

Case Name: HUDSON COUNTY CHROMATE - PPG (Garfield Avenue Group Sites)

**IMPORTANT:** 1) The CID must be **FINALIZED** prior to upload. After the CID has been populated, click the Validate for Upload button and follow the instructions.

PI #: 395, 246332, G000008753, G000008759, 777089, 722429, 775706, 775998, 629388, G000044581, G000011477 2) You **MUST SAVE** after finalizing, and before upload. Click the Enable for Editing button after uploading to edit again.

Activity #: RPC000051, RPC00001, PFR0000001

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
Garfield Avenue Group-Ground Water	Environmental media - Media