528-9R	JB37528R	05/20/2013	Remaining	N	Y		0.68	RA		
3+90	282R	133-P3B-Q37A	12.5	133-P3B-Q37A-17.0-17.5	17.0 - 17.5	-4.5	-5.0	JB37528-10	JB37528	05/20/2013	Remaining	N	Y		1.4	RA		
3+90	62R	10W-P3B-J37A-SW-A	15.2	10W-P3B-J37A-SW-A-5.1-5.6	5.2 - 5.7	10.0	9.5	410-59864-2	410598641	10/20/2021	Remaining	N	Y		0.40	J-		
3+90	65R	10W-P3B-J37A-SW-B	15.2	10W-P3B-J37A-SW-B-7.1-7.6	7.1 - 7.6	8.1	7.6	410-59864-3	410598641	10/20/2021	Remaining	N	Y		2.8	JB		
3+90	78R	P3BSPDITP3+90-80REX2	15.1	P3BSPDITP3+90-80REX2-11.7-12.2	11.7 - 12.2	3.4	2.9	410-60952-1	410609521	10/28/2021	Remaining	N	Y		2.2	RA		
3+92	119R	P3BS-PDI-3+90-120R	15.0	P3BS-PDI-3+90-120R-12.5-13.0	12.5 - 13.0	2.5	2.0	410-19675-5	410196731	11/05/2020	Remaining	N	Y		< 1.2	U		
3+94	122R	TWA-2	15.0	TWA-B002-15.0	15.0 - 15.5	0.0	-0.5	JB3648-17	JB3648	04/06/2012	Remaining	N	Y		0.37	RA		
3+94	122R	TWA-2	15.0	TWA-B002-21.0	21.0 - 21.5	-6.0	-6.5	JB3648-18	JB3648	04/06/2012	Remaining	N	Y		1.8	RA		
3+94	122R	TWA-2	15.0	TWA-B002-23.0	23.0 - 23.5	-8.0	-8.5	JB3648-19	JB3648	04/06/2012	Remaining	N	Y		1.6	RA		
3+94	122R	TWA-2	15.0	TWA-B002-23.0X	23.0 - 23.5	-8.0	-8.5	JB3648-20	JB3648	04/06/2012	Remaining	FD	Y		2.0	RA		
4+12	303R	137-P3B-R36A	12.9	137-P3B-R36A-16.8-17.3	16.8 - 17.3	-3.9	-4.4	JB41846-12	JB41846	07/11/2013	Remaining	N	Y		1.5	J		
4+12	303R	137-P3B-R36A	12.9	137-P3B-R36A-17.3-17.8	17.3 - 17.8	-4.4	-4.9	JB41846-15R	JB41846R	07/11/2013	Remaining	N	Y		2.1	J		
4+18	97R	P3BS-PDI-4+20-100R	15.0	P3BS-PDI-4+20-100R-20.0-20.5	20.0 - 20.5	-5.0	-5.5	410-19477-11	410194761	11/04/2020	Remaining	N	Y		10	J-		
4+18	97R	P3BS-PDI-4+20-100R	15.0	P3BS-PDI-4+20-100R-20.0-20.5X	20.0 - 20.5	-5.0	-5.5	410-19477-12	410194761	11/04/2020	Remaining	FD	Y		1.1	J-		
4+20	133R	10W-P3B-L36A-EX	15.2	10W-P3B-L36A-EX-17.1-17.6	17.1 - 17.7	-1.9	-2.5	410-59864-4	410598641	10/20/2021	Remaining	N	Y		0.68	JB		
4+20	162R	137-P3B-M36A	12.2	137-P3B-M36A-12.5-13.0	12.5 - 13.0	-0.3	-0.8	JB41159-1	JB41159	07/02/2013	Removed	N	Y		< 0.11	RA	S2	
4+20	162R	137-P3B-M36A	12.2	137-P3B-M36A-14.5-15.0	14.5 - 15.0	-2.3	-2.8	JB41159-2	JB41159	07/02/2013	Remaining	N	Y		< 0.097	RA		
4+20	162R	137-P3B-M36A	12.2	137-P3B-M36A-16.5-17.0	16.5 - 17.0	-4.3	-4.8	JB41159-5	JB41159	07/02/2013	Remaining	N	Y		2.7	RA		
4+20	162R	137-P3B-M36A	12.2	137-P3B-M36A-17.0-17.5	17.0 - 17.5	-4.8	-5.3	JB41159-3	JB41159	07/02/2013	Remaining	N	Y		< 0.14	RA		
4+20	162R	137-P3B-M36A	12.2	137-P3B-M36A-17.5-18.0	17.5 - 18.0	-5.3	-5.8	JB41159-4	JB41159	07/02/2013	Remaining	N	Y		2.7	RA		

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
4+20	192R	137-P3B-N36A	11.6	137-P3B-N36A-18.0-18.5	18.0 - 18.5	-6.4	-6.9	JB56059-7	JB56059	12/19/2013	Removed	N	Y	FILL (FILL)	0.91	J	S8	
4+20	192R	137-P3B-N36A	11.6	137-P3B-N36A-20.0-20.5	20.0 - 20.5	-8.4	-8.9	JB56059-8	JB56059	12/19/2013	Removed	N	Y	FILL (FILL)	31.8	J	S8	
4+20	192R	137-P3B-N36A-EX	11.6	137-P3B-N36A-EX-20.5-21.0	17.9 - 18.4	-6.3	-6.8	410-61370-2	410613701	11/01/2021	Remaining	N	Y	MM (PT)	< 0.23	RA	S8	
4+20	222R	137-P3B-O36A	11.8	137-P3B-O36A-18.8-19.3	18.8 - 19.3	-7.0	-7.5	JB56059-15	JB56059	12/19/2013	Removed	N	Y	FILL (FILL)	99.1	J	S9	
4+20	222R	137-P3B-O36A	11.8	137-P3B-O36A-20.0-20.5	20.0 - 20.5	-8.2	-8.7	JB56059-16R	JB56059R	12/19/2013	Remaining	N	Y	MM (PT)	0.18	J	S10	
4+20	252R	137-P3B-P36A	12.4	137-P3B-P36A-17.0-17.5	17.0 - 17.5	-4.6	-5.1	JB41462-15R	JB41462R	07/08/2013	Remaining	N	Y		2.4	J		
4+20	252R	137-P3B-P36A	12.4	137-P3B-P36A-18.5-19.0	18.5 - 19.0	-6.1	-6.6	JB41462-16	JB41462	07/08/2013	Remaining	N	Y		< 0.097	UJ		
4+20	252R	137-P3B-P36A	12.4	137-P3B-P36A-19.0-19.5	19.0 - 19.5	-6.6	-7.1	JB41462-17	JB41462	07/08/2013	Remaining	N	Y		0.27	J		
4+20	282R	137-P3B-Q36A	13.2	137-P3B-Q36A-15.5-16.0	15.5 - 16.0	-2.3	-2.8	JB56197-5R	JB56197R	12/20/2013	Removed	N	Y	FILL (FILL)	9.4	J	S6	
4+20	282R	137-P3B-Q36A	13.2	137-P3B-Q36A-17.5-18.0	17.5 - 18.0	-4.3	-4.8	JB56197-6R	JB56197R	12/20/2013	Removed	N	Y	FILL (FILL)	0.35	J	S11	
4+20	282R	137-P3B-Q36A	13.2	137-P3B-Q36A-18.5-19.0	18.5 - 19.0	-5.3	-5.8	JB56197-7	JB56197	12/20/2013	Removed	N	Y	FILL (FILL)	1.1	J	S11	
4+20	282R	137-P3B-Q36A	13.2	137-P3B-Q36A-19.0-19.5	19.0 - 19.5	-5.8	-6.3	JB56197-8R	JB56197R	12/20/2013	Removed	N	Y	MM (PT)	0.33	J	S12	
4+20	59R	10W-P3B-J36A-SW-A	15.1	10W-P3B-J36A-SW-A-6.2-6.7	6.1 - 6.6	9.0	8.5	410-58384-1	410583841	10/08/2021	Remaining	N	Y		1.2	J-		
4+20	62R	10W-P3B-J36A-SW-B	15.1	10W-P3B-J36A-SW-B-8.2-8.7	8.1 - 8.6	7.0	6.5	410-58384-2	410583841	10/08/2021	Remaining	N	Y		2.7	J-		
4+20	66R	10W-P3B-J36A-SW-C	15.1	10W-P3B-J36A-SW-C-10.2-10.7	10.1 - 10.6	5.0	4.5	410-58384-3	410583841	10/08/2021	Remaining	N	Y		11	J-		
4+20	68R	10W-P3B-J36A-SW-D	15.1	10W-P3B-J36A-SW-D-12.2-12.7	12.1 - 12.6	3.0	2.5	410-58384-4	410583841	10/08/2021	Remaining	N	Y		0.95	J-		
4+20	73R	10W-P3B-J36A-SW-E	15.1	10W-P3B-J36A-SW-E-14.2-14.7	14.1 - 14.6	1.0	0.5	410-58384-5	410583841	10/08/2021	Remaining	N	Y		1.4	J-		
4+20	78R	10W-P3B-J36A-SW-F	15.1	10W-P3B-J36A-SW-F-16.2-16.7	16.1 - 16.6	-1.0	-1.5	410-58384-6	410583841	10/08/2021	Remaining	N	Y		2.7	J-		
4+20	84R	10W-P3B-J36A-SW-G	15.0	10W-P3B-J36A-SW-G-18.2-18.7	18.0 - 18.5	-3.0	-3.5	410-58384-7	410583841	10/08/2021	Remaining	N	Y		< 0.25	UJ		
4+37	2R	10W-H35A	15.5	10W-H35A-2.5-3.0	2.5 - 3.0	13.0	12.5	JB67819-13R	JB67819R	05/27/2014	Remaining	N	Y		0.67	J		
4+37	2R	10W-H35A	15.5	10W-H35A-4.5-5.0	4.5 - 5.0	11.0	10.5	JB67819-14	JB67819	05/27/2014	Remaining	N	Y		1.1	J		
4+37	2R	10W-H35A	15.5	10W-H35A-6.0-6.5	6.0 - 6.5	9.5	9.0	JB67819-15	JB67819	05/27/2014	Remaining	N	Y		< 0.23	UJ		
4+37	2R	10W-H35A	15.5	10W-H35A-6.5-7.0	6.5 - 7.0	9.0	8.5	JB67819-16R	JB67819R	05/27/2014	Remaining	N	Y		0.39	J		
4+37	2R	10W-H35A	15.5	10W-H35A-8.5-9.0	8.5 - 9.0	7.0	6.5	JB67819-17	JB67819	05/27/2014	Remaining	N	Y		0.25	J		
4+37	2R	10W-H35A	15.5	10W-H35A-10.5-11.0	10.5 - 11.0	5.0	4.5	JB67819-18	JB67819	05/27/2014	Remaining	N	Y		< 0.21	UJ		
4+37	2R	10W-H35A	15.5	10W-H35A-12.5-13.0	12.5 - 13.0	3.0	2.5	JB67819-19	JB67819	05/27/2014	Remaining	N	Y		< 0.21	UJ		
4+37	2R	10W-H35A	15.5	10W-H35A-14.5-15.0	14.5 - 15.0	1.0	0.5	JB67819-20	JB67819	05/27/2014	Remaining	N	Y		0.45	J		
4+37	2R	10W-H35A	15.5	10W-H35A-15.5-16.0	15.5 - 16.0	0.0	-0.5	JB67819-21	JB67819	05/27/2014	Remaining	N	Y		< 0.19	UJ		
4+37	2R	10W-H35A	15.5	10W-H35A-16.0-16.5	16.0 - 16.5	-0.5	-1.0	JB67819-22R	JB67819R	05/27/2014	Remaining	N	Y		0.24	J		
4+39	64R	10W-J35A	15.1	10W-J35A-11.0-11.5	11.0 - 11.5	4.1	3.6	JB67595-20	JB67595	05/22/2014	Remaining	N	Y		0.64	J		
4+39	64R	10W-J35A	15.1	10W-J35A-13.0-13.5	13.0 - 13.5	2.1	1.6	JB67595-21	JB67595	05/22/2014	Remaining	N	Y		0.84	J		
4+39	64R	10W-J35A	15.1	10W-J35A-15.0-15.5	15.0 - 15.5	0.1	-0.4	JB67595-22	JB67595	05/22/2014	Remaining	N	Y		0.24	J		
4+39	64R	10W-J35A	15.1	10W-J35A-17.0-17.5	17.0 - 17.5	-1.9	-2.4	JB67595-23	JB67595	05/22/2014	Remaining	N	Y		< 0.24	UJ		
4+39	64R	10W-J35A	15.1	10W-J35A-18.5-19.0	18.5 - 19.0	-3.4	-3.9	JB67595-24	JB67595	05/22/2014	Remaining	N	Y		0.60	J		
4+39	64R	10W-J35A	15.1	10W-J35A-19.0-19.5	19.0 - 19.5	-3.9	-4.4	JB67595-25	JB67595	05/22/2014	Remaining	N	Y		0.32	J		
4+45	250R	137-B10	15.3	137B10J_23.5-24.2_802719	23.5 - 24.2	-8.2	-8.9	802719	C290	01/25/2007	Remaining	N	Y		< 11.27	UJ		
4+45	250R	137-B10	15.3	137B10K_24.8-25.2_802720	24.8 - 25.2	-9.5	-9.9	802720	C290	01/25/2007	Remaining	N	Y		< 2.75	UJ		
4+45	250R	137-B10-EX	15.3	137-B10-EX-21.8-22.3	21.8 - 22.3	-6.5	-7.0	JC85259-1	JC85259	03/27/2019	Remaining	N	Y		0.69	J-		
4+46	71R	P3BS-PDI-4+50-70R	14.9	P3BS-PDI-4+50-70R-10.4-10.9	10.4 - 10.9	4.5	4.0	410-19315-1	410193151	11/03/2020	Removed	N	Y		< 0.95	RA	S1	
4+46	71R	P3BS-PDI-4+50-70R	14.9	P3BS-PDI-4+50-70R-14.4-14.9	14.4 - 14.9	0.5	0.0	410-19315-2	410193151	11/03/2020	Removed	N	Y		< 0.27	RA	S1	
4+48	282R	137-3BS-Q35A	14.0	137-3BS-Q35A-EX-20.5-21.0	20.5 - 21.0	-6.5	-7.0	JC85167-1R	JC85167R	03/26/2019	Remaining	N	Y		< 2.1	RA		
4+49	193R	137-P3B-N35A-EX	14.4	137-P3B-N35A-EX-19.2-19.7	19.2 - 19.7	-4.8	-5.3	410-61370-1	410613701	11/01/2021	Remaining	N	Y		0.53	RA		
4+49	21L	P3BS-PDI-TP-4+50-20L	15.5	P3BS-PDI-TP-4+50-20L-1.2-1.7	1.2 - 1.7	14.3	13.8	410-18647-1	410186471	12/06/2020	Remaining	N	Y		1.6	J-		
4+49	74R	10W-K35A	14.8	10W-K35A-0.5-1.0	0.5 - 1.0	14.3	13.8	JD288-1	JD288	12/11/2019	Removed	N	Y		3.7	J-	S1	
4+49	74R	10W-K35A	14.8	10W-K35A-2.0-2.5	2.0 - 2.5	12.8	12.3	JD288-2T	JD288	12/12/2019	Removed	N	Y		1.1	J-	S1	
4+49	74R	10W-K35A	14.8	10W-K35A-4.0-4.5	4.0 - 4.5	10.8	10.3	JD288-3	JD288	12/12/2019	Removed	N	Y		2.8	J-	S1	
4+49	74R	10W-K35A	14.8	10W-K35A-6.0-6.5	6.0 - 6.5	8.8	8.3	JD288-4	JD288	12/12/2019	Removed	N	Y		0.65	J-	S1	
4+49	74R	10W-K35A	14.8	10W-K35A-8.0-8.5	8.0 - 8.5	6.8	6.3	JD288-5	JD288	12/12/2019	Removed	N	Y		1.6	J-	S1	

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
4+49	74R	10W-K35A	14.8	10W-K35A-12.0-12.5	12.0 - 12.5	2.8	2.3	JD288-6	JD288	12/12/2019	Removed	N	Y		1.4	J-	S1	
4+49	74R	10W-K35A	14.8	10W-K35A-16.0-16.5	16.0 - 16.5	-1.2	-1.7	JD288-7	JD288	12/12/2019	Removed	N	Y		1.4	J-	S1	
4+49	74R	10W-K35A	14.8	10W-K35A-17.5-18.0	17.5 - 18.0	-2.7	-3.2	JD288-8T	JD288	12/12/2019	Removed	N	Y	FILL (FILL)	< 0.43	UJ	S13	
4+49	74R	10W-K35A	14.8	10W-K35A-18.0-18.5	18.0 - 18.5	-3.2	-3.7	JD288-9T	JD288	12/12/2019	Removed	N	Y	UNDorg (OL)	1.6	J-	S14	
4+50	103R	10W-P3B-K35A-EX	15.2	10W-P3B-K35A-EX-19.3-19.8	19.3 - 19.8	-4.1	-4.6	410-57210-1	410572101	09/30/2021	Remaining	N	Y	MM (PT)	73	RA	S15	
4+50	222R	137-P3B-O35A	12.1	137-P3B-O35A-16.0-16.5	16.0 - 16.5	-3.9	-4.4	JB41462-6	JB41462	07/08/2013	Removed	N	Y		< 0.094	UJ	S2	
4+50	222R	137-P3B-O35A	12.1	137-P3B-O35A-18.0-18.5	18.0 - 18.5	-5.9	-6.4	JB41462-7R	JB41462R	07/08/2013	Remaining	N	Y		< 0.096	UJ		
4+50	222R	137-P3B-O35A	12.1	137-P3B-O35A-20.0-20.5	20.0 - 20.5	-7.9	-8.4	JB41462-8R	JB41462R	07/08/2013	Remaining	N	Y		1.3	J		
4+50	312R	137-P3B-R35A-EX	13.9	137-P3B-R35A-EX-20.6-21.1	20.6 - 21.1	-6.7	-7.2	JC84634-1R	JC84634R	03/18/2019	Remaining	N	Y		3.6	RA		
4+52	169R	137-B8	14.2	137B8G_17.1-17.5_802705	17.1 - 17.5	-2.9	-3.3	802705	C290	01/25/2007	Removed	N	Y		< 4.11	UJ	S2	
4+52	169R	137-B8	14.2	137B8H_22.1-22.4_802706	22.1 - 22.4	-7.9	-8.2	802706	C290	01/25/2007	Remaining	N	Y		< 6.99	UJ		
4+52	169R	137-B8	14.2	137B8I_24.9-25.2_802707	24.9 - 25.2	-10.7	-11.0	802707	C290	01/25/2007	Remaining	N	Y		< 2.81	UJ		
4+57	143R	EF-26	15.2	EF-B26-16.0	16.0 - 16.5	-0.8	-1.3	460-25481-19	460254811	04/18/2011	Removed	N	Y	MM (PT)	< 0.89	U	S2	
4+57	143R	EF-26	15.2	EF-B26-22.5	22.5 - 23.0	-7.3	-7.8	460-25481-21	460254811	04/18/2011	Remaining	N	Y	MM (PT)	< 1.8	UJ		
4+76	51R	TWA-4	15.1	TWA-B004-6.0	6.0 - 6.5	9.1	8.6	JB3648-64	JB3648	04/06/2012	Remaining	N	Y		1.1	J		
4+76	51R	TWA-4	15.1	TWA-B004-10.0	10.0 - 10.5	5.1	4.6	JB3648-65	JB3648	04/06/2012	Remaining	N	Y		0.53	J		
4+76	51R	TWA-4	15.1	TWA-B004-15.0	15.0 - 15.5	0.1	-0.4	JB3648-66	JB3648	04/06/2012	Remaining	N	Y		< 0.22	UJ		
4+76	51R	TWA-4	15.1	TWA-B004-17.0	17.0 - 17.5	-1.9	-2.4	JB3648-67	JB3648	04/06/2012	Remaining	N	Y		0.77	J		
4+76	51R	TWA-4	15.1	TWA-B004-20.0	20.0 - 20.5	-4.9	-5.4	JB3648-68	JB3648	04/06/2012	Remaining	N	Y		1.1	J		
4+76	51R	TWA-4	15.1	TWA-B004-22.0	22.0 - 22.5	-6.9	-7.4	JB3648-69	JB3648	04/06/2012	Remaining	N	Y		0.64	J		
4+76	51R	TWA-4	15.1	TWA-B004-22.0X	22.0 - 22.5	-6.9	-7.4	JB3648-70	JB3648	04/06/2012	Remaining	FD	Y		0.27	J		
4+77	121R	TWA-1/ICO-12	15.3	TWA-B001-20.0	20.0 - 20.5	-4.7	-5.2	JB3648-59R	JB3648R	04/06/2012	Remaining	N	Y		0.58	J		
4+77	121R	TWA-1/ICO-12	15.3	TWA-B001-22.0	22.0 - 22.5	-6.7	-7.2	JB3648-60R	JB3648R	04/06/2012	Remaining	N	Y		3.4	J		
4+77	18L	TWA-8	15.5	TWA-B008-3.0	3.0 - 3.5	12.5	12.0	JB3648-73R	JB3648R	04/06/2012	Remaining	N	Y		< 0.27	UJ		
4+77	18L	TWA-8	15.5	TWA-B008-5.0	5.0 - 5.5	10.5	10.0	JB3648-74R	JB3648R	04/06/2012	Remaining	N	Y		0.39	J		
4+77	18L	TWA-8	15.5	TWA-B008-7.0	7.0 - 7.5	8.5	8.0	JB3648-75R	JB3648R	04/06/2012	Remaining	N	Y		< 0.24	UJ		
4+77	18L	TWA-8	15.5	TWA-B008-10.0	10.0 - 10.5	5.5	5.0	JB3648-76R	JB3648R	04/06/2012	Remaining	N	Y		< 0.32	UJ		
4+77	18L	TWA-8	15.5	TWA-B008-15.0	15.0 - 15.5	0.5	0.0	JB3648-77R	JB3648R	04/06/2012	Remaining	N	Y		< 0.35	UJ		
4+77	18L	TWA-8	15.5	TWA-B008-17.0	17.0 - 17.5	-1.5	-2.0	JB3648-78	JB3648	04/06/2012	Remaining	N	Y		2.2	J		
4+77	18L	TWA-8	15.5	TWA-B008-20.0	20.0 - 20.5	-4.5	-5.0	JB3648-79R	JB3648R	04/06/2012	Remaining	N	Y		< 0.24	UJ		
4+77	18L	TWA-8	15.5	TWA-B008-22.0	22.0 - 22.5	-6.5	-7.0	JB3648-80	JB3648	04/06/2012	Remaining	N	Y		0.85	J		
4+79	103R	P3BS-PDI-4+80-105R	15.2	P3BS-PDI-4+80-105R-20.5-21.0	20.5 - 21.0	-5.3	-5.8	410-19673-2	410196731	11/05/2020	Remaining	N	Y		< 2.8	UJ		
4+79	194R	137-P3B-N34A-EX	14.5	137-P3B-N34A-EX-19.4-19.9	20.7 - 21.2	-6.2	-6.7	410-61173-3	410611731	10/29/2021	Remaining	N	Y	MM (PT)	38	J	S16	
4+79	194R	137-P3B-N34A-EX	14.5	137-P3B-N34A-EX-19.4-19.9X	20.7 - 21.2	-6.2	-6.7	410-61173-4	410611731	10/29/2021	Remaining	FD	Y	MM (PT)	3.1	J	S16	
4+79	224R	137-P3B-O34A-EX	14.6	137-P3B-O34A-EX-19.8-20.3	21.2 - 21.7	-6.6	-7.1	410-61173-2	410611731	10/29/2021	Remaining	N	Y		1.6	J		
4+80	162R	137-P3B-M34A	12.8	137-P3B-M34A-19.1-19.6	19.1 - 19.6	-6.3	-6.8	JB42286-5R	JB42286R	07/16/2013	Removed	N	Y	FILL (FILL)	294	J	S17	
4+80	162R	137-P3B-M34A	12.8	137-P3B-M34A-20.0-20.5	20.0 - 20.5	-7.2	-7.7	JB42286-6	JB42286	07/16/2013	Removed	N	Y	FILL (FILL)	0.80	J	S18, S19	
4+80	252R	137-3BS-P34A	14.5	137-3BS-P34A-EX-21.5-22.0	21.5 - 22.0	-7.0	-7.5	JC84893-1	JC84893	03/21/2019	Remaining	N	Y		3.4	J-		
4+80	252R	137-3BS-P34A	14.5	137-3BS-P34A-EX-21.5-22.0X	21.5 - 22.0	-7.0	-7.5	JC84893-2	JC84893	03/21/2019	Remaining	FD	Y		2.9	J-		
4+80	282R	137-3BS-Q34A	14.8	137-3BS-Q34A-EX-21.2-21.7	21.2 - 21.7	-6.4	-6.9	JC84802-1	JC84802	03/20/2019	Remaining	N	Y		1.5	RA		
4+81	80R	10W-K34A	14.8	10W-K34A-0.5-1.0	0.5 - 1.0	14.3	13.8	JD288-13	JD288	12/12/2019	Removed	N	Y		0.97	J-	S1	
4+81	80R	10W-K34A	14.8	10W-K34A-2.0-2.5	2.0 - 2.5	12.8	12.3	JD288-14R	JD288	12/12/2019	Removed	N	Y		0.68	J-	S1	
4+81	80R	10W-K34A	14.8	10W-K34A-2.0-2.5X	2.0 - 2.5	12.8	12.3	JD288-15R	JD288	12/12/2019	Removed	FD	Y		0.97	J-	S1	
4+81	80R	10W-K34A	14.8	10W-K34A-4.0-4.5	4.0 - 4.5	10.8	10.3	JD288-16R	JD288	12/12/2019	Removed	N	Y		2.7	J-	S1	
4+81	80R	10W-K34A	14.8	10W-K34A-6.0-6.5	6.0 - 6.5	8.8	8.3	JD288-17R	JD288	12/12/2019	Removed	N	Y		< 0.35	UJ	S1	
4+81	80R	10W-K34A	14.8	10W-K34A-8.0-8.5	8.0 - 8.5	6.8	6.3	JD288-18	JD288	12/12/2019	Removed	N	Y		1.3	J-	S1	
4+81	80R	10W-K34A	14.8	10W-K34A-10.0-10.5	10.0 - 10.5	4.8	4.3	JD288-19R	JD288	12/12/2019	Removed	N	Y		0.57	J-	S1	
4+81	80R	10W-K34A	14.8	10W-K34A-12.0-12.5	12.0 - 12.5	2.8	2.3	JD288-20R	JD288	12/12/2019	Removed	N	Y		< 0.54	UJ	S1	

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
4+81	80R	10W-K34A	14.8	10W-K34A-14.0-14.5	14.0 - 14.5	0.8	0.3	JD288-21	JD288	12/12/2019	Removed	N	Y		1.6	J-	S1	
4+81	80R	10W-K34A	14.8	10W-K34A-16.0-16.5	16.0 - 16.5	-1.2	-1.7	JD288-22R	JD288	12/12/2019	Removed	N	Y		1.3	J-	S1	
4+81	80R	10W-K34A	14.8	10W-K34A-18.0-18.5	18.0 - 18.5	-3.2	-3.7	JD288-23R	JD288	12/12/2019	Remaining	N	Y		< 0.39	UJ		
4+81	80R	10W-K34A	14.8	10W-K34A-19.5-20.0	19.5 - 20.0	-4.7	-5.2	JD288-24	JD288	12/12/2019	Remaining	N	Y		1.0	J-		
4+81	80R	10W-K34A	14.8	10W-K34A-20.0-20.5	20.0 - 20.5	-5.2	-5.7	JD288-25R	JD288	12/12/2019	Remaining	N	Y		2.1	J		
4+82	334R	137-3BS-S34A	13.6	137-3BS-S34A-EX-19.9-20.4	19.9 - 20.4	-6.3	-6.8	JC84244-3R	JC84244R	03/12/2019	Remaining	N	Y		2.9	RA		
4+85	116L	10W-D33A-SW-S	15.4	10W-D33A-SW-S-2-2.5	2.0 - 2.5	13.4	12.9	410-49469-3	410494691	07/30/2021	Remaining	N	Y		< 0.16	U		
4+85	55L	10W-F33A-SW-S	15.4	10W-F33A-SW-S-2.1-2.6	1.9 - 2.4	13.5	13.0	410-49469-7	410494691	07/30/2021	Remaining	N	Y		< 0.17	U		
4+90	34R	P3BS-PDI-5+10-35R	15.2	P3BS-PDI-5+10-35R-4.0-4.5	4.0 - 4.5	11.2	10.7	410-19316-2	410193151	11/03/2020	Remaining	N	Y		1.3	RA		
4+90	34R	P3BS-PDI-5+10-35R	15.2	P3BS-PDI-5+10-35R-6.0-6.5	6.0 - 6.5	9.2	8.7	410-19316-3	410193151	11/03/2020	Remaining	N	Y		< 0.38	RA		
4+90	34R	P3BS-PDI-5+10-35R	15.2	P3BS-PDI-5+10-35R-6.0-6.5X	6.0 - 6.5	9.2	8.7	410-19316-4	410193151	11/03/2020	Remaining	FD	Y		< 0.42	RA		
4+90	34R	P3BS-PDI-5+10-35R	15.2	P3BS-PDI-5+10-35R-8.0-8.5	8.0 - 8.5	7.2	6.7	410-19316-5	410193151	11/03/2020	Remaining	N	Y		< 0.39	RA		
4+90	34R	P3BS-PDI-5+10-35R	15.2	P3BS-PDI-5+10-35R-10.0-10.5	10.0 - 10.5	5.2	4.7	410-19316-6	410193151	11/03/2020	Remaining	N	Y		< 0.42	RA		
4+90	34R	P3BS-PDI-5+10-35R	15.2	P3BS-PDI-5+10-35R-12.0-12.5	12.0 - 12.5	3.2	2.7	410-19316-7	410193151	11/03/2020	Remaining	N	Y		< 0.56	RA		
4+90	34R	P3BS-PDI-5+10-35R	15.2	P3BS-PDI-5+10-35R-14.0-14.5	14.0 - 14.5	1.2	0.7	410-19316-8	410193151	11/03/2020	Remaining	N	Y		< 0.46	RA		
4+90	34R	P3BS-PDI-5+10-35R	15.2	P3BS-PDI-5+10-35R-16.0-16.5	16.0 - 16.5	-0.8	-1.3	410-19316-9	410193151	11/03/2020	Remaining	N	Y		0.69	RA		
4+90	34R	P3BS-PDI-5+10-35R	15.2	P3BS-PDI-5+10-35R-17.0-17.5	17.0 - 17.5	-1.8	-2.3	410-19316-10	410193151	11/03/2020	Remaining	N	Y		< 0.48	RA		
4+90	34R	P3BS-PDI-5+10-35R	15.2	P3BS-PDI-5+10-35R-17.5-18.0	17.5 - 18.0	-2.3	-2.8	410-19316-11	410193151	11/03/2020	Remaining	N	Y		0.49	RA		
4+91	3R	10W-H34A	15.5	10W-H34A-4.5-5.0	4.5 - 5.0	11.0	10.5	JB68100-4	JB68100	05/30/2014	Remaining	N	Y		0.58	J		
4+91	3R	10W-H34A	15.5	10W-H34A-5.4-5.9	5.4 - 5.9	10.1	9.6	JB68100-5	JB68100	05/30/2014	Remaining	N	Y		1.1	J		
4+91	3R	10W-H34A	15.5	10W-H34A-6.5-7.0	6.5 - 7.0	9.0	8.5	JB68100-6	JB68100	05/30/2014	Remaining	N	Y		0.73	J		
4+91	3R	10W-H34A	15.5	10W-H34A-6.5-7.0X	6.5 - 7.0	9.0	8.5	JB68100-7	JB68100	05/30/2014	Remaining	FD	Y		0.64	J		
4+91	3R	10W-H34A	15.5	10W-H34A-8.5-9.0	8.5 - 9.0	7.0	6.5	JB68100-8	JB68100	05/30/2014	Remaining	N	Y		0.66	J		
4+91	3R	10W-H34A	15.5	10W-H34A-10.5-11.0	10.5 - 11.0	5.0	4.5	JB68100-9	JB68100	05/30/2014	Remaining	N	Y		1.4	J		
4+91	3R	10W-H34A	15.5	10W-H34A-12.5-13.0	12.5 - 13.0	3.0	2.5	JB68100-10	JB68100	05/30/2014	Remaining	N	Y		1.8	J		
4+91	3R	10W-H34A	15.5	10W-H34A-14.5-15.0	14.5 - 15.0	1.0	0.5	JB68100-11	JB68100	05/30/2014	Remaining	N	Y		1.4	J		
4+91	3R	10W-H34A	15.5	10W-H34A-15.5-16.0	15.5 - 16.0	0.0	-0.5	JB68100-12	JB68100	05/30/2014	Remaining	N	Y		0.64	J		
4+91	3R	10W-H34A	15.5	10W-H34A-16.7-17.2	16.7 - 17.2	-1.2	-1.7	JB68100-13	JB68100	05/30/2014	Remaining	N	Y		1.6	J		
4+91	3R	10W-H34A	15.5	10W-H34A-17.2-17.7	17.2 - 17.7	-1.7	-2.2	JB68100-14	JB68100	05/30/2014	Remaining	N	Y		1.3	J		
4+96	125R	10W-P3B-L33A-EX	15.3	10W-P3B-L33A-EX-20.4-20.9	20.4 - 20.9	-5.1	-5.6	410-55140-2	410551401	09/15/2021	Remaining	N	Y		9.3	RA		
5+00	101R	10W-D33A-SW-E	15.6	10W-D33A-SW-E-2-2.5	2.0 - 2.5	13.6	13.1	410-49469-2	410494691	07/30/2021	Remaining	N	Y		0.50			
5+00	116R	10W-D33A	15.6	10W-D33A-2.5-3.0	2.5 - 3.0	13.1	12.6	JB67728-2R	JB67728R	05/23/2014	Remaining	N	Y		0.42	J		
5+00	116R	10W-D33A	15.6	10W-D33A-4.5-5.0	4.5 - 5.0	11.1	10.6	JB67728-3R	JB67728R	05/23/2014	Remaining	N	Y		1.1	J		
5+00	116R	10W-D33A	15.6	10W-D33A-6.5-7.0	6.5 - 7.0	9.1	8.6	JB67728-4R	JB67728R	05/23/2014	Remaining	N	Y		0.63	J		
5+00	116R	10W-D33A	15.6	10W-D33A-6.5-7.0X	6.5 - 7.0	9.1	8.6	JB67728-6R	JB67728R	05/23/2014	Remaining	FD	Y		0.58	J		
5+00	116R	10W-D33A	15.6	10W-D33A-7.5-8.0	7.5 - 8.0	8.1	7.6	JB67728-5R	JB67728R	05/23/2014	Remaining	N	Y		0.77	J		
5+00	116R	10W-D33A	15.6	10W-D33A-8.5-9.0	8.5 - 9.0	7.1	6.6	JB67728-7R	JB67728R	05/23/2014	Remaining	N	Y		1.5	J		
5+00	116R	10W-D33A	15.6	10W-D33A-10.5-11.0	10.5 - 11.0	5.1	4.6	JB67728-8R	JB67728R	05/23/2014	Remaining	N	Y		2.2	J		
5+00	116R	10W-D33A	15.6	10W-D33A-12.0-12.5	12.0 - 12.5	3.6	3.1	JB67728-10R	JB67728R	05/23/2014	Remaining	N	Y		0.54	J		
5+00	116R	10W-D33A	15.6	10W-D33A-12.5-13.0	12.5 - 13.0	3.1	2.6	JB67728-9R	JB67728R	05/23/2014	Remaining	N	Y		1.4	J		
5+00	128L	10W-D33A-SW-W	15.4	10W-D33A-SW-W-2.1-2.6	1.9 - 2.4	13.5	13.0	410-49469-4	410494691	07/30/2021	Remaining	N	Y		3.0			
5+00	40L	10W-F33A-SW-E	15.5	10W-F33A-SW-E-2.6-3.1	2.5 - 3.0	13.0	12.5	410-49469-6	410494691	07/30/2021	Remaining	N	Y		2.7			
5+00	55L	10W-F33A	15.7	10W-F33A-2.5-3.0	2.5 - 3.0	13.2	12.7	JB67728-12R	JB67728R	05/23/2014	Remaining	N	Y		2.9	J		
5+00	55L	10W-F33A	15.7	10W-F33A-4.5-5.0	4.5 - 5.0	11.2	10.7	JB67728-13R	JB67728R	05/23/2014	Remaining	N	Y		0.61	J		
5+00	55L	10W-F33A	15.7	10W-F33A-5.5-6.0	5.5 - 6.0	10.2	9.7	JB67728-14	JB67728	05/23/2014	Remaining	N	Y		0.33	J		
5+00	55L	10W-F33A	15.7	10W-F33A-6.5-7.0	6.5 - 7.0	9.2	8.7	JB67728-15R	JB67728R	05/23/2014	Remaining	N	Y		0.40	J		
5+00	55L	10W-F33A	15.7	10W-F33A-8.5-9.0	8.5 - 9.0	7.2	6.7	JB67728-16	JB67728	05/23/2014	Remaining	N	Y		< 0.18	UJ		
5+00	55L	10W-F33A	15.7	10W-F33A-10.5-11.0	10.5 - 11.0	5.2	4.7	JB67728-17R	JB67728R	05/23/2014	Remaining	N	Y		0.48	J		

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
5+00	55L	10W-F33A	15.7	10W-F33A-12.5-13.0	12.5 - 13.0	3.2	2.7	JB67728-18	JB67728	05/23/2014	Remaining	N	Y		< 0.22	UJ		
5+00	55L	10W-F33A	15.7	10W-F33A-14.5-15.0	14.5 - 15.0	1.2	0.7	JB67728-19	JB67728	05/23/2014	Remaining	N	Y		0.27	J		
5+00	55L	10W-F33A	15.7	10W-F33A-15.3-15.8	15.3 - 15.8	0.4	-0.1	JB67728-20	JB67728	05/23/2014	Remaining	N	Y		0.33	J		
5+00	55L	10W-F33A	15.7	10W-F33A-15.8-16.3	15.8 - 16.3	-0.1	-0.6	JB67728-21	JB67728	05/23/2014	Remaining	N	Y		< 0.26	UJ		
5+00	62R	10W-P3B-J33A-SW	14.9	10W-P3B-J33A-SW-16.9-17.4	16.9 - 17.4	-2.0	-2.5	410-55140-1	410551401	09/15/2021	Remaining	N	Y		< 0.26	RA		
5+00	64R	10W-J33A	14.9	10W-J33A-1.0-1.5	1.0 - 1.5	13.9	13.4	JB67595-2	JB67595	05/22/2014	Removed	N	Y		1.4	J	S1	
5+00	64R	10W-J33A	14.9	10W-J33A-3.0-3.5	3.0 - 3.5	11.9	11.4	JB67595-3	JB67595	05/22/2014	Removed	N	Y		0.41	J	S1	
5+00	64R	10W-J33A	14.9	10W-J33A-5.0-5.5	5.0 -5.5	9.9	9.4	JB67595-4R	JB67595R	05/22/2014	Removed	N	Y		0.60	J	S1	
5+00	64R	10W-J33A	14.9	10W-J33A-7.0-7.5	7.0 - 7.5	7.9	7.4	JB67595-5	JB67595	05/22/2014	Removed	N	Y		0.34	J	S1	
5+00	64R	10W-J33A	14.9	10W-J33A-9.0-9.5	9.0 -9.5	5.9	5.4	JB67595-6	JB67595	05/22/2014	Removed	N	Y		< 0.33	UJ	S1	
5+00	64R	10W-J33A	14.9	10W-J33A-11.0-11.5	11.0 - 11.5	3.9	3.4	JB67595-7	JB67595	05/22/2014	Removed	N	Y		< 0.25	UJ	S1	
5+00	64R	10W-J33A	14.9	10W-J33A-13.0-13.5	13.0 - 13.5	1.9	1.4	JB67595-8	JB67595	05/22/2014	Removed	N	Y		0.94	J	S1	
5+00	64R	10W-J33A	14.9	10W-J33A-15.0-15.5	15.0 - 15.5	-0.1	-0.6	JB67595-9	JB67595	05/22/2014	Removed	N	Y		0.43	J	S1	
5+00	64R	10W-J33A	14.9	10W-J33A-17.0-17.5	15.0 - 15.5	-0.1	-0.6	JB67595-10	JB67595	05/22/2014	Removed	N	Y		< 0.23	UJ	S1	
5+00	64R	10W-J33A	14.9	10W-J33A-18.0-18.5	18.0 - 18.5	-3.1	-3.6	JB67595-12	JB67595	05/22/2014	Remaining	N	Y		< 0.27	UJ		
5+00	64R	10W-J33A	14.9	10W-J33A-18.5-19.0	18.5 - 19.0	-3.6	-4.1	JB67595-11	JB67595	05/22/2014	Remaining	N	Y		0.93	J		
5+00	64R	10W-J33A	14.9	10W-J33A-19.0-19.5	19.0 - 19.5	-4.1	-4.6	JB67595-13R	JB67595R	05/22/2014	Remaining	N	Y		2.6	J		
5+00	71L	10W-F33A-SW-W	15.6	10W-F33A-SW-W-2.2-2.7	2.2 - 2.7	13.4	12.9	410-49469-8	410494691	07/30/2021	Remaining	N	Y		< 0.19	U		
5+09	224R	137-P3B-O33A-EX	13.2	137-P3B-O33A-EX-20.0-20.5	20.0 - 20.5	-6.8	-7.3	410-61173-1	410611731	10/29/2021	Remaining	N	Y		1.3	J		
5+09	93R	10W-P3B-K33A-EX	15.1	10W-P3B-K33A-EX-19.6-20.1	19.7 - 20.2	-4.6	-5.1	410-55140-3	410551401	09/15/2021	Remaining	N	Y		< 0.22	RA		
5+10	162R	137-P3B-M33A	13.1	137-P3B-M33A-19.5-20.0	19.5 - 20.0	-6.4	-6.9	JB42286-3R	JB42286R	07/16/2013	Removed	N	Y	FILL (FILL)	318	J	S20	
5+10	162R	137-P3B-M33A	13.1	137-P3B-M33A-20.0-20.5	20.0 - 20.5	-6.9	-7.4	JB42286-4	JB42286	07/16/2013	Removed	N	Y	FILL (FILL)	0.44	J	S21	
5+10	194R	137-P3B-N33A-EX	13.2	137-P3B-N33A-EX-19.3-19.8	19.3 - 19.8	-6.1	-6.6	410-60250-1	410602501	10/22/2021	Remaining	N	Y		< 0.35	RA		
5+10	252R	137-3BS-P33A	14.5	137-3BS-P33A-EX-21.5-22.0	21.5 - 22.0	-7.0	-7.5	JC84505-1	JC84505	03/15/2019	Remaining	N	Y		2.8	RA		
5+10	282R	137-3BS-Q33A	14.6	137-3BS-Q33A-EX-21.4-21.9	21.4 - 21.9	-6.8	-7.3	JC84440-1	JC84440	03/14/2019	Remaining	N	Y		2.7	RA		
5+10	312R	137-3BS-R33A	14.7	137-3BS-R33A-EX-21.2-21.7	21.2 - 21.7	-6.5	-7.0	JC84244-1R	JC84244R	03/12/2019	Remaining	N	Y		2.6	RA		
5+10	342R	137-P3B-S33A	13.9	137-P3B-S33A-19.5-20.0	19.5 - 20.0	-5.6	-6.1	JB41256-12	JB41256	07/03/2013	Removed	N	Y	FILL (FILL)	52.8	J	S22	
5+10	342R	137-P3B-S33A	13.9	137-P3B-S33A-20.0-20.5	20.0 - 20.5	-6.1	-6.6	JB41256-13R	JB41256R	07/03/2013	Removed	N	Y	FILL (FILL)	11.3	J	S22	
5+10	342R	137-P3B-S33A	13.9	137-P3B-S33A-20.5-21.0	20.5 - 21.0	-6.6	-7.1	JB41256-14	JB41256	07/03/2013	Removed	N	Y	FILL (FILL)	0.16	J	S22	
5+10	342R	137-P3B-S33A	13.9	137-P3B-S33A-21.0-21.5	21.0 - 21.5	-7.1	-7.6	JB41256-15	JB41256	07/03/2013	Remaining	N	Y	MM (PT)	0.98	J	S23	
5+15	116L	10W-D33A-SW-N	15.4	10W-D33A-SW-N-2-2.5	2.0 - 2.5	13.4	12.9	410-49469-1	410494691	07/30/2021	Remaining	N	Y		2.5			
5+15	56L	10W-F33A-SW-N	15.4	10W-F33A-SW-N-2.4-2.9	2.2 - 2.7	13.2	12.7	410-49469-5	410494691	07/30/2021	Remaining	N	Y		4.5			
5+27	11L	P3BS-PDI-5+25-7L	14.8	P3BS-PDI-5+25-7L-0.0-0.5	0.9 - 1.4	13.9	13.4	410-13445-1	410133231	09/09/2020	Removed	N	Y		3.4	J-	S1	
5+27	11L	P3BS-PDI-5+25-7L	14.8	P3BS-PDI-5+25-7L-2.0-2.5	2.0 - 2.5	12.8	12.3	410-13445-2	410133231	09/09/2020	Removed	N	Y		2.0	J-	S1	
5+27	11L	P3BS-PDI-5+25-7L	14.8	P3BS-PDI-5+25-7L-4.0-4.5	4.0 - 4.5	10.8	10.3	410-13445-3	410133231	09/09/2020	Removed	N	Y		2.2	J-	S1	
5+27	11L	P3BS-PDI-5+25-7L	14.8	P3BS-PDI-5+25-7L-6.0-6.5	6.0 - 6.5	8.8	8.3	410-13445-4	410133231	09/09/2020	Removed	N	Y		1.6	J-	S1	
5+27	11L	P3BS-PDI-5+25-7L	14.8	P3BS-PDI-5+25-7L-8.0-8.5	8.0 - 8.5	6.8	6.3	410-13445-5	410133231	09/09/2020	Removed	N	Y		< 0.21	UJ	S1	
5+27	11L	P3BS-PDI-5+25-7L	14.8	P3BS-PDI-5+25-7L-10.0-10.5	10.0 - 10.5	4.8	4.3	410-13445-6	410133231	09/09/2020	Removed	N	Y		3.9	J-	S1	
5+27	11L	P3BS-PDI-5+25-7L	14.8	P3BS-PDI-5+25-7L-12.0-12.5	12.0 - 12.5	2.8	2.3	410-13445-7	410133231	09/09/2020	Removed	N	Y		< 0.20	UJ	S1	
5+27	11L	P3BS-PDI-5+25-7L	14.8	P3BS-PDI-5+25-7L-12.0-12.5X	12.0 - 12.5	2.8	2.3	410-13445-12	410134451	09/09/2020	Removed	FD	Y		< 0.21	UJ	S1	
5+27	11L	P3BS-PDI-5+25-7L	14.8	P3BS-PDI-5+25-7L-14.0-14.5	14.0 - 14.5	0.8	0.3	410-13445-8	410133231	09/09/2020	Removed	N	Y		< 0.22	UJ	S1	
5+27	11L	P3BS-PDI-5+25-7L	14.8	P3BS-PDI-5+25-7L-16.0-16.5	16.0 - 16.5	-1.2	-1.7	410-13445-9	410134451	09/09/2020	Removed	N	Y		< 0.19	UJ	S1	
5+27	11L	P3BS-PDI-5+25-7L	14.8	P3BS-PDI-5+25-7L-17.5-18.0	17.5 - 18.0	-2.7	-3.2	410-13445-10	410134451	09/09/2020	Remaining	N	Y		< 0.16	UJ		
5+27	11L	P3BS-PDI-5+25-7L	14.8	P3BS-PDI-5+25-7L-18.0-18.5	18.0 - 18.5	-3.2	-3.7	410-13445-11	410134451	09/09/2020	Remaining	N	Y		< 4.7	UJ		
5+29	90L	10W-P3BS-EF-29-SW-S	15.3	10W-P3BS-EF-29-SW-S-3.0-3.5	3.0 - 3.5	12.3	11.8	410-48301-1	410483011	07/22/2021	Remaining	N	Y		< 0.16	U		
5+34	90L	EF-29	15.3	EF-B29-4.0	4.0 - 4.5	11.3	10.8	460-25599-26	460255991	04/20/2011	Remaining	N	Y		< 0.55	U		
5+34	90L	EF-29	15.3	EF-B29-6.5	6.5 - 7.0	8.8	8.3	460-25705-7	460257051	04/22/2011	Remaining	N	Y		< 0.66	U		
5+34	90L	EF-29	15.3	EF-B29-10.0	10.0 - 10.5	5.3	4.8	460-25705-8	460257051	04/22/2011	Remaining	N	Y		< 0.66	U		

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
5+34	90L	EF-29	15.3	EF-B29-10.0X	10.0 - 10.5	5.3	4.8	460-25705-9	460257051	04/22/2011	Remaining	FD	Y		< 0.65	U		
5+34	90L	EF-29	15.3	EF-B29-12.5	12.5 - 13.0	2.8	2.3	460-25705-10	460257051	04/22/2011	Remaining	N	Y		< 0.67	U		
5+34	90L	EF-29	15.3	EF-B29-15.0	15.0 - 15.5	0.3	-0.2	460-25705-11	460257051	04/22/2011	Remaining	N	Y		< 0.71	U		
5+34	90L	EF-29	15.3	EF-B29-21.0	21.0 - 21.5	-5.7	-6.2	460-25705-12	460257051	04/22/2011	Remaining	N	Y		< 0.54	U		
5+36	83L	10W-P3BS-EF-29-SW-E	15.3	10W-P3BS-EF-29-SW-E-3.1-3.6	3.2 - 3.7	12.1	11.6	410-48301-2	410483011	07/22/2021	Remaining	N	Y		< 0.79	U		
5+37	40R	EF-28	14.3	EF-B28-4.0	4.0 - 4.5	10.3	9.8	460-25599-30	460255991	04/20/2011	Remaining	N	Y		< 0.67	U		
5+37	40R	EF-28	14.3	EF-B28-5.5	5.5 - 6.0	8.8	8.3	460-25705-1	460257051	04/22/2011	Remaining	N	Y		< 0.74	U		
5+37	40R	EF-28	14.3	EF-B28-10.0	10.0 - 10.5	4.3	3.8	460-25705-2	460257051	04/22/2011	Remaining	N	Y		< 0.87	U		
5+37	40R	EF-28	14.3	EF-B28-15.0	15.0 - 15.5	-0.7	-1.2	460-25705-4	460257051	04/22/2011	Remaining	N	Y		< 0.74	U		
5+37	40R	EF-28	14.3	EF-B28-22.5	22.5 - 23.0	-8.2	-8.7	460-25705-6	460257051	04/22/2011	Remaining	N	Y		3.1			
5+38	109L	10W-P3BS-EF-29-SW-W	15.1	10W-P3BS-EF-29-SW-W-2.9-3.4	2.9 - 3.4	12.2	11.7	410-48301-4	410483011	07/22/2021	Remaining	N	Y		< 0.16	UJ		
5+38	109L	10W-P3BS-EF-29-SW-W	15.1	10W-P3BS-EF-29-SW-W-2.9-3.4X	2.9 - 3.4	12.2	11.7	410-48301-5	410483011	07/22/2021	Remaining	FD	Y		3.5	J		
5+39	113R	10W-K32A	12.3	10W-K32A-18.5-19.0	18.5 - 19.0	-6.2	-6.7	JB66705-24	JB66705	05/09/2014	Remaining	N	Y		1.6	J		
5+39	113R	10W-K32A	12.3	10W-K32A-19.0-19.5	19.0 - 19.5	-6.7	-7.2	JB66705-25	JB66705	05/09/2014	Remaining	N	Y		1.9	J		
5+39	282R	137-P3BS-Q32A	14.7	137-P3BS-Q32A-EX-21.7-22.2	21.7 - 22.2	-7.0	-7.5	JC83838-3R	JC83838R	03/05/2019	Remaining	N	Y		0.89	RA		
5+39	358R	137-MW4B	13.5	137-4BH_19-20_808381	19.0 - 20.0	-5.5	-6.5	808381	D104	02/20/2007	Remaining	N	Y		< 6.13	UJ		
5+39	358R	137-MW4B	13.5	137-4BI_21.0-22.0_808697	21.0 - 22.0	-7.5	-8.5	808697	D153	02/21/2007	Remaining	N	Y	UNDorg (OH)	< 30.03	UJ	S24	
5+39	358R	137-MW4B	13.5	137-4BJ_23.0-24.0_808698	23.0 - 24.0	-9.5	-10.5	808698	D153	02/21/2007	Remaining	N	Y		< 3.34	UJ		
5+39	358R	137-MW4B	13.5	137-4BJD_23.0-24.0_808699	23.0 - 24.0	-9.5	-10.5	808699	D153	02/21/2007	Remaining	FD	Y		< 3.17	UJ		
5+39	358R	137-MW4B	13.5	137-4BK_24.5-25.0_808700	24.5 - 25.0	-11.0	-11.5	808700	D153	02/21/2007	Remaining	N	Y		< 2.51	UJ		
5+40	116L	10W-D32A	15.1	10W-D32A-2.5-3.0	2.5 - 3.0	12.6	12.1	JB67912-2R	JB67912R	05/28/2014	Remaining	N	Y		0.53	J		
5+40	116L	10W-D32A	15.1	10W-D32A-2.5-3.0X	2.5 - 3.0	12.6	12.1	JB67912-3R	JB67912R	05/28/2014	Remaining	FD	Y		0.73	J		
5+40	116L	10W-D32A	15.1	10W-D32A-4.5-5.0	4.5 - 5.0	10.6	10.1	JB67912-4	JB67912	05/28/2014	Remaining	N	Y		0.25	J		
5+40	116L	10W-D32A	15.1	10W-D32A-6.5-7.0	6.5 - 7.0	8.6	8.1	JB67912-5	JB67912	05/28/2014	Remaining	N	Y		0.26	J		
5+40	116L	10W-D32A	15.1	10W-D32A-7.0-7.5	7.0 - 7.5	8.1	7.6	JB67912-6	JB67912	05/28/2014	Remaining	N	Y		< 0.23	UJ		
5+40	116L	10W-D32A	15.1	10W-D32A-8.5-9.0	8.5 - 9.0	6.6	6.1	JB67912-7	JB67912	05/28/2014	Remaining	N	Y		0.29	J		
5+40	116L	10W-D32A	15.1	10W-D32A-9.5-10.0	9.5 - 10.0	5.6	5.1	JB67912-8R	JB67912R	05/28/2014	Remaining	N	Y		0.23	J		
5+40	116L	10W-D32A	15.1	10W-D32A-10.8-11.3	10.8 - 11.3	4.3	3.8	JB67912-9R	JB67912R	05/28/2014	Remaining	N	Y		0.42	J		
5+40	116L	10W-D32A	15.1	10W-D32A-11.3-11.8	11.3 - 11.8	3.8	3.3	JB67912-10	JB67912	05/28/2014	Remaining	N	Y		< 0.21	UJ		
5+40	134R	10W-P3B-L32A-EX	11.8	10W-P3B-L32A-EX-16.5-17	16.5 - 17.0	-4.7	-5.2	410-52863-1	410528631	08/26/2021	Remaining	N	Y		< 0.54	UJ		
5+40	162R	137-P3B-M32A	13.5	137-P3B-M32A-19.0-19.5	19.0 - 19.5	-5.5	-6.0	JB42286-1	JB42286	07/16/2013	Remaining	N	Y		4.6	J		
5+40	162R	137-P3B-M32A	13.5	137-P3B-M32A-20.0-20.5	20.0 - 20.5	-6.5	-7.0	JB42286-2	JB42286	07/16/2013	Remaining	N	Y		0.53	J		
5+40	192R	137-P3B-N32A	13.2	137-P3B-N32A-20.0-20.5	20.0 - 20.5	-6.8	-7.3	JB42409-8	JB42409	07/17/2013	Remaining	N	Y		< 0.10	U		
5+40	222R	137-P3B-O32A	13.2	137-P3B-O32A-20.0-20.5	20.0 - 20.5	-6.8	-7.3	JB42409-15	JB42409	07/17/2013	Remaining	N	Y		5.6			
5+40	22L	P3BS-PDI-5+40-22L	14.8	P3BS-PDI-5+40-22L-0.0-0.5	1.0 - 1.5	13.8	13.3	410-13446-1	410134451	09/04/2020	Removed	N	Y		4.0	J-	S1	
5+40	22L	P3BS-PDI-5+40-22L	14.8	P3BS-PDI-5+40-22L-2.0-2.5	2.0 - 2.5	12.8	12.3	410-13446-2	410134451	09/04/2020	Removed	N	Y		< 0.17	UJ	S1	
5+40	22L	P3BS-PDI-5+40-22L	14.8	P3BS-PDI-5+40-22L-4.0-4.5	4.0 - 4.5	10.8	10.3	410-13446-3	410134451	09/04/2020	Removed	N	Y		1.9	J-	S1	
5+40	22L	P3BS-PDI-5+40-22L	14.8	P3BS-PDI-5+40-22L-6.0-6.5	6.0 - 6.5	8.8	8.3	410-13446-4	410134451	09/04/2020	Removed	N	Y		< 0.20	UJ	S1	
5+40	22L	P3BS-PDI-5+40-22L	14.8	P3BS-PDI-5+40-22L-8.0-8.5	8.0 - 8.5	6.8	6.3	410-13446-5	410134451	09/04/2020	Removed	N	Y		< 0.25	UJ	S1	
5+40	22L	P3BS-PDI-5+40-22L	14.8	P3BS-PDI-5+40-22L-10.0-10.5	10.0 - 10.5	4.8	4.3	410-13446-6	410134451	09/04/2020	Removed	N	Y		< 0.18	UJ	S1	
5+40	22L	P3BS-PDI-5+40-22L	14.8	P3BS-PDI-5+40-22L-12.0-12.5	12.0 - 12.5	2.8	2.3	410-13446-7	410134451	09/04/2020	Removed	N	Y		< 0.20	UJ	S1	
5+40	22L	P3BS-PDI-5+40-22L	14.8	P3BS-PDI-5+40-22L-14.0-14.5	14.0 - 14.5	0.8	0.3	410-13446-8	410134451	09/04/2020	Removed	N	Y		< 0.20	UJ	S1	
5+40	22L	P3BS-PDI-5+40-22L	14.8	P3BS-PDI-5+40-22L-14.0-14.5X	14.0 - 14.5	0.8	0.3	410-13446-12	410134451	09/04/2020	Removed	FD	Y		< 0.20	UJ	S1	
5+40	22L	P3BS-PDI-5+40-22L	14.8	P3BS-PDI-5+40-22L-16.0-16.5	16.0 - 16.5	-1.2	-1.7	410-13446-9	410134451	09/04/2020	Removed	N	Y		< 0.18	UJ	S1	
5+40	22L	P3BS-PDI-5+40-22L	14.8	P3BS-PDI-5+40-22L-17.0-17.5	17.0 - 17.5	-2.2	-2.7	410-13446-10	410134451	09/04/2020	Remaining	N	Y		< 1.6	UJ		
5+40	22L	P3BS-PDI-5+40-22L	14.8	P3BS-PDI-5+40-22L-17.5-18.0	17.5 - 18.0	-2.7	-3.2	410-13446-11	410134451	09/04/2020	Remaining	N	Y	MM (PT)	< 5.1	UJ		
5+40	312R	137-3BS-R32A	14.6	137-3BS-R32A-EX-21.6-22.1	21.6 - 22.1	-7.0	-7.5	JC83513-1R	JC83513R	02/26/2019	Remaining	N	Y		4.8	RA		
5+40	342R	137-P3B-S32A	14.2	137-P3B-S32A-20.7-21.2	20.7 - 21.2	-6.6	-7.1	JB42615-15	JB42615	07/19/2013	Remaining	N	Y		0.48	J		

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-2.0-2.5	2.0 - 2.5	12.9	12.4	410-13323-2	410133231	09/08/2020	Remaining	N	Y		< 0.20	UJ		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-4.0-4.5	4.0 - 4.5	10.9	10.4	410-13323-3	410133231	09/08/2020	Remaining	N	Y		< 0.20	UJ		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-6.0-6.5	6.0 - 6.5	8.9	8.4	410-13323-4	410133231	09/08/2020	Remaining	N	Y		< 0.20	UJ		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-8.0-8.5	8.0 - 8.5	6.9	6.4	410-13323-5	410133231	09/08/2020	Remaining	N	Y		< 0.24	UJ		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-10.0-10.5	10.0 - 10.5	4.9	4.4	410-13323-6	410133231	09/08/2020	Remaining	N	Y		< 0.19	UJ		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-12.0-12.5	12.0 - 12.5	2.9	2.4	410-13323-7	410133231	09/08/2020	Remaining	N	Y		< 0.18	UJ		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-14.0-14.5	14.0 - 14.5	0.9	0.4	410-13323-8	410133231	09/08/2020	Remaining	N	Y		< 0.20	UJ		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-16.0-16.5	16.0 - 16.5	-1.1	-1.6	410-13323-9	410133231	09/08/2020	Remaining	N	Y		< 0.17	UJ		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-16.0-16.5X	16.0 - 16.5	-1.1	-1.6	410-13323-12	410133231	09/08/2020	Remaining	FD	Y		< 0.17	UJ		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-16.5-17.0	16.5 - 17.0	-1.6	-2.1	410-13323-10	410133231	09/08/2020	Remaining	N	Y		< 0.17	UJ		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-17.0-17.5	17.0 - 17.5	-2.1	-2.6	410-13323-11	410133231	09/08/2020	Remaining	N	Y		< 3.1	UJ		
5+40	73R	10W-J32A	13.8	10W-J32A-0.5-1.0	0.5 - 1.0	13.3	12.8	JD143-1	JD143	12/10/2019	Removed	N	Y		11.3	J-	S1	
5+40	73R	10W-J32A	13.8	10W-J32A-2.0-2.5	2.0 - 2.5	11.8	11.3	JD143-2	JD143	12/10/2019	Removed	N	Y		5.0	J-	S1	
5+40	73R	10W-J32A	13.8	10W-J32A-4.0-4.5	4.0 - 4.5	9.8	9.3	JD143-3	JD143	12/10/2019	Removed	N	Y		0.85	J-	S1	
5+40	73R	10W-J32A	13.8	10W-J32A-6.0-6.5	6.0 - 6.5	7.8	7.3	JD247-1R	JD247	12/11/2019	Removed	N	Y		< 0.37	RA	S1	
5+40	73R	10W-J32A	13.8	10W-J32A-8.0-8.5	8.0 - 8.5	5.8	5.3	JD247-2R	JD247	12/11/2019	Removed	N	Y		< 0.33	RA	S1	
5+40	73R	10W-J32A	13.8	10W-J32A-10.0-10.5	10.0 - 10.5	3.8	3.3	JD247-3R	JD247	12/11/2019	Removed	N	Y		< 0.29	RA	S1	
5+40	73R	10W-J32A	13.8	10W-J32A-12.0-12.5	12.0 - 12.5	1.8	1.3	JD247-4R	JD247	12/11/2019	Removed	N	Y		< 0.36	RA	S1	
5+40	73R	10W-J32A	13.8	10W-J32A-14.0-14.5	14.0 - 14.5	-0.2	-0.7	JD247-5R	JD247	12/11/2019	Removed	N	Y		< 0.35	RA	S1	
5+40	73R	10W-J32A	13.8	10W-J32A-16.0-16.5	16.0 - 16.5	-2.2	-2.7	JD247-6R	JD247	12/11/2019	Removed	N	Y		< 0.34	RA	S1	
5+40	73R	10W-J32A	13.8	10W-J32A-18.0-18.5	16.0 - 16.5	-4.2	-4.7	JD247-7R	JD247	12/11/2019	Remaining	N	Y		< 0.29	RA		
5+40	73R	10W-J32A	13.8	10W-J32A-18.5-19.0	18.5 - 19.0	-4.7	-5.2	JD247-8	JD247	12/11/2019	Remaining	N	Y		3.9	RA		
5+40	7L	10W-G32A	14.9	10W-G32A-17.5-18.0	17.5 - 18.0	-2.6	-3.1	JB66705-13R	JB66705R	05/09/2014	Remaining	N	Y		6.5	J		
5+40	7L	10W-G32A	14.9	10W-G32A-18.0-18.5	18.0 - 18.5	-3.1	-3.6	JB66705-14	JB66705	05/09/2014	Remaining	N	Y		6.4	J		
5+40	7R	P3BS-PDI-5+40-7R	14.6	P3BS-PDI-5+40-7R-0.0-0.5	0.4 - 0.9	14.2	13.7	410-13743-2	410137431	09/11/2020	Removed	N	Y		5.5	J-	S1	
5+40	7R	P3BS-PDI-5+40-7R	14.6	P3BS-PDI-5+40-7R-2.0-2.5	2.0 - 2.5	12.6	12.1	410-13743-3	410137431	09/11/2020	Removed	N	Y		< 0.83	UJ	S1	
5+40	7R	P3BS-PDI-5+40-7R	14.6	P3BS-PDI-5+40-7R-4.0-4.5	4.0 - 4.5	10.6	10.1	410-13743-4	410137431	09/11/2020	Removed	N	Y		< 0.94	UJ	S1	
5+40	7R	P3BS-PDI-5+40-7R	14.6	P3BS-PDI-5+40-7R-6.0-6.5	6.0 - 6.5	8.6	8.1	410-13743-5	410137431	09/11/2020	Removed	N	Y		< 0.20	UJ	S1	
5+40	7R	P3BS-PDI-5+40-7R	14.6	P3BS-PDI-5+40-7R-8.0-8.5	8.0 - 8.5	6.6	6.1	410-13743-6	410137431	09/11/2020	Removed	N	Y		< 0.23	UJ	S1	
5+40	7R	P3BS-PDI-5+40-7R	14.6	P3BS-PDI-5+40-7R-10.0-10.5	10.0 - 10.5	4.6	4.1	410-13743-7	410137431	09/11/2020	Removed	N	Y		0.73	J-	S1	
5+40	7R	P3BS-PDI-5+40-7R	14.6	P3BS-PDI-5+40-7R-10.0-10.5X	10.0 - 10.5	4.6	4.1	410-13743-13	410137431	09/11/2020	Removed	FD	Y		< 0.24	UJ	S1	
5+40	7R	P3BS-PDI-5+40-7R	14.6	P3BS-PDI-5+40-7R-12.0-12.5	12.0 - 12.5	2.6	2.1	410-13743-8	410137431	09/11/2020	Removed	N	Y		< 0.22	UJ	S1	
5+40	7R	P3BS-PDI-5+40-7R	14.6	P3BS-PDI-5+40-7R-14.0-14.5	14.0 - 14.5	0.6	0.1	410-13743-9	410137431	09/11/2020	Removed	N	Y		< 0.20	UJ	S1	
5+40	7R	P3BS-PDI-5+40-7R	14.6	P3BS-PDI-5+40-7R-16.0-16.5	16.0 - 16.5	-1.4	-1.9	410-13743-10	410137431	09/11/2020	Removed	N	Y		< 0.28	UJ	S1	
5+40	7R	P3BS-PDI-5+40-7R	14.6	P3BS-PDI-5+40-7R-17.5-18.0	17.5 - 18.0	-2.9	-3.4	410-13743-12	410137431	09/11/2020	Remaining	N	Y		< 0.16	UJ		
5+40	7R	P3BS-PDI-5+40-7R	14.6	P3BS-PDI-5+40-7R-18.0-18.5	18.0 - 18.5	-3.4	-3.9	410-13743-11	410137431	09/11/2020	Remaining	N	Y		< 4.6	UJ		
5+44	90L	10W-P3BS-EF-29-SW-N	15.1	10W-P3BS-EF-29-SW-N-3.0-3.5	3.0 - 3.5	12.1	11.6	410-48301-3	410483011	07/22/2021	Remaining	N	Y		< 0.16	U		
5+53	292R	137-P3BS-B12	14.7	137-P3BS-B12-EX-21.4-21.9	21.4 - 21.9	-6.7	-7.2	JC83838-2R	JC83838R	03/05/2019	Remaining	N	Y		6.0	RA		
5+54	293R	137-B12	15.9	137B12G_24.5-25.1_805060	24.5 - 25.1	-8.6	-9.2	805060	C609	02/02/2007	Remaining	N	Y		< 2.51	UJ		
5+55	362R	137-3BS-T31A32A	13.7	137-3BS-T31A32A-EX-20.0-20.5	20.0 - 20.5	-6.3	-6.8	JC83441-1R	JC83441R	02/26/2019	Remaining	N	Y		5.7	RA		
5+55	7L	P3BS-PDI-5+55-7L	14.1	P3BS-PDI-5+55-7L-0-0.5	0.4 - 0.9	13.7	13.2	410-13584-1	410135841	09/10/2020	Removed	N	Y		< 0.15	UJ	S1	
5+55	7L	P3BS-PDI-5+55-7L	14.1	P3BS-PDI-5+55-7L-2-2.5	2.0 - 2.5	12.1	11.6	410-13584-2	410135841	09/10/2020	Removed	N	Y		< 0.21	UJ	S1	
5+55	7L	P3BS-PDI-5+55-7L	14.1	P3BS-PDI-5+55-7L-4-4.5	4.0 - 4.5	10.1	9.6	410-13584-3	410135841	09/10/2020	Removed	N	Y		< 1.3	UJ	S1	
5+55	7L	P3BS-PDI-5+55-7L	14.1	P3BS-PDI-5+55-7L-6-6.5	6.0 - 6.5	8.1	7.6	410-13584-4	410135841	09/10/2020	Removed	N	Y		< 1.0	UJ	S1	
5+55	7L	P3BS-PDI-5+55-7L	14.1	P3BS-PDI-5+55-7L-8-8.5	8.0 - 8.5	6.1	5.6	410-13584-5	410135841	09/10/2020	Removed	N	Y		< 1.1	UJ	S1	
5+55	7L	P3BS-PDI-5+55-7L	14.1	P3BS-PDI-5+55-7L-10-10.5	10.0 - 10.5	4.1	3.6	410-13584-6	410135841	09/10/2020	Removed	N	Y		< 0.21	UJ	S1	
5+55	7L	P3BS-PDI-5+55-7L	14.1	P3BS-PDI-5+55-7L-12-12.5	12.0 - 12.5	2.1	1.6	410-13584-7	410135841	09/10/2020	Removed	N	Y		< 0.22	UJ	S1	
5+55	7L	P3BS-PDI-5+55-7L	14.1	P3BS-PDI-5+55-7L-12-12.5X	12.0 - 12.5	2.1	1.6	410-13584-8	410135841	09/10/2020	Removed	FD	Y		< 0.21	UJ	S1	

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
5+55	7L	P3BS-PDI-5+55-7L	14.1	P3BS-PDI-5+55-7L-14-14.5	14.0 - 14.5	0.1	-0.4	410-13584-9	410135841	09/10/2020	Removed	N	Y		< 0.23	UJ	S1	
5+55	7L	P3BS-PDI-5+55-7L	14.1	P3BS-PDI-5+55-7L-16-16.5	16.0 - 16.5	-1.9	-2.4	410-13584-10	410135841	09/10/2020	Removed	N	Y		< 0.20	UJ	S1	
5+55	7L	P3BS-PDI-5+55-7L	14.1	P3BS-PDI-5+55-7L-17-17.5	17.0 - 17.5	-2.9	-3.4	410-13584-11	410135841	09/10/2020	Remaining	N	Y		< 0.16	UJ		
5+55	7L	P3BS-PDI-5+55-7L	14.1	P3BS-PDI-5+55-7L-17.5-18	17.5 - 18.0	-3.4	-3.9	410-13584-12	410135841	09/10/2020	Remaining	N	Y		< 8.7	UJ		
5+57	142L	ICO-11	14.7	ICO-B011-3.0	3.0 - 3.5	11.7	11.2	JB3648-31R	JB3648R	04/06/2012	Remaining	N	Y		< 0.22	UJ		
5+57	142L	ICO-11	14.7	ICO-B011-5.0	5.0 - 5.5	9.7	9.2	JB3648-32R	JB3648R	04/06/2012	Remaining	N	Y		< 0.27	UJ		
5+57	142L	ICO-11	14.7	ICO-B011-7.0	7.0 - 7.5	7.7	7.2	JB3648-33R	JB3648R	04/06/2012	Remaining	N	Y		< 0.28	UJ		
5+57	142L	ICO-11	14.7	ICO-B011-10.0	10.0 - 10.5	4.7	4.2	JB3648-34R	JB3648R	04/06/2012	Remaining	N	Y		< 0.24	UJ		
5+59	117R	EF-27	13.1	EF-B27-21.5	21.5 - 22.0	-8.4	-8.9	460-25657-13	460256571	04/21/2011	Remaining	N	Y		0.65	J		
5+59	117R	EF-27	13.1	EF-B27-21.5X	21.5 - 22.0	-8.4	-8.9	460-25657-14	460256571	04/21/2011	Remaining	FD	Y		< 0.58	UJ		
5+68	109L	FBP-D31A	14.7	FBP-D31A-2.0-2.5	2.0 - 2.5	12.7	12.2	JB65815-3	JB65815	04/29/2014	Remaining	N	Y		1.4	J		
5+68	109L	FBP-D31A	14.7	FBP-D31A-4.0-4.5	4.0 - 4.5	10.7	10.2	JB65815-4	JB65815	04/29/2014	Remaining	N	Y		0.33	J		
5+68	109L	FBP-D31A	14.7	FBP-D31A-6.0-6.5	6.0 - 6.5	8.7	8.2	JB65815-5R	JB65815R	04/29/2014	Remaining	N	Y		< 0.11	UJ		
5+68	109L	FBP-D31A	14.7	FBP-D31A-8.0-8.5	8.0 - 8.5	6.7	6.2	JB65815-6	JB65815	04/29/2014	Remaining	N	Y		< 0.094	UJ		
5+68	109L	FBP-D31A	14.7	FBP-D31A-10.0-10.5	10.0 - 10.5	4.7	4.2	JB65815-7	JB65815	04/29/2014	Remaining	N	Y		0.60	J		
5+68	109L	FBP-D31A	14.7	FBP-D31A-12.0-12.5	12.0 - 12.5	2.7	2.2	JB65815-8	JB65815	04/29/2014	Remaining	N	Y		0.51	J		
5+68	109L	FBP-D31A	14.7	FBP-D31A-14.0-14.5	14.0 - 14.5	0.7	0.2	JB65815-9R	JB65815R	04/29/2014	Remaining	N	Y		< 0.11	UJ		
5+68	109L	FBP-D31A	14.7	FBP-D31A-15.0-15.5	15.0 - 15.5	-0.3	-0.8	JB65815-10	JB65815	04/29/2014	Remaining	N	Y		1.4	J		
5+68	109L	FBP-D31A	14.7	FBP-D31A-15.0-15.5X	15.0 - 15.5	-0.3	-0.8	JB65815-11	JB65815	04/29/2014	Remaining	FD	Y		1.1	J		
5+68	109L	FBP-D31A	14.7	FBP-D31A-15.5-16.0	15.5 - 16.0	-0.8	-1.3	JB65815-12	JB65815	04/29/2014	Remaining	N	Y		6.3	J		
5+68	135L	FBP-C31A	14.9	FBP-C31A-3.0-3.5	3.0 - 3.5	11.9	11.4	JB65739-13	JB65739	04/28/2014	Remaining	N	Y		0.26	J		
5+68	135L	FBP-C31A	14.9	FBP-C31A-5.0-5.5	5.0 - 5.5	9.9	9.4	JB65739-14	JB65739	04/28/2014	Remaining	N	Y		0.29	J		
5+68	135L	FBP-C31A	14.9	FBP-C31A-7.0-7.5	7.0 - 7.5	7.9	7.4	JB65739-15	JB65739	04/28/2014	Remaining	N	Y		0.41	J		
5+68	135L	FBP-C31A	14.9	FBP-C31A-9.0-9.5	9.0 - 9.5	5.9	5.4	JB65739-16	JB65739	04/28/2014	Remaining	N	Y		0.11	J		
5+68	135L	FBP-C31A	14.9	FBP-C31A-11.0-11.5	11.0 - 11.5	3.9	3.4	JB65739-17	JB65739	04/28/2014	Remaining	N	Y		0.30	J		
5+68	135L	FBP-C31A	14.9	FBP-C31A-13.0-13.5	13.0 - 13.5	1.9	1.4	JB65739-18	JB65739	04/28/2014	Remaining	N	Y		1.7	J		
5+68	135L	FBP-C31A	14.9	FBP-C31A-14.3-14.8	14.3 - 14.8	0.6	0.1	JB65739-19	JB65739	04/28/2014	Remaining	N	Y		4.9	J		
5+68	135L	FBP-C31A	14.9	FBP-C31A-14.8-15.3	14.8 - 15.3	0.1	-0.4	JB65739-20	JB65739	04/28/2014	Remaining	N	Y		1.5	J		
5+68	71R	FBP-J31A	13.8	FBP-J31A-17.0-17.5	17.0 - 17.5	-3.2	-3.7	JB66207-24	JB66207	05/05/2014	Remaining	N	Y		0.78	J		
5+68	78L	FBP-E31A	14.8	FBP-E31A-4.0-4.5	4.0 - 4.5	10.8	10.3	JB65815-15	JB65815	04/29/2014	Remaining	N	Y		0.57	J		
5+68	78L	FBP-E31A	14.8	FBP-E31A-6.0-6.5	6.0 - 6.5	8.8	8.3	JB65815-16R	JB65815R	04/29/2014	Remaining	N	Y		1.2	J		
5+68	78L	FBP-E31A	14.8	FBP-E31A-8.0-8.5	8.0 - 8.5	6.8	6.3	JB65815-17R	JB65815R	04/29/2014	Remaining	N	Y		1.3	J		
5+68	78L	FBP-E31A	14.8	FBP-E31A-10.0-10.5	10.0 - 10.5	4.8	4.3	JB65815-18	JB65815	04/29/2014	Remaining	N	Y		0.44	J		
5+68	78L	FBP-E31A	14.8	FBP-E31A-12.0-12.5	12.0 - 12.5	2.8	2.3	JB65815-19	JB65815	04/29/2014	Remaining	N	Y		1.1	J		
5+68	78L	FBP-E31A	14.8	FBP-E31A-14.0-14.5	14.0 - 14.5	0.8	0.3	JB65815-20	JB65815	04/29/2014	Remaining	N	Y		0.12	J		
5+68	78L	FBP-E31A	14.8	FBP-E31A-15.0-15.5	15.0 - 15.5	-0.2	-0.7	JB65815-21	JB65815	04/29/2014	Remaining	N	Y		0.25	J		
5+68	78L	FBP-E31A	14.8	FBP-E31A-15.5-16.0	15.5 - 16.0	-0.7	-1.2	JB65815-22	JB65815	04/29/2014	Remaining	N	Y		0.19	J		
5+69	11R	FBP-H31A	13.7	FBP-H31A-6.5-7.0	6.5 - 7.0	7.2	6.7	JB65892-4R	JB65892R	04/30/2014	Remaining	N	Y		< 0.17	UJ		
5+69	11R	FBP-H31A	13.7	FBP-H31A-8.5-9.0	8.5 - 9.0	5.2	4.7	JB65892-5	JB65892	04/30/2014	Remaining	N	Y		0.11	J		
5+69	11R	FBP-H31A	13.7	FBP-H31A-8.5-9.0X	8.5 - 9.0	5.2	4.7	JB65892-6	JB65892	04/30/2014	Remaining	FD	Y		0.11	J		
5+69	11R	FBP-H31A	13.7	FBP-H31A-10.5-11.0	10.5 - 11.0	3.2	2.7	JB65892-7	JB65892	04/30/2014	Remaining	N	Y		0.12	J		
5+69	11R	FBP-H31A	13.7	FBP-H31A-12.5-13.0	12.5 - 13.0	1.2	0.7	JB65892-8	JB65892	04/30/2014	Remaining	N	Y		0.23	J		
5+69	11R	FBP-H31A	13.7	FBP-H31A-14.7-15.2	14.7 - 15.2	-1.0	-1.5	JB65892-9	JB65892	04/30/2014	Remaining	N	Y		0.29	J		
5+69	11R	FBP-H31A	13.7	FBP-H31A-15.2-15.7	15.2 - 15.7	-1.5	-2.0	JB65892-10R	JB65892R	04/30/2014	Remaining	N	Y		1.3	J		
5+69	131R	P3BS-PDI-5+70-130R	13.2	P3BS-PDI-5+70-130R-18.0-18.5	18.0 - 18.5	-4.8	-5.3	410-13746-2	410137431	09/11/2020	Remaining	N	Y		< 1.7	UJ		
5+69	158L	FBP-B31A	15.1	FBP-B31A-2.5-3.0	2.5 - 3.0	12.6	12.1	JB65739-2	JB65739	04/28/2014	Remaining	N	Y		0.58	J		
5+69	158L	FBP-B31A	15.1	FBP-B31A-4.5-5.0	4.5 - 5.0	10.6	10.1	JB65739-3R	JB65739R	04/28/2014	Remaining	N	Y		0.72	J		
5+69	158L	FBP-B31A	15.1	FBP-B31A-6.5-7.0	6.5 - 7.0	8.6	8.1	JB65739-4R	JB65739R	04/28/2014	Remaining	N	Y		0.73	J		

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units CrSCC	CHROMIUM (HEXVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes	
5+69	158L	FBP-B31A	15.1	FBP-B31A-8.5-9.0	8.5 - 9.0	6.6	6.1	JB65739-5	JB65739	04/28/2014	Remaining	N	Y		1.2	J		
5+69	158L	FBP-B31A	15.1	FBP-B31A-10.5-11.0	10.5 - 11.0	4.6	4.1	JB65739-6	JB65739	04/28/2014	Remaining	N	Y		0.90	J		
5+69	158L	FBP-B31A	15.1	FBP-B31A-10.5-11.0X	10.5 - 11.0	4.6	4.1	JB65739-7	JB65739	04/28/2014	Remaining	FD	Y		1.1	J		
5+69	158L	FBP-B31A	15.1	FBP-B31A-12.5-13.0	12.5 - 13.0	2.6	2.1	JB65739-8	JB65739	04/28/2014	Remaining	N	Y		0.72	J		
5+69	158L	FBP-B31A	15.1	FBP-B31A-14.5-15.0	14.5 - 15.0	0.6	0.1	JB65739-9	JB65739	04/28/2014	Remaining	N	Y		0.50	J		
5+69	158L	FBP-B31A	15.1	FBP-B31A-15.0-15.5	15.0 - 15.5	0.1	-0.4	JB65739-10R	JB65739R	04/28/2014	Remaining	N	Y		1.3	J		
5+69	158L	FBP-B31A	15.1	FBP-B31A-15.5-16.0	15.5 - 16.0	-0.4	-0.9	JB65739-11	JB65739	04/28/2014	Remaining	N	Y		1.3	J		
5+69	18L	FBP-G31A	13.7	FBP-G31A-7.0-7.5	7.0 - 7.5	6.7	6.2	JB66036-4R	JB66036R	05/01/2014	Remaining	N	Y		0.31	J		
5+69	18L	FBP-G31A	13.7	FBP-G31A-9.0-9.5	9.0 - 9.5	4.7	4.2	JB66036-5	JB66036	05/01/2014	Remaining	N	Y		< 0.11	UJ		
5+69	18L	FBP-G31A	13.7	FBP-G31A-11.0-11.5	11.0 - 11.5	2.7	2.2	JB66036-6	JB66036	05/01/2014	Remaining	N	Y		0.34	J		
5+69	18L	FBP-G31A	13.7	FBP-G31A-13.0-13.5	13.0 - 13.5	0.7	0.2	JB66036-7R	JB66036R	05/01/2014	Remaining	N	Y		0.25	J		
5+69	18L	FBP-G31A	13.7	FBP-G31A-15.0-15.5	15.0 - 15.5	-1.3	-1.8	JB66036-8R	JB66036R	05/01/2014	Remaining	N	Y		0.90	J		
5+69	18L	FBP-G31A	13.7	FBP-G31A-16.0-16.5	16.0 - 16.5	-2.3	-2.8	JB66036-9R	JB66036R	05/01/2014	Remaining	N	Y		3.1	J		
5+69	18L	FBP-G31A	13.7	FBP-G31A-16.5-17.0	16.5 - 17.0	-2.8	-3.3	JB66036-10	JB66036	05/01/2014	Remaining	N	Y		0.59	J		
5+69	224R	137-P3B-O31A-EX	13.2	137-P3B-O31A-EX-20.8-21.3	19.8 - 20.3	-6.6	-7.1	410-58009-2	410580091	10/06/2021	Remaining	N	Y		3.2	RA		
5+69	41R	FBP-I31A	13.6	FBP-I31A-3.0-3.5	3.0 - 3.5	10.6	10.1	JB66207-3R	JB66207R	05/05/2014	Remaining	N	Y		0.59	J		
5+69	41R	FBP-I31A	13.6	FBP-I31A-3.0-3.5X	3.0 - 3.5	10.6	10.1	JB66207-4R	JB66207R	05/05/2014	Remaining	FD	Y		1.2	J		
5+69	41R	FBP-I31A	13.6	FBP-I31A-5.0-5.5	5.0 - 5.5	8.6	8.1	JB66207-5R	JB66207R	05/05/2014	Remaining	N	Y		0.41	J		
5+69	41R	FBP-I31A	13.6	FBP-I31A-7.0-7.5	7.0 - 7.5	6.6	6.1	JB66207-6R	JB66207R	05/05/2014	Remaining	N	Y		0.11	J		
5+69	41R	FBP-I31A	13.6	FBP-I31A-9.0-9.5	9.0 - 9.5	4.6	4.1	JB66207-7	JB66207	05/05/2014	Remaining	N	Y		< 0.092	UJ		
5+69	41R	FBP-I31A	13.6	FBP-I31A-11.0-11.5	11.0 - 11.5	2.6	2.1	JB66207-8	JB66207	05/05/2014	Remaining	N	Y		0.39	J		
5+69	41R	FBP-I31A	13.6	FBP-I31A-13.0-13.5	13.0 - 13.5	0.6	0.1	JB66207-9R	JB66207R	05/05/2014	Remaining	N	Y		0.18	J		
5+69	41R	FBP-I31A	13.6	FBP-I31A-15.0-15.5	15.0 - 15.5	-1.4	-1.9	JB66207-10R	JB66207R	05/05/2014	Remaining	N	Y		0.73	J		
5+69	41R	FBP-I31A	13.6	FBP-I31A-15.8-16.3	15.8 - 16.3	-2.2	-2.7	JB66207-11R	JB66207R	05/05/2014	Remaining	N	Y		0.95	J		
5+69	41R	FBP-I31A	13.6	FBP-I31A-16.3-16.8	16.3 - 16.8	-2.7	-3.2	JB66207-12	JB66207	05/05/2014	Remaining	N	Y		1.9	J		
5+69	47L	FBP-F31A	14.2	FBP-F31A-2.5-3.0	2.5 - 3.0	11.7	11.2	JB66101-2	JB66101	05/02/2014	Remaining	N	Y		< 0.10	UJ		
5+69	47L	FBP-F31A	14.2	FBP-F31A-4.5-5.0	4.5 - 5.0	9.7	9.2	JB66101-3	JB66101	05/02/2014	Remaining	N	Y		< 0.095	UJ		
5+69	47L	FBP-F31A	14.2	FBP-F31A-6.5-7.0	6.5 - 7.0	7.7	7.2	JB66101-4R	JB66101R	05/02/2014	Remaining	N	Y		0.37	J		
5+69	47L	FBP-F31A	14.2	FBP-F31A-8.5-9.0	8.5 - 9.0	5.7	5.2	JB66101-5R	JB66101R	05/02/2014	Remaining	N	Y		0.48	J		
5+69	47L	FBP-F31A	14.2	FBP-F31A-10.5-11.0	10.5 - 11.0	3.7	3.2	JB66101-6	JB66101	05/02/2014	Remaining	N	Y		0.37	J		
5+69	47L	FBP-F31A	14.2	FBP-F31A-10.5-11.0X	10.5 - 11.0	3.7	3.2	JB66101-7R	JB66101R	05/02/2014	Remaining	FD	Y		0.11	J		
5+69	47L	FBP-F31A	14.2	FBP-F31A-12.5-13.0	12.5 - 13.0	1.7	1.2	JB66101-8	JB66101	05/02/2014	Remaining	N	Y		< 0.10	UJ		
5+69	47L	FBP-F31A	14.2	FBP-F31A-14.5-15.0	14.5 - 15.0	-0.3	-0.8	JB66101-9	JB66101	05/02/2014	Remaining	N	Y		< 0.15	UJ		
5+69	47L	FBP-F31A	14.2	FBP-F31A-15.5-16.0	15.5 - 16.0	-1.3	-1.8	JB66101-10	JB66101	05/02/2014	Remaining	N	Y		0.57	J		
5+69	47L	FBP-F31A	14.2	FBP-F31A-16.0-16.5	16.0 - 16.5	-1.8	-2.3	JB66101-11R	JB66101R	05/02/2014	Remaining	N	Y		4.7	J		
5+69	67R	P3BS-PDI-5+70-70R	13.3	P3BS-PDI-5+70-70R-14-14.5	14.0 - 14.5	-0.7	-1.2	410-13873-8	410138731	09/14/2020	Removed	N	Y		< 0.23	UJ	S1	
5+69	67R	P3BS-PDI-5+70-70R	13.3	P3BS-PDI-5+70-70R-16-16.5	16.0 - 16.5	-2.7	-3.2	410-13873-9	410138731	09/14/2020	Remaining	N	Y		< 0.17	UJ		
5+69	67R	P3BS-PDI-5+70-70R	13.3	P3BS-PDI-5+70-70R-18.5-19	18.5 - 19.0	-5.2	-5.7	410-13873-10	410138731	09/14/2020	Remaining	N	Y		< 1.3	UJ		
5+69	67R	P3BS-PDI-5+70-70R	13.3	P3BS-PDI-5+70-70R-19-19.5	19.0 - 19.5	-5.7	-6.2	410-13873-11	410138731	09/14/2020	Remaining	N	Y		< 4.6	UJ		
5+69	99R	FBP-K31A	13.8	FBP-K31A-18.8-19.3	18.8 - 19.3	-5.0	-5.5	JB66036-13R	JB66036R	05/01/2014	Removed	N	Y	UNDorg (OL)	0.90	J	S25	
5+70	132R	FBP-P3B-L31A-EX	13.0	FBP-P3B-L31A-EX-19.5-20	17.7 - 18.2	-4.7	-5.2	410-51439-1	410514391	08/17/2021	Remaining	N	Y		< 0.50	RA		
5+70	162R	137-P3B-M31A	13.8	137-P3B-M31A-20.0-20.5	20.0 - 20.5	-6.2	-6.7	JB42409-2	JB42409	07/17/2013	Remaining	N	Y		< 0.13	U		
5+70	194R	137-P3B-N31A-EX	13.2	137-P3B-N31A-EX-20.5-21.0	19.9 - 20.4	-6.7	-7.2	410-58009-1	410580091	10/06/2021	Remaining	N	Y		13	RA		
5+70	252R	137-3BS-P31A	14.2	137-3BS-P31A-EX-20.8-21.3	20.8 - 21.3	-6.6	-7.1	JC83911-1R	JC83911R	03/06/2019	Remaining	N	Y		4.4	RA		
5+70	282R	137-3BS-Q31A	14.7	137-3BS-Q31A-EX-21.5-22.0	21.5 - 22.0	-6.8	-7.3	JC83838-1R	JC83838R	03/05/2019	Remaining	N	Y		3.7	RA		
5+70	312R	137-3BS-R31A	14.7	137-3BS-R31A-EX-21.8-22.3	21.8 - 22.3	-7.1	-7.6	JC83669-1R	JC83669R	03/01/2019	Remaining	N	Y		5.7	J-		
5+70	343R	137-3BS-S31A	15.9	137-3BS-S31A-EX-22.7-23.2	22.7 - 23.2	-6.8	-7.3	JC83587-1R	JC83587R	2/28/2019	Removed	N	Y		3.8	RA	S26	
5+75	63R	10W-J31A	13.2	10W-J31A-0.5-1.0	0.5 - 1.0	12.7	12.2	JC99900-1	JC99900	12/09/2019	Removed	N	Y		1.3	J	S1	

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

Analyte CAS RN Units CrSCC															CHROMIUM (HEXAVALENT) 18540-29-9 mg/kg 20		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Matrix (G16)	Result (G17, G18)	Qualifier (G19, G20)	Specific Notes
5+75	63R	10W-J31A	13.2	10W-J31A-2.0-2.5	2.0 - 2.5	11.2	10.7	JC99900-2R	JC99900	12/09/2019	Removed	N	Y		13.5	J	S1
5+75	63R	10W-J31A	13.2	10W-J31A-4.0-4.5	4.0 - 4.5	9.2	8.7	JC99900-3R	JC99900	12/09/2019	Removed	N	Y		1.3	J	S1
5+75	63R	10W-J31A	13.2	10W-J31A-4.0-4.5X	4.0 - 4.5	9.2	8.7	JC99900-4R	JC99900	12/09/2019	Removed	FD	Y		0.45	J	S1
5+75	63R	10W-J31A	13.2	10W-J31A-6.0-6.5	6.0 - 6.5	7.2	6.7	JC99900-5R	JC99900	12/09/2019	Removed	N	Y		6.7	J	S1
5+75	63R	10W-J31A	13.2	10W-J31A-8.0-8.5	8.0 - 8.5	5.2	4.7	JC99900-6R	JC99900	12/09/2019	Removed	N	Y		1.1	J	S1
5+75	63R	10W-J31A	13.2	10W-J31A-10.0-10.5	10.0 - 10.5	3.2	2.7	JC99900-7R	JC99900	12/09/2019	Removed	N	Y		< 0.44	UJ	S1
5+75	63R	10W-J31A	13.2	10W-J31A-12.0-12.5	12.0 - 12.5	1.2	0.7	JC99900-8R	JC99900	12/09/2019	Removed	N	Y		< 0.53	UJ	S1
5+75	63R	10W-J31A	13.2	10W-J31A-14.0-14.5	14.0 - 14.5	-0.8	-1.3	JC99900-9	JC99900	12/09/2019	Remaining	N	Y		0.61	J	
5+75	63R	10W-J31A	13.2	10W-J31A-16.0-16.5	16.0 - 16.5	-2.8	-3.3	JC99900-10R	JC99900	12/09/2019	Remaining	N	Y		< 0.43	UJ	
5+75	63R	10W-J31A	13.2	10W-J31A-18.0-18.5	18.0 - 18.5	-4.8	-5.3	JC99900-11R	JC99900	12/09/2019	Remaining	N	Y		0.82	J	
5+75	63R	10W-J31A	13.2	10W-J31A-18.5-19.0	18.5 - 19.0	-5.3	-5.8	JC99900-12R	JC99900	12/09/2019	Remaining	N	Y		0.99	J	
5+75	63R	10W-J31A	13.2	10W-J31A-19.0-19.5	19.0 - 19.5	-5.8	-6.3	JC99900-13	JC99900	12/09/2019	Remaining	N	Y		2.4	J	

Table 5-1
Cr+6 Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, 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
Cr+6 - hexavalent chromium
CrSCC - Chromium Soil Cleanup Criterion
El. - elevation
FD - field duplicate sample type
ft - feet
HSS - Halladay Street South
mg/kg - milligrams per kilogram
LSRP - Licensed Site Remediation Professional
N - normal sample type
NA - not applicable
NAVD88 - North American Vertical Datum of 1988
NJDEP - New Jersey Department of Environmental Protection
PDI - Pre-Design Investigation
RI - Remedial Investigation
RL - reporting limit
SDG - sample delivery group
U.S. - United States
USCS - Unified Soil Classification System

MATRICES	USCS CLASSIFICATIONS
FILL - fill	OH - organic clay
MM - meadow mat	OL - organic silt
UNDorg - undisturbed native deposits - organic	PT - peat

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.
J- - The analyte was positively identified; the associated numerical value is an estimated quantity with a potential low bias.
JB - The analyte concentration is greater than three times, but less than 10 times, the concentration in the associated method blank. The presence of that analyte in the sample is considered "real". The concentration is quantitatively qualified (JB) due to method blank contamination.
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. "Station" refers to a sample's location along the excavation's centerline, which runs the length of the Phase 3B South Excavation starting from a northwestern edge of Phase 3B South, as presented on Figure 5-1A and Figure 5-1B. Station values are presented in hundreds of feet. For example, station 1+50 is 150 feet along the excavation's centerline.
G2. "Offset" refers to a sample's distance in feet 90 degrees from the excavation's centerline in the southeasterly direction, as presented on Figure 5-1A and Figure 5-1B. An addition of "L" in this column indicates the sample is located to the left of the excavation's centerline and an addition of "R" in this column indicates the sample is located to the right of the excavation's centerline.
G3. "Location ID" refers to the location name where samples were collected.
G4. "Location Elevation" refers to the pre-remediation surface elevation for samples collected from the pit bottom or sidewall, and the surface elevation of the sample location when the sample was collected via boring or test pit.
G5. Elevation vertical datum is NAVD88, in U.S. survey ft.
G6. "Sample ID" refers to the name of a sample collected at a given location and is unique to the depth of the sample collected.
G7. "Depth Interval" is based on the "Location Elevation."
G8. "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.
G9. "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.
G10. "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.
G11. "Date Collected" refers to the date the soil sample was collected.
G12. "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;
- "Removed" indicates the sample was removed during excavation.
G13. The post-excavation survey points and 1-ft post-excavation contours representing the as-built terminal excavation elevations are provided on Figure 5-1A and Figure 5-1B.
G14. "Sample Type" indicates whether the sample type is normal (N) or a field duplicate (FD).

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

G15. “Y” indicates that a sample underwent data validation and “N” indicates that data validation was not conducted.
G16. For samples with Cr⁺⁶ CrSCC exceedances, the USCS Classification is provided. Where the sample was collected above 20 ft bgs, the matrix (e.g., MM or FILL) is also specified. In the event that a post-excavation sample supersedes a sample with Cr⁺⁶ CrSCC exceedances, the USCS Classification, and matrix if applicable, for the post-excavation sample is also provided.
G17. “Result” refers to the analytical result, which is reported in mg/kg.
G18. Bold text indicates that the result exceeds the CrSCC. Non-bold text indicates that the result does not exceed the CrSCC.
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. This sample serves as a Cr⁺⁶ confirmation sidewall sample and was removed due to excavation sloping per the excavation design.
- S2. This sample serves as a Cr⁺⁶ confirmation pit bottom sample and was removed to create a level grade across the excavation footprint in this area per the excavation design.
- S3. There is a 0.9 ft difference between the top of sample elevation at P4-HAL-O46A-4.5-5.0 (El. 6.4 to 5.9 ft NAVD88) and the excavation as-built elevation (El. 7.3 ft NAVD88) at this location. The 33.1 mg/kg Cr⁺⁶ concentration at P4-HAL-O46A-2.5-3.0 (El. 8.4 to 7.9 ft NAVD88), which was removed during excavation in this area, is slightly greater than the CrSCC of 20 mg/kg. Surrounding PDI samples collected at P4-HAL-O47A (Station 0+99, Offset 232R) and P4-HAL-P45A (Station 1+47, Offset 246R) indicate that Cr⁺⁶ concentrations between El. 9.1 and 5.1 ft NAVD88 are less than the CrSCC in this area.
- S4. There is a 3.8 ft difference between confirmation sidewall samples 133-P3BS-N44A45A-SWA-3.2-3.7 (El. 8.0 to 7.5 ft NAVD88) and 133-P3BS-N44A45A-SWB-RS2 (El. 4.2 to 3.7 ft NAVD88). Post-excavation sample 133-P3BS-N44A45A-SWB-RS2 (El. 4.2 to 3.7 ft NAVD88) was collected as a confirmation sidewall sample following a sidewall scrape and associated removal of Cr⁺⁶ CrSCC exceedances at samples 133-P3BS-N44A45A-SWB-5.4-5.9 (El. 6.0 to 5.5 ft NAVD88) and 133-P3BS-N44A45A-SWB-RS-6.4-6.9 (El. 5.0 to 4.5 ft NAVD88). Post-excavation sample 133-P3BS-N44A45A-SWB-RS2 (El. 4.2 to 3.7 ft NAVD88) was collected along the sidewall at El. 4.2 ft NAV88, approximately at the same northings and eastings as 133-P3BS-N44A45A-SWB-5.4-5.9 and 133-P3BS-N44A45A-SWB-RS-6.4-6.9. Surrounding PDI samples collected at 133-P3B-N45A (Station 1+49, Offset 192R), 133-P3B-N44A (Station 1+80, Offset 191R), 133-P3B-N46A (Station 1+19, Offset 189R), 133-P3B-O45A (Station 1+86, Offset 203R), and P4-HAL-O46A (Station 1+26, Offset 224R) indicate that Cr⁺⁶ concentrations between El. 7.1 and 1.7 ft NAVD88 are less than the CrSCC in this area.
- S5. The post-excavation sample 133-P3BS-N44A45A-SWC-7.6-8.1 (El. 4.0 to 3.5 ft NAVD88) serves as a Cr⁺⁶ confirmation sidewall sample and was removed due to excavation sloping required to remove Cr⁺⁶ CrSCC exceedances at samples 133-P3BS-N44A45A-SWB-5.4-5.9 (El. 6.0 – 5.5 ft NAVD88) and 133-P3BS-N44A45A-SWB-RS-6.4-6.9 (El. 5.0 4.5 ft NAVD88).
- S6. This sample serves as a Cr⁺⁶ confirmation pit bottom sample and was removed due to excavation sloping per the excavation design.
- S7. This sample serves as a Cr⁺⁶ confirmation pit bottom sample and was removed during excavation of the transition zone between the excavation conducted in 2019 and 2021 within Phase 3B South (including portions of Site 133 East [Site 133E] and Halladay Street South [HSS]) and the excavation conducted between 2015 and 2017 within Site 133E and HSS; the Site 133E and HSS excavation and backfilling activities were completed prior to excavation in Phase 3B South.
- S8. At Station 4+20, Offset 192R, the PDI samples 137-P3B-N36A-18.0-18.5 and 137-P3B-N36A-20.0-20.5 appear to be remaining in place based on the sample elevations (El. -6.4 to -6.9 ft NAVD88 and El. -8.4 to -8.9 ft NAVD88, respectively); however, based on field observations, these samples were actually removed. The boring log indicates that these samples were collected from fill and the excavation field notes indicate this area was excavated to visually clean MM. The post-excavation sample 137-P3B-N36A-EX-20.5-21.0 (El. -6.3 to -6.8 ft NAVD88), which serves as a confirmation pit bottom sample, was collected from the top of MM at this location and the associated Cr⁺⁶ result is less than the CrSCC.
- S9. At Station 4+20, Offset 222R, the PDI sample 137-P3B-O36A-18.8-19.3 appears to be remaining in place based on the sample elevation (El. -7.0 to -7.5 ft NAVD88); however, based on field observations, this sample was actually removed. The boring log indicates that this sample was collected from fill directly above MM. The excavation field notes indicate that the fill material was removed, and this area was excavated to visually clean MM.
- S10. At Station 4+20, Offset 222R, PDI sample 137-P3B-O36A-20.0-20.5 (El. -8.2 to -8.7 ft NAVD88) serves as a confirmation pit bottom sample. There is a 2.1 ft difference between the top of sample elevation (El. -8.2 to -8.7 ft NAVD88) and the excavation as-built elevation (El. -6.1 ft NAVD88) at this location. The boring log indicates that this sample was collected from the top of MM and the excavation field notes indicate that this area was excavated to visually clean MM.
- S11. At Station 4+20, Offset 282R, the PDI samples 137-P3B-Q36A-17.5-18.0 and 137-P3B-Q36A-18.5-19.0 appear to be remaining in place based on the sample elevations (El. -4.3 to -4.8 ft NAVD88 and El. -5.3 to -5.8 ft NAVD88, respectively); however, based on field observations, these samples were actually removed. The boring log indicates that these samples were collected from fill directly above MM. The excavation field notes indicate that the fill material was removed, and this area was excavated to visually clean MM.
- S12. At Station 4+20, Offset 282R, PDI sample 137-P3B-Q36A-19.0-19.5 (El. -5.8 to -6.3 ft NAVD88) serves as a confirmation pit bottom sample. There is a 2.2 ft difference between the top of sample elevation (El. -5.8 to -6.3 ft NAVD88) and the excavation as-built elevation (El. -3.7 ft NAVD88) at this location. The boring log indicates that this sample was collected from the top of MM and the excavation field notes indicate that this area was excavated to visually clean MM.
- S13. At Station 4+49, Offset 74R, the PDI sample 10W-K35A-17.5-18.0 appears to be remaining in place based on the sample elevation (El. -2.7 to -3.2 ft NAVD88); however, based on field observations, this sample was actually removed. The boring log indicates that this sample was collected from fill directly above UNDorg. The excavation field notes indicate that the fill material was removed, and this area was excavated to visually clean MM.
- S14. At Station 4+49, Offset 74R, PDI sample 10W-K35A-18.0-18.5 (El. -3.2 to -3.7 ft NAVD88) serves as a confirmation pit bottom sample and was removed. The boring log indicates that this sample was collected from UNDorg, and the excavation field notes indicate that this area was excavated to visually clean MM.
- S15. At Station 4+50, Offset 103R, the Cr⁺⁶ result for PDI sample 10W-P3B-K35A-EX-19.3-19.8 is greater than the CrSCC but is in compliance with the Chromium Policy per the Method to Determine Compliance because: 1) of the reducing nature of the matrix associated with this sample as indicated in the associated data validation report; 2) this sample was collected from the top of MM; 3) MM is not commingled with CCPW; and 4) the Cr⁺⁶ result is less than 1,000 mg/kg.

Table 5-1
Cr⁺⁶ Analytical Results for In-Place Soil Compared to Chromium Soil Cleanup Criterion
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

- S16. At Station 4+79, Offset 194R, the Cr⁺⁶ result associated with PDI sample 137-P3B-N34A-EX-19.4-19.9 (El. -6.2 to -6.7 ft NAVD88) is greater than the CrSCC but is in compliance with the Chromium Policy per the Method to Determine Compliance because: 1) this sample was collected from the top of MM; 2) MM is not commingled with CCPW; 3) the Cr⁺⁶ result is less than 1,000 mg/kg; and 4) excavation of this sample would compromise the existing 1.5-ft thick MM layer present from El. -2.9 to -4.4 ft NAVD88. Additionally, the Cr⁺⁶ result associated with the field duplicate sample 137-P3B-N34A-EX-19.4-19.9X (El. -6.2 to -6.7 ft NAVD88) is less than the CrSCC.
- S17. At Station 4+80, Offset 162R, the PDI sample 137-P3B-M34A-19.1-19.6 appears to be remaining in place based on the sample elevation (El. -6.3 to -6.8 ft NAVD88); however, based on field observations, this sample was actually removed. The boring log indicates that this sample was collected from fill material. The excavation field notes indicate that the fill material was removed, and this area was excavated to visually clean MM.
- S18. This sample serves as a Cr⁺⁶ confirmation pit bottom sample and was removed due to excavation to MM, which was encountered shallower than anticipated based on observations made during the PDI field program and as noted in the boring log.
- S19. At Station 4+80, Offset 162R, the PDI sample 137-P3B-M34A-20.0-20.5 appears to be remaining in place based on the sample elevation (El. -7.2 to -7.7 ft NAVD88); however, based on field observations, this sample was actually removed. The boring log indicates that this sample was collected from fill material. The excavation field notes indicate that the fill material was removed, and this area was excavated to visually clean MM.
- S20. At Station 5+10, Offset 162R, the PDI sample 137-P3B-M33A-19.5-20.0 appears to be remaining in place based on the sample elevation (El. -6.4 to -6.9 ft NAVD88); however, based on field observations, this sample was actually removed. The excavation field notes indicate that this area was excavated to visually clean MM.
- S21. At Station 5+10, Offset 162R, PDI sample 137-P3B-M33A-20.0-20.5 (El. -6.9 to -7.4 ft NAVD88) serves as a confirmation pit bottom sample and appears to be remaining in place based on the sample elevation (El. -7.0 to -7.5 ft NAVD88) and the excavation as-built elevation (El. -6.5 ft NAVD88); however, based on field observations, this sample was actually removed. The boring log indicates that this sample was collected from fill material. The excavation field notes indicate that the fill material was removed, and this area was excavated to visually clean MM.
- S22. At Station 5+10, Offset 342R, the PDI samples 137-P3B-S33A-19.5-20.0, 137-P3B-S33A-20.0-20.5, and 137-P3B-S33A-20.5-21.0 appear to be remaining in place based on the sample elevations (El. -5.6 to -6.1 ft NAVD88, El. -6.1 to -6.6 ft NAVD88, and El. -6.6 to -7.1 ft NAVD88, respectively); however, based on field observations, these samples were actually removed. The boring log indicates that these samples were collected from fill above MM. The excavation field notes indicate that the fill material was removed, and this area was excavated to visually clean MM.
- S23. At Station 5+10, Offset 342R, PDI sample 137-P3B-S33A-21.0-21.5 (El. -7.1 to -7.6 ft NAVD88) serves as a confirmation pit bottom sample. There is a 1.1 ft difference between the top of sample elevation (El. -7.1 ft NAVD88) and the excavation as-built elevation (El. -6.0 ft NAVD88) at this location. The boring log indicates that this sample was collected from the top of MM and the excavation field notes indicate that this area was excavated to visually clean MM.
- S24. At Station 5+39, Offset 358R, Cr⁺⁶ was not detected at a concentration greater than the reporting limit (RL) in the sample 137-4BI_21.0-22.0_808697 (El. -7.5 to -8.5 ft NAVD88) at location 137-MW4B, but the RL was greater than the CrSCC. The boring log indicates that this sample was collected in UNDorg below the MM layer, which is present in this area from approximately El. -4.5 to -7.5 ft NAVD88. CCPW-related impacts have been observed in this area within the fill material above the MM layer. CCPW-related impacts are not expected below the MM layer. Excavation in this area exposed the MM layer, which was observed to be intact. Additionally, this sample is in compliance with the Chromium Policy because: 1) this sample was collected from greater than 20 ft bgs; 2) the RL for Cr⁺⁶ is less than 1,000 mg/kg; and 3) excavation of this sample would compromise the existing MM layer.
- S25. At Station 5+69, Offset 99R, the PDI sample FBP-K31A-18.8-19.3 serves as a confirmation pit bottom sample and was removed. The boring log indicates that this sample was collected in UNDorg and, according to the excavation field notes, the excavation extended beyond the UNDorg to the top of the visually clean MM.
- S26. This sample serves as a Cr⁺⁶ confirmation pit bottom sample and was removed to accommodate placement of a sump for excavation dewatering purposes.

Table 5-2
CCPW Metals Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units RDCSRS RDCSRS-GAG NRDCSRS	ANTIMONY 7440-36-0 mg/kg 31 NA 450	CHROMIUM 7440-47-3 mg/kg 120000 NA NA	NICKEL 7440-02-0 mg/kg 1600 NA 23000	THALLIUM 7440-28-0 mg/kg NA NA	VANADIUM 7440-62-2 mg/kg NA 390 1100				
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G20)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Specific Notes
0+87	253R	133-P3C-P47AR	10.8	133-P3C-P47AR-4.5-5.0	4.5 - 5.0	6.3	5.8	JB82342-3T	JB82342T	11/20/2014	Remaining	N	Y		R	719	RA	38.6	RA	0.33	RA	29.9	RA	
0+87	253R	133-P3C-P47AR	10.8	133-P3C-P47AR-6.5-7.0	6.5 - 7.0	4.3	3.8	JB82342-4T	JB82342T	11/20/2014	Remaining	N	Y		R	16.0	RA	9.9	RA		R	20.9	RA	
0+87	253R	133-P3C-P47AR	10.8	133-P3C-P47AR-8.5-9.0	8.5 - 9.0	2.3	1.8	JB82342-5T	JB82342T	11/20/2014	Remaining	N	Y		R	15.1	RA	9.1	RA		R	22.6	RA	
0+87	253R	133-P3C-P47AR	10.8	133-P3C-P47AR-10.5-11.0	10.5 - 11.0	0.3	-0.2	JB82342-6T	JB82342T	11/20/2014	Remaining	N	Y		R	21.4	RA	22.1	RA	0.38	RA	28.1	RA	
0+87	253R	133-P3C-P47AR	10.8	133-P3C-P47AR-12.5-13.0	12.5 - 13.0	-1.7	-2.2	JB82342-7T	JB82342T	11/20/2014	Remaining	N	Y		R	18.6	RA	13.1	RA		R	26.4	RA	
0+87	253R	133-P3C-P47AR	10.8	133-P3C-P47AR-14.5-15.0	14.5 - 15.0	-3.7	-4.2	JB82342-8T	JB82342T	11/20/2014	Remaining	N	Y		R	37.6	RA	22.4	RA		R	53.2	RA	
0+87	253R	133-P3C-P47AR	10.8	133-P3C-P47AR-16.5-17.0	16.5 - 17.0	-5.7	-6.2	JB82342-9T	JB82342T	11/20/2014	Remaining	N	Y		R	42.3	RA	31.3	RA		R	52.0	RA	
0+95	257R	EF-91	10.6	EF-B091-4.0-4.5	4.0 - 4.5	6.6	6.1	JB15125-1	JB15125	08/30/2012	Remaining	N	Y	10.3	J	1110		47.2		0.57	J	34.4		
0+95	257R	EF-91	10.6	EF-B091-4.0-4.5X	4.0 - 4.5	6.6	6.1	JB15125-2	JB15125	08/30/2012	Remaining	FD	Y	< 0.21	UJ	1410		55.5		0.86	J	36.3		
1+06	255R	133-B7	10.5	133B7C(4.5-5.0)J48474-16	4.5 - 5.0	6.0	5.5	J48474-16	J48474	12/07/2006	Remaining	N	Y	< 2.8	UJ	2190	J	84.1	J	< 1.4	U	45.9	J	
1+06	255R	133-B7	10.5	PPG-133-B7D 8.5-9.5	8.5 - 9.5	2.0	1.0	793194	A808	12/13/2006	Remaining	N	Y	< 1.3	UJ	16.9		10.3		< 1.1	U	25.1		
1+06	255R	133-B7	10.5	PPG-133-B7E 12.5-13.0	12.5 - 13.0	-2.0	-2.5	793195	A808	12/13/2006	Remaining	N	Y	< 2.5	UJ	28		19.1		< 2	U	37.6		
1+06	255R	133-B7	10.5	PPG-133-B7F 16.5-17.0	16.5 - 17.0	-6.0	-6.5	793196	A808	12/13/2006	Remaining	N	Y	< 1.8	UJ	33		26.4		< 1.5	U	35.9		
1+06	255R	133-B7	10.5	PPG-133-B7G 20.5-21.0	20.5 - 21.0	-10.0	-10.5	793197	A808	12/13/2006	Remaining	N	Y	< 1.9	UJ	30		26.5		< 1.5	U	42.1		
1+06	255R	133-B7	10.5	PPG-133-B7H 22.3-22.8	22.3 - 22.8	-11.8	-12.3	793198	A808	12/13/2006	Remaining	N	Y	< 1.5	UJ	12.1		10.5		< 1.3	U	18.5		
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-1.0-1.5	1.0 - 1.5	11.0	10.5	JB64984-9A	JB64984A	04/17/2014	Remaining	N	Y	3.7	J	327	J	25.7		< 0.46	U	36.5		
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-3.0-3.5	3.0 - 3.5	9.0	8.5	JB64984-10A	JB64984A	04/17/2014	Remaining	N	Y	4.0	J	157	J	95.1		< 0.50	U	29.2		
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-5.0-5.5	5.0 - 5.5	7.0	6.5	JB64984-11A	JB64984A	04/17/2014	Remaining	N	Y	1.4	J	32.8	J	19.6		< 0.54	U	34.8		
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-7.0-7.5	7.0 - 7.5	5.0	4.5	JB64984-12A	JB64984A	04/17/2014	Remaining	N	Y	1.4	J	29.2	J	22.4		< 0.64	U	44.7		
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-9.0-9.5	9.0 - 9.5	3.0	2.5	JB64984-13A	JB64984A	04/17/2014	Remaining	N	Y	1.6	J	13.4	J	13.8		< 0.53	U	17.0		
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-11.0-11.5	11.0 - 11.5	1.0	0.5	JB64984-14A	JB64984A	04/17/2014	Remaining	N	Y	4.0	J	13.6	J	11.4		< 0.56	U	21.5		
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-11.0-11.5X	11.0 - 11.5	1.0	0.5	JB64984-15A	JB64984A	04/17/2014	Remaining	FD	Y	3.7	J	20.1	J	13.8		< 0.61	U	26.7		
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-11.5-12.0	11.5 - 12.0	0.5	0.0	JB64984-16A	JB64984A	04/17/2014	Remaining	N	Y	3.4	J	23.0	J	16.9		< 0.65	U	33.0		
1+19	189R	133-P3B-N46A	11.1	133-P3B-N46A-2.0-2.5	2.0 - 2.5	9.1	8.6	JB64984-26A	JB64984A	04/17/2014	Remaining	N	Y	8.6	J	188	J	38.5		< 0.47	U	48.5	J	
1+19	189R	133-P3B-N46A	11.1	133-P3B-N46A-4.0-4.5	4.0 - 4.5	7.1	6.6	JB64984-27A	JB64984A	04/17/2014	Remaining	N	Y	4.1	J	109	J	18.0		1.2	J	21.3	J	
1+19	189R	133-P3B-N46A	11.1	133-P3B-N46A-6.0-6.5	6.0 - 6.5	5.1	4.6	JB64984-28A	JB64984A	04/17/2014	Remaining	N	Y	3.1	J	82.9	J	15.5		< 0.60	U	18.2	J	
1+19	189R	133-P3B-N46A	11.1	133-P3B-N46A-8.0-8.5	8.0 - 8.5	3.1	2.6	JB64984-29A	JB64984A	04/17/2014	Remaining	N	Y	4.5	J	21.3	J	14.4		0.63	J	22.1	J	
1+19	189R	133-P3B-N46A	11.1	133-P3B-N46A-10.0-10.5	10.0 - 10.5	1.1	0.6	JB64984-30A	JB64984A	04/17/2014	Remaining	N	Y	1.3	J	12.5	J	9.6		< 0.56	U	8.9	J	
1+19	189R	133-P3B-N46A	11.1	133-P3B-N46A-10.5-11.0	10.5 - 11.0	0.6	0.1	JB64984-31A	JB64984A	04/17/2014	Remaining	N	Y	25.2	J	46.7	J	67.5		< 2.6	U	76.8	J	
1+19	189R	133-P3B-N46A	11.1	133-P3B-N46A-10.5-11.0X	10.5 - 11.0	0.6	0.1	JB64984-32A	JB64984A	04/17/2014	Remaining	FD	Y	< 4.2	UJ	25.1	J	75.2		< 6.3	U	43.4	J	
1+19	189R	133-P3B-N46A	11.1	133-P3B-N46A-11.0-11.5	11.0 - 11.5	0.1	-0.4	JB64984-33A	JB64984A	04/17/2014	Remaining	N	Y	2.6	J	33.9	J	37.2	J	< 0.90	UJ	48.1	J	
1+19	252R	P3BS-PDI-1+20-250R	10.9	P3BS-PDI-1+20-250R-4.4-5	4.0 - 4.5	6.9	6.4	410-14446-3	410144461	09/18/2020	Remaining	N	Y	0.24	J	130		16		0.18	J	27		
1+19	252R	P3BS-PDI-1+20-250R	10.9	P3BS-PDI-1+20-250R-6.6-5	6.0 - 6.5	4.9	4.4	410-14446-4	410144461	09/18/2020	Remaining	N	Y	3.1		300		27		0.22	J	34		
1+19	252R	P3BS-PDI-1+20-250R	10.9	P3BS-PDI-1+20-250R-8.8-5	8.0 - 8.5	2.9	2.4	410-14446-5	410144461	09/18/2020	Remaining	N	Y	1.2	J-	12	J	13	J	< 0.075	U	23	J	
1+19	252R	P3BS-PDI-1+20-250R	10.9	P3BS-PDI-1+20-250R-10-10.5	10.0 - 10.5	0.9	0.4	410-14446-6	410144461	09/18/2020	Remaining	N	Y	< 0.27	U	17		11		0.10	J	28		
1+19	252R	P3BS-PDI-1+20-250R	10.9	P3BS-PDI-1+20-250R-10-10.5X	10.0 - 10.5	0.9	0.4	410-14446-7	410144461	09/18/2020	Remaining	FD	Y	< 0.29	U	21		11		0.12	J	26		
1+19	252R	P3BS-PDI-1+20-250R	10.9	P3BS-PDI-1+20-250R-12-12.5	12.0 - 12.5	-1.1	-1.6	410-14446-8	410144461	09/18/2020	Remaining	N	Y	< 0.25	U	18		10		0.16	J	38		
1+19	252R	P3BS-PDI-1+20-250R	10.9	P3BS-PDI-1+20-250R-12.5-13	12.5 - 13.0	-1.6	-2.1	410-14446-9	410144461	09/18/2020	Remaining	N	Y	< 0.45	U	33		22		0.19	J	50		
1+20	282R	133-P3C-Q46A	12.2	133-P3C-Q46A-2.5-3.0	2.5 - 3.0	9.7	9.2	JB64006-13A	JB64006A	04/07/2014	Removed	N	Y	27.0		68.6		57.4		< 0.53	U	39.2		S1
1+20	282R	133-P3C-Q46A	12.2	133-P3C-Q46A-4.5-5.0	4.5 - 5.0	7.7	7.2	JB64006-14A	JB64006A	04/07/2014	Remaining	N	Y	4.4		66.6		16.7		< 0.47	U	21.0		
1+20	282R	133-P3C-Q46A	12.2	133-P3C-Q46A-6.5-7.0	6.5 - 7.0	5.7	5.2	JB64006-15A	JB64006A	04/07/2014	Remaining	N	Y	0.48	J	15.3		12.8		< 0.96	U	22.0		
1+20	282R	133-P3C-Q46A	12.2	133-P3C-Q46A-8.5-9.0	8.5 - 9.0	3.7	3.2	JB64006-16A	JB64006A	04/07/2014	Remaining	N	Y	0.84	J	19.0		16.2		< 0.58	U	25.0		
1+20	282R	133-P3C-Q46A	12.2	133-P3C-Q46A-10.5-11.0	10.5 - 11.0	1.7	1.2	JB64006-17A	JB64006A	04/07/2014	Remaining	N	Y	0.90	J	20.6		14.5		< 0.58	U	23.0		
1+20	282R	133-P3C-Q46A	12.2	133-P3C-Q46A-12.8-13.3	12.8 - 13.3	-0.6	-1.1	JB64006-18A	JB64006A	04/07/2014	Remaining	N	Y	< 0.32	U	18.1		9.6		< 0.48	U	25.6		
1+20	282R	133-P3C-Q46A	12.2	133-P3C-Q46A-13.3-13.8	13.3 - 13.8	-1.1	-1.6	JB64006-19A	JB64006A	04/07/2014	Remaining	N	Y	< 0.70	UJ	42.3	J	33.5	J	< 1.1	UJ	44.8	J	
1+30	315R	133-B8	12.1	PPG-133-B8B 5.0-6.0 797778	5.0 - 6.0	7.1	6.1	797778	B560	01/05/2007	Remaining	N	Y	< 1.4	UJ	14.6		16.7		< 1.4	UJ	22.9		
1+30	315R	133-B8	12.1	PPG-133-B8C 9.0-10.0 797779	9.0 - 10.0	3.1	2.1	797779	B560	01/05/2007	Remaining	N	Y	< 1.2	UJ	12		10.8		< 1.2	UJ	20.6		
1+30	315R	133-B8	12.1	PPG-133-B8CD 9.0-10.0 797780	9.0 - 10.0	3.1	2.1	797780	B560	01/05/2007	Remaining	FD	Y	< 1.2	UJ	11.4		11.4		< 1.8	UJ	22.7		
1+30	315R	133-B8	12.1	PPG-133-B8D 13.0-13.5 797781	13.0 - 13.5	-0.9	-1.4	797781	B560	01/05/2007	Remaining	N	Y	< 1.5	UJ	13.3		14.9		< 1.5	UJ	26.5		
1+30	315R	133-B8	12.1	PPG-133-B8E 13.5-14.0 797782	13.5 - 14.0	-1.4	-1.9	797782	B560															

Table 5-2
CCPW Metals Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units RDCSRS RDCSRS-GAG NRDCSRS	ANTIMONY 7440-36-0 mg/kg 31 NA 450	CHROMIUM 7440-47-3 mg/kg 120000 NA NA	NICKEL 7440-02-0 mg/kg 1600 NA 23000	THALLIUM 7440-28-0 mg/kg NA NA	VANADIUM 7440-62-2 mg/kg NA 390 1100				
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G20)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Specific Notes
1+57	141R	ICO-18	11.4	ICO-B018-7.0	7.0 - 7.5	4.4	3.9	JB3648-38	JB3648	04/06/2012	Remaining	N	Y	2.2	J	252		26.7		1.2	J	22.4	J	
1+57	141R	ICO-18	11.4	ICO-B018-10.0	10.0 - 10.5	1.4	0.9	JB3648-39	JB3648	04/06/2012	Remaining	N	Y	< 0.24	UJ	25.0		58.4		1.0	J	21.9	J	
1+60	84R	10W-J45A	15.6	10W-J45A-5.5-6.0	5.5 - 6.0	10.1	9.6	JB66880-6A	JB66880A	05/13/2014	Remaining	N	Y	0.65	J-	18.7	J	11.2		< 0.50	U	23.5		
1+60	84R	10W-J45A	15.6	10W-J45A-6.5-7.0	6.5 - 7.0	9.1	8.6	JB66880-7A	JB66880A	05/13/2014	Remaining	N	Y	6.8	J-	34.3	J	24.3		< 0.62	U	32.0		
1+60	84R	10W-J45A	15.6	10W-J45A-14.5-15.0	14.5 - 15.0	1.1	0.6	JB66880-11A	JB66880A	05/13/2014	Remaining	N	Y	< 0.33	UJ	8.1	J	25.6		< 0.50	U	12.3		
1+60	84R	10W-J45A	15.6	10W-J45A-16.5-17.0	16.5 - 17.0	-0.9	-1.4	JB66880-12A	JB66880A	05/13/2014	Remaining	N	Y	0.70	J-	35.8	J	21.4		< 0.60	U	37.9		
1+60	84R	10W-J45A	15.6	10W-J45A-18.5-19.0	18.5 - 19.0	-2.9	-3.4	JB66880-13A	JB66880A	05/13/2014	Remaining	N	Y	< 0.45	UJ	33.4	J	25.6		< 0.69	U	44.6		
1+62	70R	TWA-7	15.6	TWA-B007-5.0	5.0 - 5.5	10.6	10.1	JB3579-21	JB3579	04/06/2012	Remaining	N	Y	1.1	J	511		15.6		< 0.67	U	19.2		
1+62	70R	TWA-7	15.6	TWA-B007-10.0	10.0 - 10.5	5.6	5.1	JB3579-22	JB3579	04/06/2012	Remaining	N	Y	1.0	J	27.6		15.8		1.3	J	20.2		
1+62	70R	TWA-7	15.6	TWA-B007-12.0	12.0 - 12.5	3.6	3.1	JB3579-23	JB3579	04/06/2012	Remaining	N	Y	< 0.20	UJ	12.7		10.9		< 0.27	U	23.6		
1+62	70R	TWA-7	15.6	TWA-B007-15.0	15.0 - 15.5	0.6	0.1	JB3579-24	JB3579	04/06/2012	Remaining	N	Y	< 0.18	UJ	26.2		17.3		< 0.25	U	35.0		
1+62	70R	TWA-7	15.6	TWA-B007-17.0	17.0 - 17.5	-1.4	-1.9	JB3579-25	JB3579	04/06/2012	Remaining	N	Y	< 0.23	UJ	30.9		21.4		0.50	J	40.2		
1+62	70R	TWA-7	15.6	TWA-B007-19.0	19.0 - 19.5	-3.4	-3.9	JB3579-26	JB3579	04/06/2012	Remaining	N	Y	< 0.24	UJ	30.9		25.5		< 0.34	U	41.6		
1+62	70R	TWA-7	15.6	TWA-B007-21.0	21.0 - 21.5	-5.4	-5.9	JB3579-27	JB3579	04/06/2012	Remaining	N	Y	< 0.26	UJ	30.9		22.2		< 0.37	U	40.0		
1+62	70R	TWA-7	15.6	TWA-B007-23.0	23.0 - 23.5	-7.4	-7.9	JB3579-28	JB3579	04/06/2012	Remaining	N	Y	< 0.26	UJ	31.5		25.3		< 0.37	U	35.9		
1+62	70R	TWA-7	15.6	TWA-B007-23.0X	23.0 - 23.5	-7.4	-7.9	JB3579-29	JB3579	04/06/2012	Remaining	FD	Y	< 0.26	UJ	34.0		27.1		< 0.36	U	39.7		
1+74	202R	133-MW1C	11.9	133-MW1CC 9.0-10.0 822615	9.0 - 10.0	2.9	1.9	822615	F201	04/19/2007	Remaining	N	Y	< 1.5	UJ	37.3		14.9	J	< 1.2	U	20.2		
1+74	202R	133-MW1C	11.9	133-MW1CCD 9.0-10.0 822616	9.0 - 10.0	2.9	1.9	822616	F201	04/19/2007	Remaining	FD	Y	< 1.5	UJ	45.8		13.3	J	< 1.2	U	21.2		
1+74	202R	133-MW1C	11.9	133-MW1CD 13.0-14.0 822617	13.0 - 14.0	-1.1	-2.1	822617	F201	04/19/2007	Remaining	N	Y	< 2.2	UJ	43.4		25.7		< 1.7	U	42.1		
1+74	202R	133-MW1C	11.9	133-MW1CE 15.0-15.5 822618	15.0 - 15.5	-3.1	-3.6	822618	F201	04/19/2007	Remaining	N	Y	< 2	UJ	35.3		27	J	< 1.7	U	42		
1+74	202R	133-MW1C	11.9	133-MW1CF 17.0-18.0 823270	17.0 - 18.0	-5.1	-6.1	823270	F446	04/23/2007	Remaining	N	Y	< 2.1	UJ	39.5		30.5	J	< 1.7	U	40.3		
1+74	202R	133-MW1C	11.9	133-MW1CG 19.0-20.0 823271	19.0 - 20.0	-7.1	-8.1	823271	F446	04/23/2007	Remaining	N	Y	< 2	UJ	34.7		27.3	J	< 1.6	U	39.8		
1+74	202R	133-MW1C	11.9	133-MW1CGD 19.0-20.0 823272	19.0 - 20.0	-7.1	-8.1	823272	F446	04/23/2007	Remaining	FD	Y	< 2.1	UJ	36.2		28.3	J	< 1.7	U	41.7		
1+74	202R	133-MW1C	11.9	133-MW1CH 21.0-21.5 823273	21.0 - 21.5	-9.1	-9.6	823273	F446	04/23/2007	Remaining	N	Y	< 2.1	UJ	37.1		28.2	J	< 1.7	U	41.7		
1+74	202R	133-MW1C	11.9	133-MW1CI 23.0-23.5 823274	23.0 - 23.5	-11.1	-11.6	823274	F446	04/23/2007	Remaining	N	Y	< 1.3	UJ	16.6		13.8	J	< 1.1	U	24.5		
1+90	88R	10W-K44A	15.6	10W-K44A-8.5-9.0	8.5 - 9.0	7.1	6.6	JB66773-6A	JB66773A	05/12/2014	Remaining	N	Y	3.0		25.6		23.2		< 0.52	U	17.3		
1+90	88R	10W-K44A	15.6	10W-K44A-9.5-10.0	9.5 - 10.0	6.1	5.6	JB66773-7A	JB66773A	05/12/2014	Remaining	N	Y	3.5		44.2		67.5		< 0.51	U	19.8		
1+90	88R	10W-K44A	15.6	10W-K44A-10.5-11.0	10.5 - 11.0	5.1	4.6	JB66773-8A	JB66773A	05/12/2014	Remaining	N	Y	8.9		48.9		50.2		< 1.1	U	43.9		
1+90	88R	10W-K44A	15.6	10W-K44A-12.5-13.0	12.5 - 13.0	3.1	2.6	JB66773-9A	JB66773A	05/12/2014	Remaining	N	Y	< 0.32	U	20.6		14.7		< 0.48	U	24.6		
1+90	88R	10W-K44A	15.6	10W-K44A-14.5-15.0	14.5 - 15.0	1.1	0.6	JB66773-10A	JB66773A	05/12/2014	Remaining	N	Y	0.66	J	86.8		13.4		< 0.55	U	26.2		
1+90	88R	10W-K44A	15.6	10W-K44A-16.5-17.0	16.5 - 17.0	-0.9	-1.4	JB66773-11A	JB66773A	05/12/2014	Remaining	N	Y	< 0.45	U	40.1		24.7		< 0.69	U	38.0		
1+90	88R	10W-K44A	15.6	10W-K44A-18.5-19.0	18.5 - 19.0	-2.9	-3.4	JB66773-12A	JB66773A	05/12/2014	Remaining	N	Y	< 0.42	U	15.1		10.7		< 0.64	U	22.8		
1+90	88R	10W-K44A	15.6	10W-K44A-20.5-21.0	20.5 - 21.0	-4.9	-5.4	JB66773-13A	JB66773A	05/12/2014	Remaining	N	Y	< 0.46	U	79.6		25.8		< 0.70	U	43.7		
1+93	285R	133-B6	10.8	PPG-133-B6E 8.0-8.5	8.0 - 8.5	2.8	2.3	793184	A808	12/13/2006	Remaining	N	Y	< 1.8	UJ	11.3		30.4		< 1.5	U	30.1		
1+93	285R	133-B6	10.8	PPG-133-B6F 12.0-13.0	12.0 - 13.0	-1.2	-2.2	793185	A808	12/13/2006	Remaining	N	Y	< 1.4	UJ	14.1		10.2		< 1.1	U	23		
1+93	285R	133-B6	10.8	PPG-133-B6FD 12.0-13.0	12.0 - 13.0	-1.2	-2.2	793186	A808	12/13/2006	Remaining	FD	Y	< 1.4	UJ	15.8		11.6		< 1.1	U	23.8		
1+93	285R	133-B6	10.8	PPG-133-B6G 13.9-14.4	13.9 - 14.4	-3.1	-3.6	793187	A808	12/13/2006	Remaining	N	Y	< 3.4	UJ	18.1		11.7		< 1.4	U	28.7		
1+93	285R	133-B6	10.8	PPG-133-B6H 18.0-18.5	18.0 - 18.5	-7.2	-7.7	793188	A808	12/13/2006	Remaining	N	Y	< 2.2	UJ	33.4		27.4		< 1.8	U	39.2		
1+93	285R	133-B6	10.8	PPG-133-B6I 22.0-22.5	22.0 - 22.5	-11.2	-11.7	793189	A808	12/13/2006	Remaining	N	Y	< 1.8	UJ	26.5		22.9		< 1.5	U	30.1		
1+93	285R	133-B6	10.8	PPG-133-B6J 24.5-25.5	24.5 - 25.5	-13.7	-14.7	793190	A808	12/13/2006	Remaining	N	Y	< 1.4	UJ	16.1		14.7		< 1.1	U	25.8		
2+01	3R	10W-H43A	15.6	10W-H43A-2.5-3.0	2.5 - 3.0	13.1	12.6	JB66966-3A	JB66966A	05/14/2014	Remaining	N	Y	< 0.34	U	16.2		17.3		< 0.51	U	60.0		
2+01	3R	10W-H43A	15.6	10W-H43A-4.5-5.0	4.5 - 5.0	11.1	10.6	JB66966-4A	JB66966A	05/14/2014	Remaining	N	Y	< 0.31	U	19.0		8.4		< 0.48	U	36.8		
2+01	3R	10W-H43A	15.6	10W-H43A-5.0-5.5	5.0 - 5.5	10.6	10.1	JB66966-5A	JB66966A	05/14/2014	Remaining	N	Y	1.1	J	33.7		17.2		0.72	J	26.9		
2+01	3R	10W-H43A	15.6	10W-H43A-6.5-7.0	6.5 - 7.0	9.1	8.6	JB66966-6A	JB66966A	05/14/2014	Remaining	N	Y	1.4	J	29.6		12.9		0.81	J	21.2		
2+01	3R	10W-H43A	15.6	10W-H43A-7.5-8.0	7.5 - 8.0	8.1	7.6	JB66966-7A	JB66966A	05/14/2014	Remaining	N	Y	< 0.33	U	13.5		9.1		< 0.50	U	21.1		
2+01	3R	10W-H43A	15.6	10W-H43A-8.5-9.0	8.5 - 9.0	7.1	6.6	JB66966-8A	JB66966A	05/14/2014	Remaining	N	Y	< 0.32	U	11.0		7.5		< 0.48	U	17.1		
2+01	3R	10W-H43A	15.6	10W-H43A-10.5-11.0	10.5 - 11.0	5.1	4.6	JB66966-9A	JB66966A	05/14/2014	Remaining	N	Y	< 0.29	U	22.9		27.8		< 0.44	U	16.2		
2+01	3R	10W-H43A	15.6	10W-H43A-12.0-12.5	12.0 - 12.5	3.6	3.1	JB66966-10A	JB66966A	05/14/2014	Remaining	N	Y	0.31	J-	15.3		11.5		< 0.42	U	22.8		
2+01	3R	10W-H43A	15.6	10W-H43A-12.5-13.0	12.5 - 13.0	3.1	2.6	JB66966-11A	JB66966A	05/14/2014	Remaining	N	Y	0.35	J-	15.2		10.7		< 0.41	U	23.9		
2+02	124R	10W-L43A	11.6	10W-L43A-2.5-3.0	2.5 - 3.0	9.1	8.6	JB66880-17A	JB66880A	05/13/2014	Removed	N	Y	2.7	J-	17.0	J	18.2		< 0.50	U	18.0		S2
2+02	124R	10W-L43A	11.6	10W-L43A-4.5-5.0	4.5 - 5.0	7.1	6.6	JB66880-18A	JB66880A	05/13/2014	Removed	N	Y	2.6	J-	32.3	J	19.3						

Table 5-2
CCPW Metals Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

														Analyte CAS RN Units RDCSRS RDCSRS-GAG NRDCSRS	ANTIMONY 7440-36-0 mg/kg 31 NA 450		CHROMIUM 7440-47-3 mg/kg 120000 NA NA		NICKEL 7440-02-0 mg/kg 1600 NA 23000		THALLIUM 7440-28-0 mg/kg NA NA		VANADIUM 7440-62-2 mg/kg NA 390 1100		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G20)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Specific Notes	
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-17.0	17.0 - 17.5	-1.4	-1.9	JB3512-8	JB3512	04/05/2012	Remaining	N	Y	< 0.17	UJ	20.1		13.0		< 0.24	U	31.6			
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-19.0	19.0 - 19.5	-3.4	-3.9	JB3512-9	JB3512	04/05/2012	Remaining	N	Y	< 0.22	UJ	27.6		23.1		< 0.31	U	35.6			
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-21.0	21.0 - 21.5	-5.4	-5.9	JB3512-10	JB3512	04/05/2012	Remaining	N	Y	< 0.24	UJ	36.7		30.2		< 0.34	U	45.2			
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-23.0	23.0 - 23.5	-7.4	-7.9	JB3512-11	JB3512	04/05/2012	Remaining	N	Y	< 0.19	UJ	10.8		5.3		< 0.27	U	12.2			
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-23.0X	23.0 - 23.5	-7.4	-7.9	JB3512-12	JB3512	04/05/2012	Remaining	FD	Y	< 0.17	UJ	11.3		5.3		< 0.23	U	12.7			
2+10	222R	133-P3B-O43A-EX	11.3	133-P3B-O43A-EX-12.9-13.4	13.0 - 13.5	-1.7	-2.2	410-44444-1	410444441	06/22/2021	Remaining	N	Y	6.7	J	130	J	17	J	0.23	J	33	J		
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-0.5-1.0	0.5 - 1.0	15.1	14.6	410-20008-1	410200081	11/09/2020	Removed	N	Y	0.38	JB	39		10		0.075	J	25		S2	
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-2.0-2.5	2.0 - 2.5	13.6	13.1	410-20008-2	410200081	11/09/2020	Removed	N	Y	2.7		160		18		0.19		25		S2	
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-2.0-2.5X	2.0 - 2.5	13.6	13.1	410-20008-3	410200081	11/09/2020	Removed	FD	Y	2.1		110		18		0.17	J	27		S2	
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-4.0-4.5	4.0 - 4.5	11.6	11.1	410-20008-4	410200081	11/09/2020	Removed	N	Y	4.4		8.6		14		0.13	J	12		S2	
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-6.0-6.5	6.0 - 6.5	9.6	9.1	410-20008-5	410200081	11/09/2020	Removed	N	Y	0.47	JB	13		10		< 0.068	U	16		S2	
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-8.0-8.5	8.0 - 8.5	7.6	7.1	410-20008-6	410200081	11/09/2020	Removed	N	Y	0.56	JB	13		11		0.071	J	18		S2	
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-10.0-10.5	10.0 - 10.5	5.6	5.1	410-20008-7	410200081	11/09/2020	Removed	N	Y	1.3		17		11		0.099	J	16		S2	
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-12.0-12.5	12.0 - 12.5	3.6	3.1	410-20008-8	410200081	11/09/2020	Removed	N	Y	0.78		22		13		0.092	J	19		S2	
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-14.0-14.5	14.0 - 14.5	1.6	1.1	410-20008-9	410200081	11/09/2020	Remaining	N	Y	3.9	J	82	J	28	J	0.38	J	39	J		
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-16.0-16.5	16.0 - 16.5	-0.4	-0.9	410-20008-10	410200081	11/09/2020	Remaining	N	Y	0.53	JB	13		10		0.075	J	14			
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-18.0-18.5	18.0 - 18.5	-2.4	-2.9	410-20008-11	410200081	11/09/2020	Remaining	N	Y	< 0.28	U	16		14		0.14	J	25			
2+21	48R	P3BS-PDI-2+20-50R	15.6	P3BS-PDI-2+20-50R-18.5-19.0	18.5 - 19.0	-2.9	-3.4	410-20008-12	410200081	11/09/2020	Remaining	N	Y	< 0.35	U	28		23		0.15	J	39			
2+41	247R	133-UST-EX-SOUTH	11.6	133-UST-EX-SOUTH-9.6-10.1	9.6 - 10.1	2.0	1.5	410-44934-1	410449341	06/24/2021	Remaining	N	Y	< 1.6	U	200		15		< 1.2	U	27			
2+41	247R	133-UST-EX-SOUTH	11.6	133-UST-EX-SOUTH-9.6-10.1X	9.6 - 10.1	2.0	1.5	410-44934-4	410449341	06/24/2021	Remaining	FD	Y	< 1.3	U	270		18		< 1.0	U	25			
2+46	245R	133-UST-EX-CENTRAL	11.5	133-UST-EX-CENTRAL-9-9.5	9.0 - 9.5	2.5	2.0	410-44934-2	410449341	06/24/2021	Remaining	N	Y	1.6	J	240	J	19	J	< 1.2	U	17	J		
2+50	221R	133-B21	11.8	PPG-133-B21E 12.4-13.4 794155	12.4 - 13.4	-0.6	-1.6	794155	A963	12/15/2006	Remaining	N	Y	< 2.4	UJ	122	J	23		< 1.2	U	40			
2+50	221R	133-B21	11.8	PPG-133-B21ED 12.4-13.4 794156	12.4 - 13.4	-0.6	-1.6	794156	A963	12/15/2006	Remaining	FD	Y	< 2.5	UJ	90	J	23.1		< 1.2	U	43.8			
2+50	221R	133-B21	11.8	PPG-133-B21F 16.5-17.0 794157	16.5 - 17.0	-4.7	-5.2	794157	A963	12/15/2006	Remaining	N	Y	< 1.7	UJ	49.7	J	26.4		< 1.7	U	38.5			
2+50	221R	133-B21	11.8	PPG-133-B21G 20.5-21.0 794158	20.5 - 21.0	-8.7	-9.2	794158	A963	12/15/2006	Remaining	N	Y	< 1.9	UJ	35.9	J	24.8		< 1.9	U	37			
2+50	221R	133-B21	11.8	PPG-133-B21H 22.0-22.5 794159	22.0 - 22.5	-10.2	-10.7	794159	A963	12/15/2006	Remaining	N	Y	< 1.3	UJ	15.5		14.4		< 1.2	U	18.7			
2+51	244R	133-UST-EX-NORTH	11.7	133-UST-EX-NORTH-8.5-9	8.5 - 9.0	3.2	2.7	410-44934-3	410449341	06/24/2021	Remaining	N	Y	4.0	J	3300		35		< 1.4	U	44			
2+60	1R	10W-H41A	15.5	10W-H41A-2.5-3.0	2.5 - 3.0	13.0	12.5	JB67098-16A	JB67098A	05/15/2014	Remaining	N	Y	0.53	J	13.0		8.1		< 0.48	U	20.3			
2+60	1R	10W-H41A	15.5	10W-H41A-6.5-7.0	6.5 - 7.0	9.0	8.5	JB67098-18A	JB67098A	05/15/2014	Remaining	N	Y	3.2		14.1		9.5		0.60	J	12.0			
2+60	1R	10W-H41A	15.5	10W-H41A-8.5-9.0	8.5 - 9.0	7.0	6.5	JB67098-19A	JB67098A	05/15/2014	Remaining	N	Y	1.3	J	27.9		16.4		0.81	J	24.9			
2+60	1R	10W-H41A	15.5	10W-H41A-10.5-11.0	10.5 - 11.0	5.0	4.5	JB67098-20A	JB67098A	05/15/2014	Remaining	N	Y	1.7	J	15.6		11.1		< 0.41	U	19.0			
2+60	1R	10W-H41A	15.5	10W-H41A-12.8-13.3	12.8 - 13.3	2.7	2.2	JB67098-22A	JB67098A	05/15/2014	Remaining	N	Y	< 0.31	U	10.7		8.3		< 0.47	U	16.1			
2+61	123R	10W-L41A	15.1	10W-L41A-6.5-7.0	6.5 - 7.0	8.6	8.1	JB67379-17A	JB67379A	05/20/2014	Remaining	N	Y	3.3		43.2		20.5		< 0.41	U	24.7			
2+61	123R	10W-L41A	15.1	10W-L41A-7.0-7.5	7.0 - 7.5	8.1	7.6	JB67379-18A	JB																

Table 5-2
CCPW Metals Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

Analyte CAS RN Units RDCSRS RDCSRS-GAG NRDCSRS														ANTIMONY 7440-36-0 mg/kg 31 NA 450	CHROMIUM 7440-47-3 mg/kg 120000 NA NA	NICKEL 7440-02-0 mg/kg 1600 NA 23000	THALLIUM 7440-28-0 mg/kg NA NA	VANADIUM 7440-62-2 mg/kg NA 390 1100					
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G20)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Specific Notes	
2+94	21L	TWA-10	15.1	TWA-B010-15.0	15.0 - 15.5	0.1	-0.4	JB3579-7	JB3579	04/05/2012	Remaining	N	Y	< 0.23	UJ	26.2		19.1		< 0.32	U	39.4	
2+94	21L	TWA-10	15.1	TWA-B010-17.0	17.0 - 17.5	-1.9	-2.4	JB3579-8	JB3579	04/05/2012	Remaining	N	Y	< 0.30	UJ	26.1		19.3		< 0.42	U	37.9	
2+94	21L	TWA-10	15.1	TWA-B010-18.0	18.0 - 18.5	-2.9	-3.4	JB3579-9	JB3579	04/05/2012	Remaining	N	Y	0.60	J	35.8		30.8		< 0.38	U	43.5	
2+94	21L	TWA-10	15.1	TWA-B010-20.0	20.0 - 20.5	-4.9	-5.4	JB3579-10	JB3579	04/05/2012	Remaining	N	Y	< 0.19	UJ	17.7		8.7		< 0.26	U	24.5	
2+94	21L	TWA-10	15.1	TWA-B010-22.0	22.0 - 22.5	-6.9	-7.4	JB3579-11	JB3579	04/05/2012	Remaining	N	Y	< 0.17	UJ	15.5		9.1		0.45	J	21.2	
3+00	192R	133-P3B-N40A	10.9	133-P3B-N40A-10.5-11.0	10.5 - 11.0	0.4	-0.1	JB55750-2A	JB55750A	12/16/2013	Remaining	N	Y	1.4	J	311		39.6		< 0.29	U	46.0	
3+00	192R	133-P3B-N40A	10.9	133-P3B-N40A-12.5-13.0	12.5 - 13.0	-1.6	-2.1	JB55750-3A	JB55750A	12/16/2013	Remaining	N	Y	0.71	J	30.0		10.4		< 0.29	U	17.4	
3+00	192R	133-P3B-N40A	10.9	133-P3B-N40A-14.5-15.0	14.5 - 15.0	-3.6	-4.1	JB55750-4A	JB55750A	12/16/2013	Remaining	N	Y	0.60	J	26.6		13.6		< 0.29	U	29.5	
3+00	192R	133-P3B-N40A	10.9	133-P3B-N40A-14.5-15.0X	14.5 - 15.0	-3.6	-4.1	JB55750-5A	JB55750A	12/16/2013	Remaining	FD	Y	0.47	J	24.5		13.5		< 0.29	U	30.4	
3+00	192R	133-P3B-N40A	10.9	133-P3B-N40A-15.0-15.5	15.0 - 15.5	-4.1	-4.6	JB55750-6A	JB55750A	12/16/2013	Remaining	N	Y	< 0.24	UJ	36.6		27.3		< 0.89	U	41.1	
3+03	271R	133-B19	11.9	PPG-133-B19F 13.1-13.6 794163	13.1 - 13.6	-1.2	-1.7	794163	A963	12/15/2006	Remaining	N	Y	< 2.8	UJ	22	J	10.7		< 1.4	U	29.9	
3+03	271R	133-B19	11.9	PPG-133-B19G 17.0-17.5 794164	17.0 - 17.5	-5.1	-5.6	794164	A963	12/15/2006	Remaining	N	Y	< 1.8	UJ	35.2	J	27		< 1.8	U	39.4	
3+03	271R	133-B19	11.9	PPG-133-B19H 21.0-21.5 794165	21.0 - 21.5	-9.1	-9.6	794165	A963	12/15/2006	Remaining	N	Y	< 1.8	UJ	59.7	J	27.5		< 1.8	U	36.1	
3+03	271R	133-B19	11.9	PPG-133-B19I 23.0-23.5 794166	23.0 - 23.5	-11.1	-11.6	794166	A963	12/15/2006	Remaining	N	Y	< 1.2	UJ	13.3		11.8		< 1.2	U	12.6	
3+07	174R	133-B22	12.3	PPG-133-B22E 12.0-12.5	12.0 - 12.5	0.3	-0.2	793665	A871	12/14/2006	Remaining	N	Y	2	J	361		20.4		< 1.6	U	31	
3+07	174R	133-B22	12.3	PPG-133-B22F 13.2-13.7	13.2 - 13.7	-0.9	-1.4	793666	A871	12/14/2006	Remaining	N	Y	< 1.9	UJ	29.9		16.7		< 1.5	U	36.4	
3+07	174R	133-B22	12.3	PPG-133-B22G 17.0-17.5 794502	17.0 - 17.5	-4.7	-5.2	794502	B013	12/18/2006	Remaining	N	Y	< 2.9	UJ	39.1	J	32.4		< 1.4	U	50.7	
3+07	174R	133-B22	12.3	PPG-133-B22H 21.7-22.3 794503	21.7 - 22.3	-9.4	-10.0	794503	B013	12/18/2006	Remaining	N	Y	< 1.2	UJ	58.8	J	11.3		< 1.2	U	22.1	
3+20	61R	10W-J39A	15.2	10W-J39A-6.5-7.0	6.5 - 7.0	8.7	8.2	JB67196-18A	JB67196A	05/16/2014	Remaining	N	Y	2.4	J	15.6		14.2		< 0.82	U	29.7	
3+20	61R	10W-J39A	15.2	10W-J39A-7.0-7.5	7.0 - 7.5	8.2	7.7	JB67196-19A	JB67196A	05/16/2014	Remaining	N	Y	3.0		13.4		17.2		< 0.41	U	23.2	
3+20	61R	10W-J39A	15.2	10W-J39A-8.5-9.0	8.5 - 9.0	6.7	6.2	JB67196-20A	JB67196A	05/16/2014	Remaining	N	Y	0.70	J	12.7		16.3		0.65	J	32.8	
3+20	61R	10W-J39A	15.2	10W-J39A-14.5-15.0	14.5 - 15.0	0.7	0.2	JB67196-23A	JB67196A	05/16/2014	Remaining	N	Y	0.66	J	15.9		12.4		< 0.41	U	21.8	
3+20	61R	10W-J39A	15.2	10W-J39A-18.5-19.0	18.5 - 19.0	-3.3	-3.8	JB67196-25A	JB67196A	05/16/2014	Remaining	N	Y	< 0.27	U	30.0		21.4		< 0.41	U	44.4	
3+20	61R	10W-J39A	15.2	10W-J39A-19.0-19.5	19.0 - 19.5	-3.8	-4.3	JB67196-26A	JB67196A	05/16/2014	Remaining	N	Y	< 0.27	UJ	24.8	J	8.5	J	< 0.42	UJ	32.1	J
3+21	1R	10W-H39A	15.6	10W-H39A-3.0-3.5	3.0 - 3.5	12.6	12.1	JB67098-4A	JB67098A	05/15/2014	Remaining	N	Y	0.95	J	14.4		20.5		< 0.40	U	21.7	
3+21	1R	10W-H39A	15.6	10W-H39A-5.0-5.5	5.0 - 5.5	10.6	10.1	JB67098-5A	JB67098A	05/15/2014	Remaining	N	Y	3.4	J	81.6		11.8		< 4.2	U	22.6	
3+21	1R	10W-H39A	15.6	10W-H39A-7.0-7.5	7.0 - 7.5	8.6	8.1	JB67098-6A	JB67098A	05/15/2014	Remaining	N	Y	2.3		30.6		15.4		0.69	J	24.8	
3+21	1R	10W-H39A	15.6	10W-H39A-8.0-8.5	8.0 - 8.5	7.6	7.1	JB67098-7A	JB67098A	05/15/2014	Remaining	N	Y	0.63	J	14.9		16.7		0.73	J	27.1	
3+21	1R	10W-H39A	15.6	10W-H39A-9.0-9.5	9.0 - 9.5	6.6	6.1	JB67098-8A	JB67098A	05/15/2014	Remaining	N	Y	4.7	J	36.0	J	17.8		< 0.40	U	30.7	
3+21	1R	10W-H39A	15.6	10W-H39A-9.0-9.5X	9.0 - 9.5	6.6	6.1	JB67098-9A	JB67098A	05/15/2014	Remaining	FD	Y	2.8	J	18.6	J	16.5		0.68	J	30.0	
3+21	1R	10W-H39A	15.6	10W-H39A-11.0-11.5	11.0 - 11.5	4.6	4.1	JB67098-10A	JB67098A	05/15/2014	Remaining	N	Y	0.51	J	13.8		14.1		< 0.41	U	21.9	
3+21	1R	10W-H39A	15.6	10W-H39A-12.0-12.5	12.0 - 12.5	3.6	3.1	JB67098-11A	JB67098A	05/15/2014	Remaining	N	Y	0.36	J	15.1		11.0		< 0.48	U	22.8	
3+21	1R	10W-H39A	15.6	10W-H39A-12.0-12.5X	12.0 - 12.5	3.6	3.1	JB67098-12A	JB67098A	05/15/2014	Remaining	FD	Y	0.42	J	13.9		9.0		< 0.96	U	27.8	
3+21	1R	10W-H39A	15.6	10W-H39A-12.5-13.0	12.5 - 13.0	3.1	2.6	JB67098-13A	JB67098A	05/15/2014	Remaining	N	Y	0.48	J-	17.3		14.5		< 0.42	U	27.6	
3+22	124R	10W-L39A	15.0	10W-L39A-12.5-13.0	12.5 - 13.0	2.5	2.0	JB67304-16A	JB67304A	05/19/2014	Remaining	N	Y	3.9		31.9		20.4		0.98	J	20.7	
3+22	124R	10W-L39A	15.0	10W-L39A-18.5-19.0	18.5 - 19.0	-3.5	-4.0	JB67304-19A	JB67304A	05/19/2014	Remaining	N	Y	17.0		36.1		34.4		< 1.1	U	20.1	
3+22	124R	10W-L39A	15.0	10W-L39A-20.5-21.0	20.5 - 21.0	-5.5	-6.0	JB67304-20A	JB67304A	05/19/2014	Remaining	N	Y	4.8		2330		35.6		0.96	J	29.1	
3+22	124R	10W-L39A	15.0	10W-L39A-22.0-22.5	22.0 - 22.5	-7.0	-7.5	JB67304-21A	JB67304A	05/19/2014	Remaining	N	Y	2.5	J	899		25.8		0.89	J	27.1	
3+22	124R	10W-L39A	15.0	10W-L39A-22.5-23.0	22.5 - 23.0	-7.5	-8.0	JB67304-22A	JB67304A	05/19/2014	Remaining	N	Y	1.0	J	249	J	18.5	J	< 6.5	UJ	30.5	J
3+38	54L	10W-F39A	17.8	10W-F39A-5.0-5.5	5.0 - 5.5	12.8	12.3	JB67999-18A	JB67999A	05/29/2014	Remaining	N	Y	0.85	J	206		28.7		< 0.54	U	25.7	
3+38	54L	10W-F39A	17.8	10W-F39A-7.0-7.5	7.0 - 7.5	10.8	10.3	JB67999-19A	JB67999A	05/29/2014	Remaining	N	Y	0.50	J	24.2		30.2		1.0	J	27.5	
3+38	54L	10W-F39A	17.8	10W-F39A-9.0-9.5	9.0 - 9.5	8.8	8.3	JB67999-20A	JB67999A	05/29/2014	Remaining	N	Y	3.1		20.9		38.5		< 0.59	U	38.3	
3+38	54L	10W-F39A	17.8	10W-F39A-9.5-10.0	9.5 - 10.0	8.3	7.8	JB67999-21A	JB67999A	05/29/2014	Remaining	N	Y	< 0.41	U	28.9		40.1		< 0.62	U	38.5	
3+38	54L	10W-F39A	17.8	10W-F39A-11.0-11.5	11.0 - 11.5	6.8	6.3	JB67999-22A	JB67999A	05/29/2014	Remaining	N	Y	< 0.32	U	14.5		9.8		< 0.49	U	20.4	
3+38	54L	10W-F39A	17.8	10W-F39A-11.7-12.2	11.7 - 12.2	6.1	5.6	JB67999-23A	JB67999A	05/29/2014	Remaining	N	Y	< 0.40	U	15.3		15.3		< 0.61	U	28.5	
3+39	115L	10W-D39A	18.2	10W-D39A-3.5-4.0	3.5 - 4.0	14.7	14.2	JB67999-7A	JB67999A	05/29/2014	Remaining	N	Y	< 0.35	U	12.9		19.9		< 0.53	U	23.5	
3+39	115L	10W-D39A	18.2	10W-D39A-5.0-5.5	5.0 - 5.5	13.2	12.7	JB67999-8A	JB67999A	05/29/2014	Remaining	N	Y	< 0.30	U	19.7		14.8		0.49	J	24.0	
3+39	115L	10W-D39A	18.2	10W-D39A-7.0-7.5	7.0 - 7.5	11.2	10.7	JB67999-9A	JB67999A	05/29/2014	Remaining	N	Y	< 0.31	U	17.7		12.1		< 0.46	U	25.1	
3+39	115L	10W-D39A	18.2	10W-D39A-9.5-10.0	9.5 - 10.0	8.7	8.2	JB67999-11A	JB67999A	05/29/2014	Remaining	N	Y	< 0.29	UJ	16.4		11.3		0.47	J	22.4	
3+39	115L	10W-D39A	18.2	10W-D39A-11.0-11.5	11.0 - 11.5	7.2	6.7	JB67999-12A	JB67999A	05/29/2014	Remaining	N	Y	< 0.34	U	14.9		11.8		< 0.52	U	25.3	
3+39	115L	10W-D39A	18.2	10W-D39A-13.0-13.5	13.0 - 13.5	5.2	4.7	JB67999-13A	JB67999A	05/29/2014	Remaining	N	Y	< 0.33	U	19.7		15.7		0.50	J	25.6	
3+39	115L	10W-D39A	18.2	10W-D39A-14.5-15.0	14.5 - 15.0	3.7	3.2	JB67999-14A	JB														

Table 5-2
CCPW Metals Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

															Analyte CAS RN Units RDCSRS RDCSRS-GAG NRDCSRS	ANTIMONY 7440-36-0 mg/kg 31 NA 450	CHROMIUM 7440-47-3 mg/kg 120000 NA NA	NICKEL 7440-02-0 mg/kg 1600 NA 23000	THALLIUM 7440-28-0 mg/kg NA NA	VANADIUM 7440-62-2 mg/kg NA 390 1100				
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G20)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Specific Notes
3+70	146R	EF-25	14.9	EF-B25-17.5	17.5 - 18.0	-2.6	-3.1	460-25481-27	460254811	04/18/2011	Remaining	N	Y	< 1.6	UJ	21.4		15.6		< 1.7	U	31.9		
3+70	146R	EF-25	14.9	EF-B25-21.5	21.5 - 22.0	-6.6	-7.1	460-25481-28	460254811	04/18/2011	Remaining	N	Y	< 2.1	UJ	10.3		9.8	J	< 2.3	U	16.6	J	
3+71	63R	10W-J38A	15.2	10W-J38A-6.5-7.0	6.5 - 7.0	8.7	8.2	JB67196-5A	JB67196A	05/16/2014	Remaining	N	Y	1.6	J	14.2		18.4		< 0.51	U	27.0		
3+71	63R	10W-J38A	15.2	10W-J38A-7.5-8.0	7.5 - 8.0	7.7	7.2	JB67196-6A	JB67196A	05/16/2014	Remaining	N	Y	0.57	J	19.4		22.5		< 0.41	U	29.4		
3+71	63R	10W-J38A	15.2	10W-J38A-8.5-9.0	8.5 - 9.0	6.7	6.2	JB67196-7A	JB67196A	05/16/2014	Remaining	N	Y	1.6	J	9.7		13.7		< 0.41	U	17.8		
3+71	63R	10W-J38A	15.2	10W-J38A-10.5-11.0	10.5 - 11.0	4.7	4.2	JB67196-8A	JB67196A	05/16/2014	Remaining	N	Y	0.63	J	17.0		17.5		0.47	J	21.2		
3+71	63R	10W-J38A	15.2	10W-J38A-12.5-13.0	12.5 - 13.0	2.7	2.2	JB67196-9A	JB67196A	05/16/2014	Remaining	N	Y	< 0.27	U	14.5		13.7		< 0.41	U	51.4		
3+71	63R	10W-J38A	15.2	10W-J38A-16.5-17.0	16.5 - 17.0	-1.3	-1.8	JB67196-12A	JB67196A	05/16/2014	Remaining	N	Y	0.40	J	28.2		12.6		0.41	J	28.9		
3+71	63R	10W-J38A	15.2	10W-J38A-17.0-17.5	17.0 - 17.5	-1.8	-2.3	JB67196-13A	JB67196A	05/16/2014	Remaining	N	Y	< 0.28	UJ	25.2		19.4		< 0.42	U	37.3		
3+72	193R	133-B23	12.3	PPG-133-B23F 17.5-18.0	17.5 - 18.0	-5.2	-5.7	793659	A871	12/14/2006	Remaining	N	Y	< 3.6	UJ	20.9		11.7		< 1.4	U	27.6		
3+72	193R	133-B23	12.3	PPG-133-B23G 21.2-21.7	21.2 - 21.7	-8.9	-9.4	793660	A871	12/14/2006	Remaining	N	Y	< 1.8	UJ	26.4		16.2		< 1.5	U	23.6		
3+72	193R	133-B23	12.3	PPG-133-B23H 24.0-24.5	24.0 - 24.5	-11.7	-12.2	793661	A871	12/14/2006	Remaining	N	Y	< 1.2	UJ	16.1		9.6		< 1.2	U	22.9		
3+80	3R	10W-H37A	15.5	10W-H37A-2.5-3.0	2.5 - 3.0	13.0	12.5	JB67912-17A	JB67912A	05/28/2014	Remaining	N	Y	0.35	J	17.3		14.2		< 0.46	U	25.7		
3+80	3R	10W-H37A	15.5	10W-H37A-2.5-3.0X	2.5 - 3.0	13.0	12.5	JB67912-18A	JB67912A	05/28/2014	Remaining	FD	Y	1.1	J	17.4		14.1		< 0.45	U	25.8		
3+80	3R	10W-H37A	15.5	10W-H37A-4.5-5.0	4.5 - 5.0	11.0	10.5	JB67912-19A	JB67912A	05/28/2014	Remaining	N	Y	0.66	J	19.2		18.4		< 0.41	U	25.7		
3+80	3R	10W-H37A	15.5	10W-H37A-5.5-6.0	5.5 - 6.0	10.0	9.5	JB67912-20A	JB67912A	05/28/2014	Remaining	N	Y	1.5	J	14.5		25.0		< 0.40	U	29.2		
3+80	3R	10W-H37A	15.5	10W-H37A-6.5-7.0	6.5 - 7.0	9.0	8.5	JB67912-21A	JB67912A	05/28/2014	Remaining	N	Y	0.78	J	15.9		70.4		< 0.40	U	23.6		
3+80	3R	10W-H37A	15.5	10W-H37A-8.5-9.0	8.5 - 9.0	7.0	6.5	JB67912-22A	JB67912A	05/28/2014	Remaining	N	Y	1.3	J	11.7		17.1		< 0.41	U	23.9		
3+80	3R	10W-H37A	15.5	10W-H37A-10.5-11.0	10.5 - 11.0	5.0	4.5	JB67912-23A	JB67912A	05/28/2014	Remaining	N	Y	1.3	J	17.6		12.6		< 0.41	U	23.5		
3+80	3R	10W-H37A	15.5	10W-H37A-11.5-12.0	11.5 - 12.0	4.0	3.5	JB67912-24A	JB67912A	05/28/2014	Remaining	N	Y	2.3		21.1		14.5		< 0.42	U	21.9		
3+80	3R	10W-H37A	15.5	10W-H37A-12.0-12.5	12.0 - 12.5	3.5	3.0	JB67912-25A	JB67912A	05/28/2014	Remaining	N	Y	0.77	J-	10.8		7.1		< 0.40	U	13.7		
3+82	126R	10W-L37A	15.0	10W-L37A-8.5-9.0	8.5 - 9.0	6.5	6.0	JB67495-21A	JB67495A	05/21/2014	Removed	N	Y	1.7	J	850		24.5		< 0.42	U	26.1		S1
3+82	126R	10W-L37A	15.0	10W-L37A-10.5-11.0	10.5 - 11.0	4.5	4.0	JB67495-22A	JB67495A	05/21/2014	Remaining	N	Y	2.5		33.7		18.1		< 0.40	U	18.1		
3+82	126R	10W-L37A	15.0	10W-L37A-16.5-17.0	16.5 - 17.0	-1.5	-2.0	JB67495-25A	JB67495A	05/21/2014	Remaining	N	Y	3.5		28.2		19.8		< 0.42	U	20.0		
3+82	126R	10W-L37A	15.0	10W-L37A-18.5-19.0	18.5 - 19.0	-3.5	-4.0	JB67495-26A	JB67495A	05/21/2014	Remaining	N	Y	0.56	J	18.3		14.5		< 0.40	U	25.2		
3+82	126R	10W-L37A	15.0	10W-L37A-20.0-20.5	20.0 - 20.5	-5.0	-5.5	JB67495-27A	JB67495A	05/21/2014	Remaining	N	Y	0.57	J	35.9		12.9		< 0.41	U	25.8		
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-1.0	1.0 - 1.5	14.1	13.6	JB3648-1	JB3648	04/06/2012	Remaining	N	Y	0.81	J	69.5		68.5		< 0.25	U	26.0	J	
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-3.0	3.0 - 3.5	12.1	11.6	JB3648-2	JB3648	04/06/2012	Remaining	N	Y	2.5	J	22.5		18.2		0.78	J	20.9	J	
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-5.0	5.0 - 5.5	10.1	9.6	JB3648-3	JB3648	04/06/2012	Remaining	N	Y	2.0	J	26.4		14.4		< 0.25	U	17.7	J	
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-6.0	6.0 - 6.5	9.1	8.6	JB3648-4	JB3648	04/06/2012	Remaining	N	Y	< 0.22	UJ	12.1		16.3		< 0.31	U	24.3	J	
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-10.0	10.0 - 10.5	5.1	4.6	JB3648-5	JB3648	04/06/2012	Remaining	N	Y	< 0.18	UJ	16.7		12.0		0.27	J	22.9	J	
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-12.0	12.0 - 12.5	3.1	2.6	JB3648-6	JB3648	04/06/2012	Remaining	N	Y	0.25	J	11.8		7.2		< 0.26	U	15.1	J	
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-15.0	15.0 - 15.5	0.1	-0.4	JB3648-7	JB3648	04/06/2012	Remaining	N	Y	< 0.18	UJ	14.2		9.7		< 0.25	U	19.7	J	
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-17.0	17.0 - 17.5	-1.9	-2.4	JB3648-8	JB3648	04/06/2012	Remaining	N	Y	< 0.24	UJ	24.2		16.7		< 0.33	U	29.3	J	
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-19.0	19.0 - 19.5	-3.9	-4.4	JB3648-9	JB3648	04/06/2012	Remaining	N	Y	< 0.26	UJ	38.0		25.5		< 0.36	U	55.9	J	
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-21.0	21.0 - 21.5	-5.9	-6.4	JB3648-10	JB3648	04/06/2012	Remaining	N	Y	< 0.19	UJ	19.2		13.9		< 0.26	U	30.1	J	
3+86	20L	TWA-9/ICO-13	15.1	ICO-B013-23.0	23.0 - 23.5	-7.9	-8.4	JB3648-11	JB3648	04/06/2012	Remaining	N	Y	0.21	J	15.5		12.7		0.37	J	21.6	J	
3+87	50R	TWA-5	15.2	TWA-B005-6.0	6.0 - 6.5	9.2	8.7	JB3648-23	JB3648	04/06/2012	Remaining	N	Y	0.81	JB	130		18.7		< 0.25	U	25.9	J	
3+87	50R	TWA-5	15.2	TWA-B005-10.0	10.0 - 10.5	5.2	4.7	JB3648-24	JB3648	04/06/2012	Remaining	N	Y	0.57	JB	42.4		10.5		< 0.24	U	18.0	J	
3+87	50R	TWA-5	15.2	TWA-B005-15.0	15.0 - 15.5	0.2	-0.3	JB3648-25	JB3648	04/06/2012	Remaining	N	Y	0.97	J	21.3		12.9		< 0.27	U	20.5	J	
3+87	50R	TWA-5	15.2	TWA-B005-17.0	17.0 - 17.5	-1.8	-2.3	JB3648-26	JB3648	04/06/2012	Remaining	N	Y	< 0.39	UJ	60.2	J	39.2	J	< 0.57	UJ	89.0	J	
3+87	50R	TWA-5	15.2	TWA-B005-18.0	18.0 - 18.5	-2.8	-3.3	JB3648-27	JB3648	04/06/2012	Remaining	N	Y	< 0.19	UJ	9.5		11.7		< 0.28	U	12.7	J	
3+87	50R	TWA-5	15.2	TWA-B005-20.0	20.0 - 20.5	-4.8	-5.3	JB3648-28	JB3648	04/06/2012	Remaining	N	Y	< 0.19	UJ	20.6		10.0		< 0.26	U	25.4	J	
3+87	50R	TWA-5	15.2	TWA-B005-22.0	22.0 - 22.5	-6.8	-7.3	JB3648-29	JB3648	04/06/2012	Remaining	N	Y	< 0.19	UJ	24.4		14.0		0.43	J	37.5	J	
3+90	222R	133-P3B-O37A	11.5	133-P3B-O37A-12.5-13.0	12.5 - 13.0	-1.1	-1.6	JB41590-19A	JB41590A	07/09/2013	Remaining	N	Y	< 0.28	UJ	3150	J	21.9	J	0.59	J	29.8	J	
3+90	222R	133-P3B-O37A	11.5	133-P3B-O37A-14.5-15.0	14.5 - 15.0	-3.1	-3.6	JB41590-18A	JB41590A	07/09/2013	Remaining	N	Y	0.51	J	42.0	J	4.2	J	< 0.32	U	8.8	J	
3+90	222R	133-P3B-O37A	11.5	133-P3B-O37A-16.5-17.0	16.5 - 17.0	-5.1	-5.6	JB41590-17A	JB41590A	07/09/2013	Remaining	N	Y	0.64	J	36.4	J	13.2	J	< 0.37	U	21.9	J	
3+90	222R	133-P3B-O37A	11.5	133-P3B-O37A-18.0-18.5	18.0 - 18.5	-6.6	-7.1	JB41590-16A	JB41590A	07/09/2013	Remaining	N	Y	0.35	J	44.0	J	5.2	J	< 0.36	U	10.2	J	
3+90	222R	133-P3B-O37A	11.5	133-P3B-O37A-18.5-19.0	18.5 - 19.0	-7.1	-7.6	JB41590-15A	JB41590A	07/09/2013	Remaining	N	Y	< 0.57	UJ	31.7	J	19.3	J	< 0.70	UJ	37.0	J	
3+90	62R	10W-P3B-J37A-SW-A	15.2	10W-P3B-J37A-SW-A-5.1-5.6	5.2 - 5.7	10.0	9.5	410-59864-2	410598641	10/20/2021	Remaining	N	Y	0.82	J	55		12	J	0.085	J	29		
3+90	65R	10W-P3B-J37A-SW-B	15.2	10W-P3B-J37A-SW-B-7.1-7.6	7.1 - 7.6	8.1	7.6	410-59864-3	410598641	10/20/2021	Remaining	N	Y	0.44	J	53		8.4	J	0				

Table 5-2
CCPW Metals Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

														Analyte CAS RN Units RDCSRS RDCSRS-GAG NRDCSRS	ANTIMONY 7440-36-0 mg/kg 31 NA 450		CHROMIUM 7440-47-3 mg/kg 120000 NA NA		NICKEL 7440-02-0 mg/kg 1600 NA 23000		THALLIUM 7440-28-0 mg/kg NA NA		VANADIUM 7440-62-2 mg/kg NA 390 1100		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G20)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Specific Notes	
4+39	64R	10W-J35A	15.1	10W-J35A-18.5-19.0	18.5 - 19.0	-3.4	-3.9	JB67595-24A	JB67595A	05/22/2014	Remaining	N	Y	< 0.27	UJ	21.4		17.8		< 0.41	U	32.5			
4+39	64R	10W-J35A	15.1	10W-J35A-19.0-19.5	19.0 - 19.5	-3.9	-4.4	JB67595-25A	JB67595A	05/22/2014	Remaining	N	Y	< 0.27	U	19.5		14.1		< 0.41	U	27.5			
4+45	250R	137-B10	15.3	137B10J 23.5-24.2 802719	23.5 - 24.2	-8.2	-8.9	802719	C290	01/25/2007	Remaining	N	Y	< 2.8	U	93.4		13		< 1.4	U	21.4			
4+45	250R	137-B10	15.3	137B10K 24.8-25.2 802720	24.8 - 25.2	-9.5	-9.9	802720	C290	01/25/2007	Remaining	N	Y	< 1.3	UJ	13.8	J	11	J	< 1.3	U	14.2			
4+49	74R	10W-K35A	14.8	10W-K35A-0.5-1.0	0.5 - 1.0	14.3	13.8	JD288-1	JD288	12/11/2019	Removed	N	Y	< 0.49	UJ	26.4		7.7		< 0.70	U	21.7		S2	
4+49	74R	10W-K35A	14.8	10W-K35A-2.0-2.5	2.0 - 2.5	12.8	12.3	JD288-2	JD288	12/12/2019	Removed	N	Y	1.6	J-	256		52.2		< 0.68	U	51.0		S2	
4+49	74R	10W-K35A	14.8	10W-K35A-4.0-4.5	4.0 - 4.5	10.8	10.3	JD288-3	JD288	12/12/2019	Removed	N	Y	1.5	J-	272		28.3		< 0.71	U	33.9		S2	
4+49	74R	10W-K35A	14.8	10W-K35A-6.0-6.5	6.0 - 6.5	8.8	8.3	JD288-4	JD288	12/12/2019	Removed	N	Y	13.2	J-	224		46.2		0.92	J	32.8		S2	
4+49	74R	10W-K35A	14.8	10W-K35A-8.0-8.5	8.0 - 8.5	6.8	6.3	JD288-5	JD288	12/12/2019	Removed	N	Y	0.80	J-	112		15.7		0.84	J	29.8		S2	
4+49	74R	10W-K35A	14.8	10W-K35A-12.0-12.5	12.0 - 12.5	2.8	2.3	JD288-6	JD288	12/12/2019	Removed	N	Y	8.5	J-	181		36.3		1.9		36.9		S2	
4+49	74R	10W-K35A	14.8	10W-K35A-16.0-16.5	16.0 - 16.5	-1.2	-1.7	JD288-7	JD288	12/12/2019	Removed	N	Y	17.2	J-	83.5		15.7		< 0.85	U	21.7		S2	
4+49	74R	10W-K35A	14.8	10W-K35A-17.5-18.0	17.5 - 18.0	-2.7	-3.2	JD288-8	JD288	12/12/2019	Remaining	N	Y	15.5	J-	165		33.0		1.4		27.0			
4+49	74R	10W-K35A	14.8	10W-K35A-18.0-18.5	18.0 - 18.5	-3.2	-3.7	JD288-9	JD288	12/12/2019	Remaining	N	Y	1.7	J-	445		24.8		< 0.88	U	37.5			
4+50	103R	10W-P3B-K35A-EX	15.2	10W-P3B-K35A-EX-19.3-19.8	19.3 - 19.8	-4.1	-4.6	410-57210-1	410572101	09/30/2021	Remaining	N	Y	3.2	J	1200		31		0.63		33			
4+52	169R	137-B8	14.2	137B8G 17.1-17.5 802705	17.1 - 17.5	-2.9	-3.3	802705	C290	01/25/2007	Removed	N	Y	< 1.5	UJ	122	J	19.1		< 1.5	U	33.6		S1	
4+52	169R	137-B8	14.2	137B8H 22.1-22.4 802706	22.1 - 22.4	-7.9	-8.2	802706	C290	01/25/2007	Remaining	N	Y	< 3.4	UJ	347	J	22.7		< 1.7	UJ	31.8			
4+52	169R	137-B8	14.2	137B8I 24.9-25.2 802707	24.9 - 25.2	-10.7	-11.0	802707	C290	01/25/2007	Remaining	N	Y	< 1.4	UJ	84.1	J	12.8		< 2	U	14.9			
4+57	143R	EF-26	15.2	EF-B26-22.5	22.5 - 23.0	-7.3	-7.8	460-25481-21	460254811	04/18/2011	Remaining	N	Y	< 3.2	UJ	214		30.9		< 3.5	U	39.1			
4+76	51R	TWA-4	15.1	TWA-B004-6.0	6.0 - 6.5	9.1	8.6	JB3648-64	JB3648	04/06/2012	Remaining	N	Y	2.2	J	19.9	J	25.5		< 0.30	U	22.0	J		
4+76	51R	TWA-4	15.1	TWA-B004-10.0	10.0 - 10.5	5.1	4.6	JB3648-65	JB3648	04/06/2012	Remaining	N	Y	2.1	J	69.6	J	18.0		< 0.31	U	26.9	J		
4+76	51R	TWA-4	15.1	TWA-B004-15.0	15.0 - 15.5	0.1	-0.4	JB3648-66	JB3648	04/06/2012	Remaining	N	Y	< 0.18	UJ	16.4	J	11.5		< 0.25	U	25.0	J		
4+76	51R	TWA-4	15.1	TWA-B004-17.0	17.0 - 17.5	-1.9	-2.4	JB3648-67	JB3648	04/06/2012	Remaining	N	Y	< 0.28	UJ	31.7	J	23.5		< 0.40	U	49.2	J		
4+76	51R	TWA-4	15.1	TWA-B004-20.0	20.0 - 20.5	-4.9	-5.4	JB3648-68	JB3648	04/06/2012	Remaining	N	Y	< 0.52	UJ	12.3	J	10.7	J	< 0.73	UJ	18.3	J		
4+76	51R	TWA-4	15.1	TWA-B004-22.0	22.0 - 22.5	-6.9	-7.4	JB3648-69	JB3648	04/06/2012	Remaining	N	Y	< 0.20	UJ	24.8	J	15.4		< 0.28	U	34.3	J		
4+76	51R	TWA-4	15.1	TWA-B004-22.0X	22.0 - 22.5	-6.9	-7.4	JB3648-70	JB3648	04/06/2012	Remaining	FD	Y	< 0.18	UJ	18.5	J	14.1		< 0.25	U	21.0	J		
4+77	18L	TWA-8	15.5	TWA-B008-3.0	3.0 - 3.5	12.5	12.0	JB3648-73	JB3648	04/06/2012	Remaining	N	Y	0.82	J	13.8		20.4		< 0.30	U	22.0	J		
4+77	18L	TWA-8	15.5	TWA-B008-5.0	5.0 - 5.5	10.5	10.0	JB3648-74	JB3648	04/06/2012	Remaining	N	Y	< 0.18	UJ	18.2		12.3		< 0.25	U	24.4	J		
4+77	18L	TWA-8	15.5	TWA-B008-7.0	7.0 - 7.5	8.5	8.0	JB3648-75	JB3648	04/06/2012	Remaining	N	Y	< 0.18	UJ	14.5		12.4		< 0.26	U	23.9	J		
4+77	18L	TWA-8	15.5	TWA-B008-10.0	10.0 - 10.5	5.5	5.0	JB3648-76	JB3648	04/06/2012	Remaining	N	Y	0.66	J	13.5		21.8		0.45	J	30.0	J		
4+77	18L	TWA-8	15.5	TWA-B008-15.0	15.0 - 15.5	0.5	0.0	JB3648-77	JB3648	04/06/2012	Remaining	N	Y	< 0.26	UJ	27.7		12.7		< 0.37	U	26.2	J		
4+77	18L	TWA-8	15.5	TWA-B008-17.0	17.0 - 17.5	-1.5	-2.0	JB3648-78	JB3648	04/06/2012	Remaining	N	Y	< 0.30	UJ	28.3	J	17.3	J	< 0.42	UJ	38.2	J		
4+77	18L	TWA-8	15.5	TWA-B008-20.0	20.0 - 20.5	-4.5	-5.0	JB3648-79	JB3648	04/06/2012	Remaining	N	Y	< 0.18	UJ	21.9		12.7		< 0.25	U	32.5	J		
4+77	18L	TWA-8	15.5	TWA-B008-22.0	22.0 - 22.5	-6.5	-7.0	JB3648-80	JB3648	04/06/2012	Remaining	N	Y	< 0.18	UJ	17.8		13.9		< 0.25	U	25.2	J		
4+77	121R	TWA-1/ICO-12	15.3	TWA-B001-20.0	20.0 - 20.5	-4.7	-5.2	JB3648-59	JB3648	04/06/2012	Remaining	N	Y	< 0.46	UJ	272	J	14.1	J	< 0.65	UJ	30.8	J		
4+77	121R	TWA-1/ICO-12	15.3	TWA-B001-22.0	22.0 - 22.5	-6.7	-7.2	JB3648-60	JB3648	04/06/2012	Remaining	N	Y	< 0.58	UJ	154	J</								

Table 5-2
CCPW Metals Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

														Analyte CAS RN RDCSRS RDCSRS-GAG NRDCSRS	ANTIMONY 7440-36-0 mg/kg 31 NA 450	CHROMIUM 7440-47-3 mg/kg 120000 NA NA	NICKEL 7440-02-0 mg/kg 1600 NA 23000	THALLIUM 7440-28-0 mg/kg NA NA	VANADIUM 7440-62-2 mg/kg NA 390 1100					
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6)	Depth Interval (ft bgs) (G7)	Sample Start Elevation (ft NAVD88) (G5, G8)	Sample End Elevation (ft NAVD88) (G5, G9)	Lab ID (G10)	Lab SDG (G10)	Date Collected (G11)	Sample Status (G12, G13)	Sample Type (G14)	Validated (Y/N) (G15)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G20)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Result (G16, G17)	Qualifier (G18, G19)	Specific Notes
5+00	116R	10W-D33A	15.6	10W-D33A-12.5-13.0	12.5 - 13.0	3.1	2.6	JB67728-9A	JB67728A	05/23/2014	Remaining	N	Y	0.56	J-	68.3	J-	8.9		< 0.81	U	17.1		
5+04	3R	10W-P3BS-5+04-3R	14.5	10W-P3BS-5+04-3R-4.1-4.6	4.1 - 4.6	10.4	9.9	JD45166-1	JD45166	5/19/2022	Remaining	N	Y	2.7	U									
5+04	3R	10W-P3BS-5+04-3R	14.5	10W-P3BS-5+04-3R-4.1-4.6-X	4.1 - 4.6	10.4	9.9	JD45166-2	JD45166	5/19/2022	Remaining	FD	Y	2.9	U									
5+10	312R	137-3BS-R33A	14.7	137-3BS-R33A-EX-21.2-21.7	21.2 - 21.7	-6.5	-7.0	JC84244-1	JC84244	03/12/2019	Remaining	N	Y	< 1.1	UJ	23.6	J	13.9	J	< 1.5	UJ	31.8	J	
5+15	40R	10W-P3BS-5+15-40R	13.5	10W-P3BS-5+15-40R-4.1-4.6	4.1 - 4.6	9.4	8.9	JD45166-3	JD45166	5/19/2022	Remaining	N	Y	3.9										
5+34	90L	EF-29	15.3	EF-B29-6.5	6.5 - 7.0	8.8	8.3	460-25705-7	460257051	04/22/2011	Remaining	N	Y					15.2				68.6	J	
5+34	90L	EF-29	15.3	EF-B29-12.5	12.5 - 13.0	2.8	2.3	460-25705-10	460257051	04/22/2011	Remaining	N	Y					12.5				21.0	J	
5+34	90L	EF-29	15.3	EF-B29-15.0	15.0 - 15.5	0.3	-0.2	460-25705-11	460257051	04/22/2011	Remaining	N	Y					16.3				32.4	J	
5+34	90L	EF-29	15.3	EF-B29-21.0	21.0 - 21.5	-5.7	-6.2	460-25705-12	460257051	04/22/2011	Remaining	N	Y					12.2				24.9	J	
5+37	40R	EF-28	14.3	EF-B28-5.5	5.5 - 6.0	8.8	8.3	460-25705-1	460257051	04/22/2011	Remaining	N	Y					22.8				21.2	J	
5+37	40R	EF-28	14.3	EF-B28-11.0	11.0 - 11.5	3.3	2.8	460-25705-3	460257051	04/22/2011	Remaining	N	Y					36.5				28.1	J	
5+37	40R	EF-28	14.3	EF-B28-17.5	17.5 - 18.0	-3.2	-3.7	460-25705-5	460257051	04/22/2011	Remaining	N	Y					14.6	J			21.9	J	
5+37	40R	EF-28	14.3	EF-B28-22.5	22.5 - 23.0	-8.2	-8.7	460-25705-6	460257051	04/22/2011	Remaining	N	Y					17.3				42.4	J	
5+39	113R	10W-K32A	12.3	10W-K32A-18.5-19.0	18.5 - 19.0	-6.2	-6.7	JB66705-24A	JB66705A	05/09/2014	Remaining	N	Y	< 0.46	U	63.3		29.2		< 0.70	U	44.4		
5+39	113R	10W-K32A	12.3	10W-K32A-19.0-19.5	19.0 - 19.5	-6.7	-7.2	JB66705-25A	JB66705A	05/09/2014	Remaining	N	Y	< 0.88	UJ	62.8	J	12.2	J	< 1.3	UJ	21.3	J	
5+39	358R	137-MW4B	13.5	137-4BH_19-20_808381	19.0 - 20.0	-5.5	-6.5	808381	D104	02/20/2007	Remaining	N	Y	< 3.6	UJ	469		16.3		< 1.4	U	28.9		
5+39	358R	137-MW4B	13.5	137-4BI_21.0-22.0_808697	21.0 - 22.0	-7.5	-8.5	808697	D153	02/21/2007	Remaining	N	Y	< 3.5	UJ	23.1	J	22.6	J	< 1.4	U	27.9		
5+39	358R	137-MW4B	13.5	137-4BJ_23.0-24.0_808698	23.0 - 24.0	-9.5	-10.5	808698	D153	02/21/2007	Remaining	N	Y	2.7	J	1590	J	104	J	< 1.6	U	23.9		
5+39	358R	137-MW4B	13.5	137-4BJD_23.0-24.0_808699	23.0 - 24.0	-9.5	-10.5	808699	D153	02/21/2007	Remaining	FD	Y	< 1.8	UJ	1200	J	10.2	J	< 1.5	U	22.4		
5+39	358R	137-MW4B	13.5	137-4BK_24.5-25.0_808700	24.5 - 25.0	-11.0	-11.5	808700	D153	02/21/2007	Remaining	N	Y	< 1.5	UJ	12.3	J	13.7	J	< 1.2	U	14.3		
5+40	7L	10W-G32A	14.9	10W-G32A-17.5-18.0	17.5 - 18.0	-2.6	-3.1	JB66705-13A	JB66705A	05/09/2014	Remaining	N	Y	< 0.36	U	217		17.9		< 0.54	U	29.9		
5+40	7L	10W-G32A	14.9	10W-G32A-18.0-18.5	18.0 - 18.5	-3.1	-3.6	JB66705-14A	JB66705A	05/09/2014	Remaining	N	Y	< 0.90	UJ	102	J	17.8	J	< 1.4	UJ	28.9	J	
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-2.0-2.5	2.0 - 2.5	12.9	12.4	410-13323-2	410133231	09/08/2020	Remaining	N	Y	2.7		24		33		0.19	J	33		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-4.0-4.5	4.0 - 4.5	10.9	10.4	410-13323-3	410133231	09/08/2020	Remaining	N	Y	2.6		29		27		0.32		34		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-6.0-6.5	6.0 - 6.5	8.9	8.4	410-13323-4	410133231	09/08/2020	Remaining	N	Y	3.0		26		25		0.23		59		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-8.0-8.5	8.0 - 8.5	6.9	6.4	410-13323-5	410133231	09/08/2020	Remaining	N	Y	50		14		16		0.29	J	22		S4
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-10.0-10.5	10.0 - 10.5	4.9	4.4	410-13323-6	410133231	09/08/2020	Remaining	N	Y	3.2		19		20		0.25		35		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-12.0-12.5	12.0 - 12.5	2.9	2.4	410-13323-7	410133231	09/08/2020	Remaining	N	Y	2.1		23		20		< 0.095	U	33		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-14.0-14.5	14.0 - 14.5	0.9	0.4	410-13323-8	410133231	09/08/2020	Remaining	N	Y	0.35	J	17		7.6		< 0.098	U	23		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-16.0-16.5	16.0 - 16.5	-1.1	-1.6	410-13323-9	410133231	09/08/2020	Remaining	N	Y	0.47		16		17		0.11	J	31		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-16.0-16.5X	16.0 - 16.5	-1.1	-1.6	410-13323-12	410133231	09/08/2020	Remaining	FD	Y	0.28	J	17		13		0.12	J	28		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-16.5-17.0	16.5 - 17.0	-1.6	-2.1	410-13323-10	410133231	09/08/2020	Remaining	N	Y	< 0.25	UJ	17		11		0.11	J	31		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-17.0-17.5	17.0 - 17.5	-2.1	-2.6	410-13323-11	410133231	09/08/2020	Remaining	N	Y	< 0.52	UJ	33	J	22	J	0.24	J	48	J	
5+40	116L	10W-D32A	15.1	10W-D32A-2.5-3.0	2.5 - 3.0	12.6	12.1	JB67912-2A	JB67912A	05/28/2014	Remaining	N	Y	< 0.31	U	30.9		66.7	J	< 0.47	U	28.9		
5+40	116L	10W-D32A	15.1	10W-D32A-2.5-3.0X	2.5 - 3.0	12.6	12.1	JB67912-3A	JB67912A	05/28/2014	Remaining	FD	Y	< 0.32	U	28.3		21.9	J	< 0.49	U	25.6		
5+40	116L	10W-D32A	15.1	10W-D32A-4.5-5.0	4.5 - 5.0	10.6	10.1	JB67912-4A	JB67912A	05/28/2014	Remaining	N	Y	< 0.31	U	18.9		31.8		< 0.47	U	25.0		
5+40	116L	10W-D32A	15.1	10W-D32A-7.0-7.5	7.0 - 7.5	8.1	7.6	JB67912-6A	JB67912A	05/28/2014	Remaining	N	Y	7.6		21.6		17.2		< 0.42	U	25.0		
5+40	116L	10W-D32A	15.1	10W-D32A-8.5-9.0	8.5 - 9.0	6.6	6.1	JB67912-7A	JB67912A	05/28/2014	Remaining	N	Y	1.2	J	19.4		14.8		< 0.41	U	27.6		
5+40	116L	10W-D32A	15.1	10W-D32A-9.5-10.0	9.5 - 10.0	5.6	5.1	JB67912-8A	JB67912A	05/28/2014	Remaining	N	Y	6.4		11.5		20.5		< 0.40	U	26.0		
5+40	116L	10W-D32A	15.1	10W-D32A-10.8-11.3	10.8 - 11.3	4.3	3.8	JB67912-9A	JB67912A	05/28/2014	Remaining	N	Y	< 0.32	UJ	15.0		11.3		< 0.49	U	22.5		
5+40	116L	10W-D32A	15.1	10W-D32A-11.3-11.8	11.3 - 11.8	3.8	3.3	JB67912-10A	JB67912A	05/28/2014	Remaining	N	Y	0.45	J	11.1		8.8		< 0.39	U	17.5		
5+54	293R	137-B12	15.9	137B12G_24.5-25.1_805060	24.5 - 25.1	-8.6	-9.2	805060	C609	02/02/2007	Remaining	N	Y	< 1.5	UJ	32.3	J	10.9	J	< 1.2	U	17.5	J	
5+57	142L	ICO-11	14.7	ICO-B011-3.0	3.0 - 3.5	11.7	11.2	JB3648-31	JB3648	04/06/2012	Remaining	N	Y	< 0.18	UJ	15.9		11.6		< 0.25	U	22.1	J	
5+57	142L	ICO-11	14.7	ICO-B011-5.0	5.0 - 5.5	9.7	9.2	JB3648-32	JB3648	04/06/2012	Remaining	N	Y	< 0.21	UJ	12.2		19.1		< 0.29	U	26.5	J	
5+57	142L	ICO-11	14.7	ICO-B011-7.0	7.0 - 7.5	7.7	7.2	JB3648-33	JB3648	04/06/2012	Remaining	N	Y	0.27	J	9.9		10.2		0.70	J	18.7	J	
5+57	142L	ICO-11	14.7	ICO-B011-10.0	10.0 - 10.5	4.7	4.2	JB3648-34	JB3648	04/06/2012	Remaining	N	Y	< 0.18	UJ	14.1		9.6		< 0.26	U	19.8	J	
5+59	117R	EF-27	13.1	EF-B27-21.5	21.5 - 22.0	-8.4	-8.9	460-25657-13	460256571	04/21/2011	Remaining	N	Y					13.3				18.1	J	
5+68	71R	FBP-J31A	13.8	FBP-J31A-17.0-17.5	17.0 - 17.5	-3.2	-3.7	JB66207-24A	JB66207A	05/05/2014	Remaining	N	Y	< 0.28	U	52.7	J	14.1		< 0.42	U	27.8		
5+68	135L	FBP-C31A	14.9	FBP-C31A-3.0-3.5	3.0 - 3.5	11.9	11.4	JB65739-13A	JB65739A	04/28/2014	Remaining	N	Y	1.2	J	15.0		10.5		< 0.47	U	22.3		
5+68	135L	FBP-C31A	14.9	FBP-C31A-5.0-5.5	5.0 - 5.5	9.9	9.4	JB65739-14A	JB65739A	04/28/2014	Remaining	N	Y	1.2	J	15.2		12.7		< 0.48	U	24.0		
5+68	135L	FBP-C31A	14.9	FBP-C31A-7.0-7.5	7.0 - 7.5	7.9	7.4	JB65739-15A	JB65739A	04/28/2014	Remaining	N	Y	0.87	J	13.9		11.0		< 0.50	U	22.1		
5+68	135L	FBP-C31A	14.9	FBP-C31A-9.0-																				

Table 5-2
CCPW Metals Analytical Results for In-Place Soil Compared to Soil Remediation Standards
Phase 3B South and Portions of Site 133 East and Halladay Street South, 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
mg/kg - milligrams per kilogram
N - normal sample type
NAVD88 - North American Vertical Datum of 1988
NA - not applicable
NJDEP - New Jersey Department of Environmental Protection
NRDCSRS - NJDEP Non-Residential Direct Contact Soil Remediation Standard
RDCSRS - NJDEP Residential Direct Contact Soil Remediation Standard
RDCSRS-GAG - Residential Direct Contact Soil Remediation Standard - Garfield Avenue Group (alternative remediation standard approved by the NJDEP on December 28, 2016)
Sb - antimony
SCC - Soil Cleanup Criteria
SDG - sample delivery group
SRS - Soil Remediation Standard
U.S. - United States

QUALIFIERS:

J - The result was an estimated value; the associated numerical value was an approximate concentration of the analyte in the sample.
J- - The analyte was positively identified; the associated numerical value is an estimated quantity with a potential low bias.
JB - The analyte concentration is greater than three times, but less than 10 times, the concentration in the associated method blank. The presence of that analyte in the sample is considered "real". The concentration is quantitatively qualified (JB) due to method 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.
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.

GENERAL NOTES:

G1. "Station" refers to a sample's location along the excavation's centerline, which runs the length of the Phase 3B South Excavation starting from a northwestern edge of Phase 3B South, as presented on Figure 5-2A and Figure 5-2B. Station values are presented in hundreds of feet. For example, station 1+50 is 150 feet along the excavation's centerline.
G2. "Offset" refers to a sample's distance in feet 90 degrees from the excavation's centerline in the southeasterly direction, as presented on Figure 5-2A and Figure 5-2B. An addition of "L" in this column indicates the sample is located to the left of the excavation's centerline and an addition of "R" in this column indicates the sample is located to the right of the excavation's centerline.
G3. "Location ID" refers to the location name where samples were collected.
G4. "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.
G5. Elevation vertical datum is NAVD88, in U.S. survey ft.
G6. "Sample ID" refers to the name of a sample collected at a given location and is unique to the depth of the sample collected.
G7. "Depth Interval" is based on the "Location Elevation."
G8. "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.
G9. "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.
G10. "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.
G11. "Date Collected" refers to the date the soil sample was collected.
G12. "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.
G13. The post-excavation survey points and 1-ft post-excavation contours representing the as-built terminal excavation elevations are provided on Figure 5-2A and Figure 5-2B.
G14. "Sample Type" indicates whether the sample type is normal (N) or a field duplicate (FD).
G15. "Y" indicates that a sample underwent data validation and "N" indicates that data validation was not conducted.
G16. "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.
G17. Bold text indicates a result that exceeds the RDCSRS or the RDCSRS-GAG. Bold and italicized text indicates a result that exceeds the NRDCSRS. Non-bold and non-italicized text indicates the result does not exceed the most stringent SRS.
G18. "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.
G19. Non-detect results are shown on this table using the method detection limit, if available; otherwise, they are shown at the reporting limit.
G20. 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
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

SPECIFIC NOTES:

- S1. This sample serves as a Cr⁺⁶ confirmation pit bottom sample and was removed to create a level grade across the excavation footprint in this area per the excavation design.
- S2. This sample serves as a Cr⁺⁶ confirmation sidewall sample and was removed due to excavation sloping per the excavation design.
- S3. The Sb result for this sample is greater than the RDCSRS and less than the NRDCSRS. Compliance with the Sb RDCSRS is demonstrated through spatial averaging. The spatially weighted average Sb concentration calculated as part of the compliance averaging evaluation is 10 mg/kg, which is compliant with the RDCSRS. The calculations of the compliance averaging evaluation are included in the Technical Memorandum *800 Garfield Avenue (the Former Ten West Apparel Company Property) Compliance Averaging for Antimony in Soil (Revision 1)*, AECOM, August 1, 2022 provided in Appendix F.
- S4. The Sb result for this sample is greater than the RDCSRS and less than the NRDCSRS. Compliance with the Sb RDCSRS is demonstrated through spatial averaging. The spatially weighted average Sb concentration calculated as part of the compliance averaging evaluation is 22 mg/kg, which is compliant with the RDCSRS. The calculations of the compliance averaging evaluation are included in the Technical Memorandum *800 Garfield Avenue (the Former Ten West Apparel Company Property) Compliance Averaging for Antimony in Soil (Revision 1)*, AECOM, August 1, 2022 provided in Appendix F.

Table 5-3
CCPW Metals Analytical Results in the Unsaturated Soil Zone
Compared to IGW SSL and SRSs
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

														Analyte CAS-RN Units DIGWSSL IGWSRS-GAG	ANTIMONY 7440-36-0 mg/kg NA 62.7		CHROMIUM 7440-47-3 mg/kg NA NA		NICKEL 7440-02-0 mg/kg NA 170		THALLIUM 7440-28-0 mg/kg 3.0 NA		VANADIUM 7440-62-2 mg/kg NA NA		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6, G7)	Depth Interval (ft bgs) (G8)	Sample Start Elevation (ft NAVD88) (G5, G9)	Sample End Elevation (ft NAVD88) (G5, G10)	Lab ID (G11)	Lab SDG (G11)	Date Collected (G12)	Sample Status (G13, G14)	Sample Type (G15)	Validated (Y/N) (G16)	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)	Specific Notes	
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-1.0-1.5	1.0 -1.5	11.0	10.5	JB64984-9A	JB64984A	04/17/2014	Remaining	N	Y	3.7	J	327	J	25.7		< 0.46	U	36.5			
1+19	161R	133-P3B-M46A	12.0	133-P3B-M46A-3.0-3.5	3.0 -3.5	9.0	8.5	JB64984-10A	JB64984A	04/17/2014	Remaining	N	Y	4.0	J	157	J	95.1		< 0.50	U	29.2			
1+19	189R	133-P3B-N46A	11.1	133-P3B-N46A-2.0-2.5	2.0 -2.5	9.1	8.6	JB64984-26A	JB64984A	04/17/2014	Remaining	N	Y	8.6	J	188	J	38.5		< 0.47	U	48.5	J		
1+49	153R	10W-M45A	11.4	10W-M45A-3.0-3.5	3.0 -3.5	8.4	7.9	JB67912-27A	JB67912A	05/28/2014	Remaining	N	Y	5.0		33.9		15.8		0.46	J	16.3			
1+56	93R	10W-K45A	15.6	10W-K45A-6.5-7.0	6.5 -7.0	9.1	8.6	JB66773-20A	JB66773A	05/12/2014	Remaining	N	Y	1.2	J	19.5		13.7		< 0.48	U	27.0			
1+57	141R	ICO-18	11.4	ICO-B018-3.0	3.0 -3.5	8.4	7.9	JB3648-36	JB3648	04/06/2012	Remaining	N	Y	1.5	J	94.3		14.0		0.58	J	16.6	J		
1+60	84R	10W-J45A	15.6	10W-J45A-5.5-6.0	5.5 -6.0	10.1	9.6	JB66880-6A	JB66880A	05/13/2014	Remaining	N	Y	0.65	J-	18.7	J	11.2		< 0.50	U	23.5			
1+60	84R	10W-J45A	15.6	10W-J45A-6.5-7.0	6.5 -7.0	9.1	8.6	JB66880-7A	JB66880A	05/13/2014	Remaining	N	Y	6.8	J-	34.3	J	24.3		< 0.62	U	32.0			
1+62	70R	TWA-7	15.6	TWA-B007-5.0	5.0 -5.5	10.6	10.1	JB3579-21	JB3579	04/06/2012	Remaining	N	Y	1.1	J	511		15.6		< 0.67	U	19.2			
2+01	3R	10W-H43A	15.6	10W-H43A-2.5-3.0	2.5 -3.0	13.1	12.6	JB66966-3A	JB66966A	05/14/2014	Remaining	N	Y	< 0.34	U	16.2		17.3		< 0.51	U	60.0			
2+01	3R	10W-H43A	15.6	10W-H43A-4.5-5.0	4.5 -5.0	11.1	10.6	JB66966-4A	JB66966A	05/14/2014	Remaining	N	Y	< 0.31	U	19.0		8.4		< 0.48	U	36.8			
2+01	3R	10W-H43A	15.6	10W-H43A-5.0-5.5	5.0 -5.5	10.6	10.1	JB66966-5A	JB66966A	05/14/2014	Remaining	N	Y	1.1	J	33.7		17.2		0.72	J	26.9			
2+01	3R	10W-H43A	15.6	10W-H43A-6.5-7.0	6.5 -7.0	9.1	8.6	JB66966-6A	JB66966A	05/14/2014	Remaining	N	Y	1.4	J	29.6		12.9		0.81	J	21.2			
2+01	3R	10W-H43A	15.6	10W-H43A-7.5-8.0	7.5 -8.0	8.1	7.6	JB66966-7A	JB66966A	05/14/2014	Remaining	N	Y	< 0.33	U	13.5		9.1		< 0.50	U	21.1			
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-1.0	1.0 -1.5	14.6	14.1	JB3512-1	JB3512	04/05/2012	Remaining	N	Y	< 0.16	UJ	26.5		11.8		0.46	J	22.5			
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-3.0	3.0 -3.5	12.6	12.1	JB3512-2	JB3512	04/05/2012	Remaining	N	Y	< 0.16	UJ	16.5		10.9		< 0.23	U	22.6			
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-5.0	5.0 -5.5	10.6	10.1	JB3512-3	JB3512	04/05/2012	Remaining	N	Y	0.23	J	15.9		14.5		0.50	J	26.6			
2+08	20L	TWA-11/ICO-16	15.6	ICO-16-7.0	7.0 -7.5	8.6	8.1	JB3512-4	JB3512	04/05/2012	Remaining	N	Y	< 0.16	UJ	19.9		17.2		< 0.22	U	25.8			
2+60	1R	10W-H41A	15.5	10W-H41A-2.5-3.0	2.5 -3.0	13.0	12.5	JB67098-16A	JB67098A	05/15/2014	Remaining	N	Y	0.53	J	13.0		8.1		< 0.48	U	20.3			
2+60	1R	10W-H41A	15.5	10W-H41A-6.5-7.0	6.5 -7.0	9.0	8.5	JB67098-18A	JB67098A	05/15/2014	Remaining	N	Y	3.2		14.1		9.5		0.60	J	12.0			
2+61	123R	10W-L41A	15.1	10W-L41A-6.5-7.0	6.5 -7.0	8.6	8.1	JB67379-17A	JB67379A	05/20/2014	Remaining	N	Y	3.3		43.2		20.5		< 0.41	U	24.7			
2+61	123R	10W-L41A	15.1	10W-L41A-7.0-7.5	7.0 -7.5	8.1	7.6	JB67379-18A	JB67379A	05/20/2014	Remaining	N	Y	5.0		32.5		27.3		0.46	J	20.7			
2+61	65R	10W-J41A	15.2	10W-J41A-5.0-5.5	5.0 -5.5	10.2	9.7	JB67304-3A	JB67304A	05/19/2014	Remaining	N	Y	0.38	J	22.2		13.2		< 0.48	U	30.4			
2+61	65R	10W-J41A	15.2	10W-J41A-6.0-6.5	6.0 -6.5	9.2	8.7	JB67304-4A	JB67304A	05/19/2014	Remaining	N	Y	< 0.32	U	19.3		15.2		< 0.48	U	28.2			
2+61	65R	10W-J41A	15.2	10W-J41A-6.0-6.5X	6.0 -6.5	9.2	8.7	JB67304-5A	JB67304A	05/19/2014	Remaining	FD	Y	< 0.32	U	16.7		12.0		< 0.48	U	24.7			
2+61	65R	10W-J41A	15.2	10W-J41A-7.0-7.5	7.0 -7.5	8.2	7.7	JB67304-6A	JB67304A	05/19/2014	Remaining	N	Y	< 0.32	U	20.5		19.0		< 0.49	U	32.1			
2+89	52R	TWA-6	15.2	TWA-B006-5.0	5.0 -5.5	10.2	9.7	JB3579-14	JB3579	04/05/2012	Remaining	N	Y	0.22	J	21.8		13.9		0.58	J	20.7			
2+94	21L	TWA-10	15.1	TWA-B010-1.0	1.0 -1.5	14.1	13.6	JB3579-1	JB3579	04/05/2012	Remaining	N	Y	1.3	J	64.4		34.2		1.0	J	35.7			
2+94	21L	TWA-10	15.1	TWA-B010-3.0	3.0 -3.5	12.1	11.6	JB3579-2	JB3579	04/05/2012	Remaining	N	Y	< 0.16	UJ	14.2		12.9		0.88	J	17.6			
2+94	21L	TWA-10	15.1	TWA-B010-5.0	5.0 -5.5	10.1	9.6	JB3579-3	JB3579	04/05/2012	Remaining	N	Y	1.1	J	17.6		13.0		0.82	J	18.7			
2+94	21L	TWA-10	15.1	TWA-B010-7.0	7.0 -7.5	8.1	7.6	JB3579-4	JB3579	04/05/2012	Remaining	N	Y	2.1	J	18.8		16.0		< 0.32	U	23.7			
3+20	61R	10W-J39A	15.2	10W-J39A-6.5-7.0	6.5 -7.0	8.7	8.2	JB67196-18A	JB67196A	05/16/2014	Remaining	N	Y	2.4	J	15.6		14.2		< 0.82	U	29.7			
3+20	61R	10W-J39A	15.2	10W-J39A-7.0-7.5	7.0 -7.5	8.2	7.7	JB67196-19A	JB67196A	05/16/2014	Remaining	N	Y	3.0		13.4		17.2		< 0.41	U	23.2			
3+21	1R	10W-H39A	15.6	10W-H39A-3.0-3.5	3.0 -3.5	12.6	12.1	JB67098-4A	JB67098A	05/15/2014	Remaining	N	Y	0.95	J	14.4		20.5		< 0.40	U	21.7			
3+21	1R	10W-H39A	15.6	10W-H39A-H																					

Table 5-3
CCPW Metals Analytical Results in the Unsaturated Soil Zone
Compared to IGW SSL and SRSs
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

													Analyte CAS-RN Units DIGWSSL IGWSRS-GAG	ANTIMONY 7440-36-0 mg/kg NA 62.7		CHROMIUM 7440-47-3 mg/kg NA NA		NICKEL 7440-02-0 mg/kg NA 170		THALLIUM 7440-28-0 mg/kg 3.0 NA		VANADIUM 7440-62-2 mg/kg NA NA		
Station (G1)	Offset (G2)	Location ID (G3)	Location Elevation (ft NAVD88) (G4, G5)	Sample ID (G6, G7)	Depth Interval (ft bgs) (G8)	Sample Start Elevation (ft NAVD88) (G5, G9)	Sample End Elevation (ft NAVD88) (G5, G10)	Lab ID (G11)	Lab SDG (G11)	Date Collected (G12)	Sample Status (G13, G14)	Sample Type (G15)	Validated (Y/N) (G16)	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)	Specific Notes
4+37	2R	10W-H35A	15.5	10W-H35A-4.5-5.0	4.5 -5.0	11.0	10.5	JB67819-14A	JB67819A	05/27/2014	Remaining	N	Y	< 0.31	U	20.6		10.4		< 0.47	U	25.2		
4+37	2R	10W-H35A	15.5	10W-H35A-6.0-6.5	6.0 -6.5	9.5	9.0	JB67819-15A	JB67819A	05/27/2014	Remaining	N	Y	1.4	J	19.6		23.3		< 0.59	U	32.1		
4+37	2R	10W-H35A	15.5	10W-H35A-6.5-7.0	6.5 -7.0	9.0	8.5	JB67819-16A	JB67819A	05/27/2014	Remaining	N	Y	1.2	J	12.1		18.6		0.72	J	40.2		
4+76	51R	TWA-4	15.1	TWA-B004-6.0	6.0 -6.5	9.1	8.6	JB3648-64	JB3648	04/06/2012	Remaining	N	Y	2.2	J	19.9	J	25.5		< 0.30	U	22.0	J	
4+77	18L	TWA-8	15.5	TWA-B008-3.0	3.0 -3.5	12.5	12.0	JB3648-73	JB3648	04/06/2012	Remaining	N	Y	0.82	J	13.8		20.4		< 0.30	U	22.0	J	
4+77	18L	TWA-8	15.5	TWA-B008-5.0	5.0 -5.5	10.5	10.0	JB3648-74	JB3648	04/06/2012	Remaining	N	Y	< 0.18	UJ	18.2		12.3		< 0.25	U	24.4	J	
4+77	18L	TWA-8	15.5	TWA-B008-7.0	7.0 -7.5	8.5	8.0	JB3648-75	JB3648	04/06/2012	Remaining	N	Y	< 0.18	UJ	14.5		12.4		< 0.26	U	23.9	J	
4+91	3R	10W-H34A	15.5	10W-H34A-4.5-5.0	4.5 -5.0	11.0	10.5	JB68100-4A	JB68100A	05/30/2014	Remaining	N	Y	3.5		19.9		22.9		0.54	J	27.8		
4+91	3R	10W-H34A	15.5	10W-H34A-5.4-5.9	5.4 -5.9	10.1	9.6	JB68100-5A	JB68100A	05/30/2014	Remaining	N	Y	1.3	J	12.7		17.9		< 0.41	U	28.0		
4+91	3R	10W-H34A	15.5	10W-H34A-6.5-7.0	6.5 -7.0	9.0	8.5	JB68100-6A	JB68100A	05/30/2014	Remaining	N	Y	163	J	15.0		26.6		< 0.41	U	28.7		S2
4+91	3R	10W-H34A	15.5	10W-H34A-6.5-7.0X	6.5 -7.0	9.0	8.5	JB68100-7A	JB68100A	05/30/2014	Remaining	FD	Y	4.9	J	16.3		33.5		< 0.41	U	30.6		
5+00	116R	10W-D33A	15.6	10W-D33A-4.5-5.0	4.5 -5.0	11.1	10.6	JB67728-3A	JB67728A	05/23/2014	Remaining	N	Y	< 0.28	U	17.9		9.5		0.42	J	23.3		
5+00	116R	10W-D33A	15.6	10W-D33A-6.5-7.0	6.5 -7.0	9.1	8.6	JB67728-4A	JB67728A	05/23/2014	Remaining	N	Y	0.35	J	21.9		11.4		< 0.41	U	24.9		
5+00	116R	10W-D33A	15.6	10W-D33A-6.5-7.0X	6.5 -7.0	9.1	8.6	JB67728-6A	JB67728A	05/23/2014	Remaining	FD	Y	0.32	J	22.6		12.0		< 0.40	U	25.0		
5+00	116R	10W-D33A	15.6	10W-D33A-7.5-8.0	7.5 -8.0	8.1	7.6	JB67728-5A	JB67728A	05/23/2014	Remaining	N	Y	< 0.28	U	17.3		11.6		0.56	J	25.6		
5+00	55L	10W-F33A	15.7	10W-F33A-4.5-5.0	4.5 -5.0	11.2	10.7	JB67728-13A	JB67728A	05/23/2014	Remaining	N	Y	0.67	J	9.9		17.0		< 0.39	U	23.5		
5+00	55L	10W-F33A	15.7	10W-F33A-5.5-6.0	5.5 -6.0	10.2	9.7	JB67728-14A	JB67728A	05/23/2014	Remaining	N	Y	0.43	J	18.4		14.7		< 0.40	U	26.2		
5+00	55L	10W-F33A	15.7	10W-F33A-6.5-7.0	6.5 -7.0	9.2	8.7	JB67728-15A	JB67728A	05/23/2014	Remaining	N	Y	0.69	J	15.0		21.0		< 0.42	U	20.8		
5+00	71L	10W-F33A-SW-W	15.6	10W-F33A-SW-W-2.2-2.7	2.2 -2.7	13.4	12.9	410-49469-8	410494691	07/30/2021	Remaining	N	Y	3.5	J	43	J	53	J	0.41		46	J	
5+04	3R	10W-P3BS-5+04-3R	14.5	10W-P3BS-5+04-3R-4.1-4.6	4.1 - 4.6	10.4	9.9	JD45166-1	JD45166	05/19/2022	Remaining	N	Y	2.7	U									
5+04	3R	10W-P3BS-5+04-3R	14.5	10W-P3BS-5+04-3R-4.1-4.6-X	4.1 - 4.6	10.4	9.9	JD45166-2	JD45166	05/19/2022	Remaining	FD	Y	2.9	U									
5+15	460R	10W-P3BS-5+15-40R	13.5	10W-P3BS-5+15-40R-4.1-4.6	4.1 - 4.6	9.4	8.9	JD45166-3	JD45166	05/19/2022	Remaining	N	Y	3.9										
5+34	90L	EF-29	15.3	EF-B29-6.5	6.5 -7.0	8.8	8.3	460-25705-7	460257051	04/22/2011	Remaining	N	Y					15.2				68.6	J	
5+37	40R	EF-28	14.3	EF-B28-5.5	5.5 -6.0	8.8	8.3	460-25705-1	460257051	04/22/2011	Remaining	N	Y					22.8				21.2	J	
5+40	116L	10W-D32A	15.1	10W-D32A-2.5-3.0	2.5 -3.0	12.6	12.1	JB67912-2A	JB67912A	05/28/2014	Remaining	N	Y	< 0.31	U	30.9		66.7	J	< 0.47	U	28.9		
5+40	116L	10W-D32A	15.1	10W-D32A-2.5-3.0X	2.5 -3.0	12.6	12.1	JB67912-3A	JB67912A	05/28/2014	Remaining	FD	Y	< 0.32	U	28.3		21.9	J	< 0.49	U	25.6		
5+40	116L	10W-D32A	15.1	10W-D32A-4.5-5.0	4.5 -5.0	10.6	10.1	JB67912-4A	JB67912A	05/28/2014	Remaining	N	Y	< 0.31	U	18.9		31.8		< 0.47	U	25.0		
5+40	116L	10W-D32A	15.1	10W-D32A-7.0-7.5	7.0 -7.5	8.1	7.6	JB67912-6A	JB67912A	05/28/2014	Remaining	N	Y	7.6		21.6		17.2		< 0.42	U	25.0		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-2.0-2.5	2.0 -2.5	12.9	12.4	410-13323-2	410133231	09/08/2020	Remaining	N	Y	2.7		24		33		0.19	J	33		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-4.0-4.5	4.0 -4.5	10.9	10.4	410-13323-3	410133231	09/08/2020	Remaining	N	Y	2.6		29		27		0.32		34		
5+40	59L	P3BS-PDI-5+40-60L	14.9	P3BS-PDI-5+40-60L-6.0-6.5	6.0 -6.5	8.9	8.4	410-13323-4	410133231	09/08/2020	Remaining	N	Y	3.0		26		25		0.23		59		
5+57	142L	ICO-11	14.7	ICO-B011-3.0	3.0 -3.5	11.7	11.2	JB3648-31	JB3648	04/06/2012	Remaining	N	Y	< 0.18	UJ	15.9		11.6		< 0.25	U	22.1	J	
5+57	142L	ICO-11	14.7	ICO-B011-5.0	5.0 -5.5	9.7	9.2	JB3648-32	JB3648	04/06/2012	Remaining	N	Y	< 0.21	UJ	12.2		19.1		< 0.29	U	26.5	J	
5+68	135L	FBP-C31A	14.9	FBP-C31A-3.0-3.5	3.0 -3.5	11.9	11.4	JB65739-13A	JB65739A	04/28/2014	Remaining	N	Y	1.2	J	15.0		10.5		< 0.47	U	22.3		
5+68	135L	FBP-C31A	14.9	FBP-C31A-5.0-5.5	5.0 -5.5	9.9	9.4	JB65739-14A	JB65739A	04/28/2014	Remaining	N	Y	1.2	J	15.2		12.7		< 0.48	U	24.0		
5+69	41R	FBP-I31A	13.6	FBP-I31A-3.0-3.5	3.0 -3.5	10.6	10.1	JB66207-3A	JB66207A	05/05/2014	Remaining	N	Y	1.7	J	82.4		31.3	J	< 0.53	U	30.0	J	
5+69	41R	FBP-I31A	13.6	FBP-I31A-3.0-3.5X	3.0 -3.5	10.6	10.1	JB66207-4A	JB66207A	05/05/2014	Remaining	FD	Y	7.2	J	98.8		56.1	J	< 0.52	U	34.5	J	
5+69	41R	FBP-I31A	13.6	FBP-I31A-5.0-5.5	5.0 -5.5	8.6	8.1	JB66207-5A	JB66207A	05/05/2014	Remaining	N	Y	1.6	J	75.0		21.4	J	< 0.41	U	21.1	J	

Table 5-3
CCPW Metals Analytical Results in the Unsaturated Soil Zone
Compared to IGW SSL and SRSs
Phase 3B South and Portions of Site 133 East and Halladay Street South, 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 (site-specific alternative remediation standard as proposed in the *Supplemental Soil Remedial Investigation Report, Final Draft*, dated 09/17/17)
mg/kg - milligrams per kilogram
MDL - method detection limit
N - normal sample type
NA - not applicable
NAVD88 - North American Vertical Datum of 1988
NJDEP - New Jersey Department of Environmental Protection
NRDCSRS - NJDEP Non-Residential Direct Contact Soil Remediation Standard
PDI - pre-design investigation
RDCSRS - NJDEP Residential Direct Contact Soil Remediation Standard
RDCSRS-GAG - Residential Direct Contact Soil Remediation Standard - Garfield Avenue Group (site-specific alternative remediation standard approved by the NJDEP on December 28, 2016)
RL - reporting limit
SDG - sample delivery group
SRSs - Soil Remediation Standards
SSL - Soil Screening Level
Tl - thallium
U.S. - United States

QUALIFIERS:

J - The result was an estimated value; the associated numerical value was an approximate concentration of the analyte in the sample.
J- - The analyte was positively identified; the associated numerical value is an estimated quantity with a potential low bias.
JB - The analyte concentration is greater than three times, but less than 10 times, the concentration in the associated method blank. The presence of that analyte in the sample is considered "real". The concentration is quantitatively qualified (JB) due to method 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. "Station" refers to a sample's location along the excavation's centerline, which runs the length of the Phase 3B South Excavation starting from a northwestern edge of Phase 3B South, as presented on Figure 5-3A and Figure 5-3B. Station values are presented in hundreds of feet. For example, station 1+50 is 150 feet along the excavation's centerline.
G2. "Offset" refers to a sample's distance in feet 90 degrees from the excavation's centerline in the southeasterly direction, as presented on Figure 5-3A and Figure 5-3B. An addition of "L" in this column indicates the sample is located to the left of the excavation's centerline and an addition of "R" in this column indicates the sample is located to the right of the excavation's centerline.
G3. "Location ID" refers to the location name where samples were collected.
G4. "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.
G5. Elevation vertical datum is NAVD88, in U.S. survey ft.
G6. "Sample ID" refers to the name of a sample collected at a given location and is unique to the depth of the sample collected.
G7. This table compares sample results from the unsaturated zone to the DIGWSSLs and IGWSRS-GAGs. The groundwater elevation (above which is the unsaturated zone) on this Site was estimated as the 50th percentile groundwater elevation from 4 monitoring wells located in Phase 3B South gauged between February 2007 and May 2018. The monitoring well locations and data are included in Appendix A. The estimated groundwater elevation for this Site is El. 7.5 ft NAVD88.
G8. "Depth Interval" is based on the "Location Elevation."
G9. "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.
G10. "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.
G11. "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.
G12. "Date Collected" refers to the date the soil sample was collected.
G13. "Sample Status" of "Remaining" indicates the soil in that interval is outside the excavation footprint and remains in-place at that location.
G14. The post-excavation survey points and 1-ft post-excavation contours representing the as-built terminal excavation elevations are provided on Figure 5-3A and Figure 5-3B.
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.
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.

Table 5-3
CCPW Metals Analytical Results in the Unsaturated Soil Zone
Compared to IGW SSL and SRSs
Phase 3B South and Portions of Site 133 East and Halladay Street South, Garfield Avenue Group
PPG, Jersey City, New Jersey

SPECIFIC NOTES:

- S1. At Station 3+21, Offset 1R, TI was not detected at a concentration greater than the RL or the MDL in the PDI sample 10W-H39A-5.0-5.5 (El. 10.6 to 10.1 ft NAVD88), but the RL and MDL were greater than the DIGWSSL. If TI was present, it would be expected to be co-located with Cr⁺⁶ or other CCPW-related constituents. At this location, Cr⁺⁶ was not detected at concentrations greater than the CrSCC (Table 5-1), CCPW metals were not detected at concentrations greater than the RDCSRs, RDCSRs-GAGs, NRDCSRs, DIGWSSLs, or the IGWSRS-GAGs, and visual CCPW was not observed. Therefore, it is concluded that TI is not present in this sample.
- S2. The Sb result for this sample is greater than the IGWSRS-GAG. Compliance with the Sb IGWSRS-GAG is demonstrated through spatial averaging. The spatially weighted average Sb concentration calculated as part of the compliance averaging evaluation is 37 mg/kg, which is compliant with the IGWSRS-GAG. The calculations of the compliance averaging evaluation are included in the Technical Memorandum *800 Garfield Avenue (the Former Ten West Apparel Company Property) Compliance Averaging for Antimony in Soil Revision 1*, AECOM, August 1, 2022 provided in Appendix F.

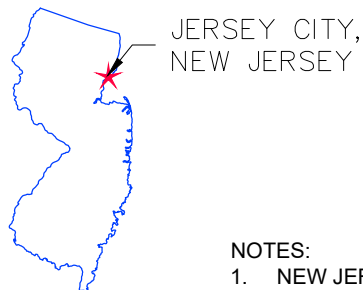
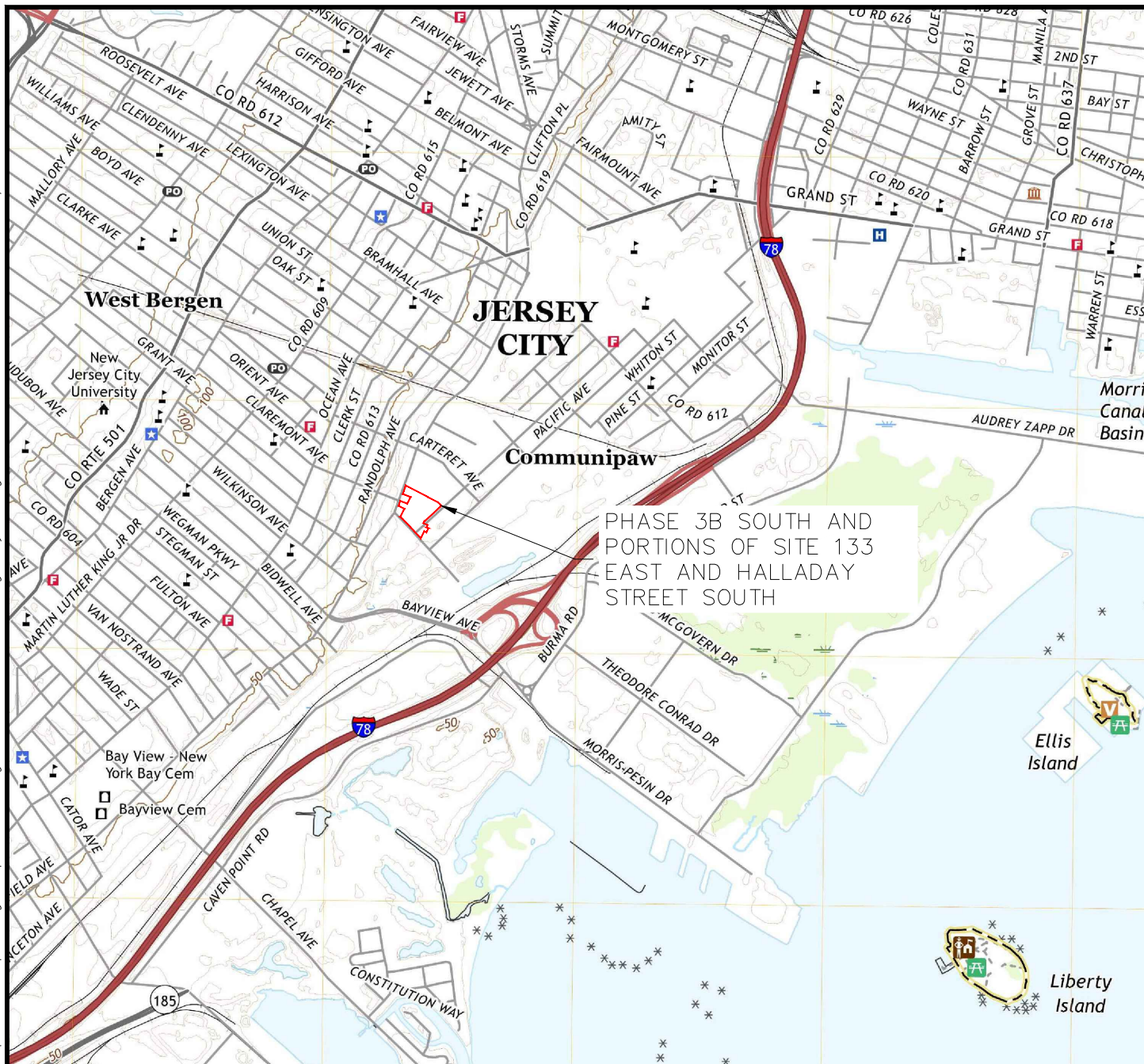
Table 5-4
Field Change Notification Tracking Sheet
Phase 3B South and Portions of Site 133 East and Halladay Street South
Garfield Avenue Group
PPG, Jersey City, New Jersey

Field Change Notification No.	Date of Submittal	Description of Field Change Notification
IRM/FS 2	8/2/2010	Formula 480 - application on concrete stockpiles
IRM/FS 4	2/23/2011	Application of DustStar in lieu of poly tarps on stockpiles
1 SWTEP	4/12/2012	CCPW transportation procedures (MHF)
SWTEP 1	5/7/2012	Total chromium no longer required on pit bottom samples (10% only)
SWTEP 2	5/21/2012	Termination of excavation before Meadow Mat
SWTEP 3	6/22/2012	Relocation of stockpile area
SWTEP 4	7/9/2012	SWTEP CCPW excavation change
SWTEP 5	8/14/2012	New backfill source added: Liberty Aggregates, 50 Caven Point Avenue, Jersey City, NJ
SWTEP 7	6/19/2013	New backfill source added: Tilcon, 625 Mount Hope Road, Wharton, NJ
SWTEP 7 (Rev 1)	7/3/2013	New backfill source added: Tilcon, Broad Street, Pompton Lakes, NJ
GA Group 8	9/13/2013	Backfill Process Improvements
GA Group 10	12/2/2013	New backfill source added: Stavola, 810 Thompson Ave Bound Brook, NJ
GA Group 11	1/8/2014	New backfill source added: Weldon, 1 New Providence Road, Watchung, NJ
GA Group 13	1/30/2014	Application of Quicklime as a soil drying agent
GA Group 15	3/12/2014	FerroBlack Dosage Option in Phase 2B-2, 3A, 3B, and 3C Areas
GA Group 16	6/27/2014	Reduction in Frequency of Virgin Backfill Sampling
GA Group 16A	7/24/2015	Reduction in Frequency of Quarry/Mine Backfill Sampling Requirement, Updated Fill Guidance
GA Group 17	7/8/2014	Process to Maintain Competency of Carteret Avenue
GA Group 18	3/18/2016	Alternative Macrocore Sampling Method
GA Group 18A	3/25/2016	Alternative Macrocore Sampling Method (Update)
GA Group 21	7/7/2020	800 and 816 Garfield Avenue - Eliminate 10% Sample Collection and Analysis

Notes:

bgs - below ground surface
CCPW - Chromate Chemical Production Waste
GA - Garfield Avenue
IRM - Interim Remedial Measure
MHF - Major Hazard Facility
NJ - New Jersey
SWTEP - Southwest Technical Execution Plan

Figures

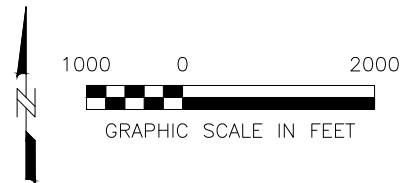


JERSEY CITY,
NEW JERSEY

NOTES:

1. NEW JERSEY STATE PLANE NORTH AMERICAN DATUM 1983 COORDINATES, US SURVEY FEET.
2. IMAGE SOURCE: USGS TOPOGRAPHIC QUADRANGLE: JERSEY CITY, NJ, 2019

NJ - NEW JERSEY
US - UNITED STATES
USGS - UNITED STATES GEOLOGICAL SURVEY



AECOM

SITE 133 EAST AND HALLADAY STREET SOUTH
GARFIELD AVENUE GROUP SITES
JERSEY CITY, NEW JERSEY

USGS SITE LOCATION MAP

DATE: 09/14/22 DRWN: MDN

FIGURE 1-1

SITE PLAN LEGEND

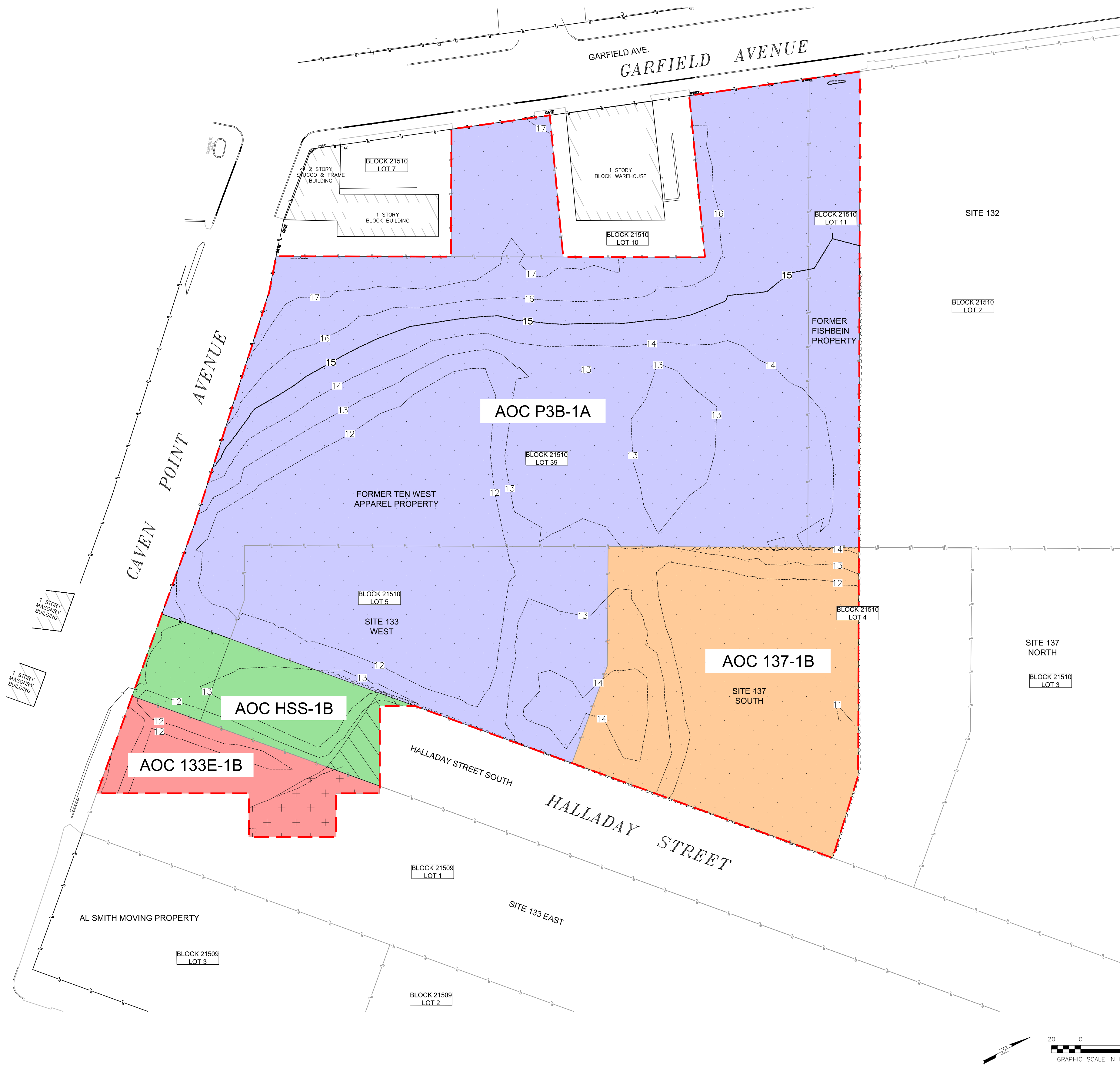
- RESTORATION GROUND SURFACE CONTOURS 1' INTERVAL 5' INDEX
- PROPERTY LINE
- RIGHT-OF-WAY
- EXISTING SHEET PILE
- RETAINING WALL/LOADING DOCK
- CURB
- CURB CUT
- EDGE OF SIDEWALK
- EXISTING BUILDING
- SITE BOUNDARY
- PHASE 3B SOUTH BOUNDARY
- AOC P3B-1A
- AOC 137-1B
- AOC HSS-1B
- AOC 133E-1B
- AREA PREVIOUSLY EXCAVATED DURING THE SITE 133 EAST REMEDIAL ACTION
- AREA PREVIOUSLY EXCAVATED DURING THE HALLADAY STREET SOUTH REMEDIAL ACTION

ABBREVIATIONS:

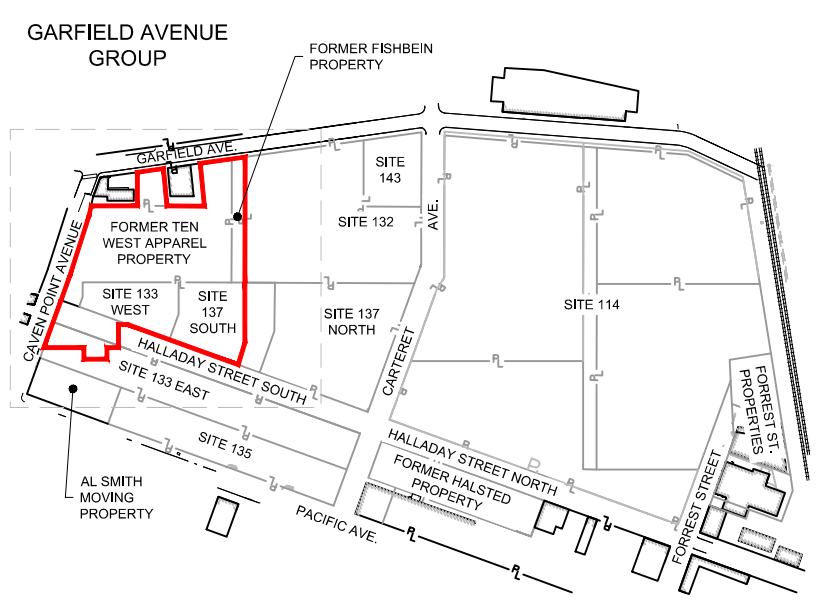
AOC AREA OF CONCERN

NJDEP NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

- GENERAL NOTE:
- PRE-CONSTRUCTION PROPERTY LINES, BUILDING EXTENTS, AND SITE FEATURES ARE SOURCED FROM SURVEYS CONDUCTED IN MAY 2014 BY BORBAS SURVEYING AND MAPPING, LLC.
 - RESTORATION AS-BUILT ELEVATIONS ARE SOURCED FROM THE "ASBUILT RESTORATION SURVEY, 10 WEST SITE EXCAVATION, CITY OF JERSEY CITY, HUDSON COUNTY, N.J." DRAWING PREPARED BY BORBAS SURVEYING AND MAPPING, LLC, DATED JULY 18, 2022.
 - HORIZONTAL LIMITS FOR AOC 137-1B, HSS-1B, AND 133E-1B ARE SOURCED FROM THE RESPECTIVE REMEDIAL ACTION REPORTS APPROVED BY THE NJDEP. SEE SECTION 10 OF THE PHASE 3B SOUTH AND PORTIONS OF SITE 133 EAST AND HALLADAY STREET SOUTH REMEDIAL ACTION REPORT FOR DETAILED REFERENCES.



MAP LOCATION



AECOM

PPG - PHASE 3B SOUTH AND PORTIONS OF
SITE 133 EAST AND HALLADAY STREET SOUTH
GARFIELD AVENUE GROUP SITES
JERSEY CITY, NEW JERSEY

SITE PLAN

FIGURE 1-2

02/23/2023

DRAWN BY: MDN

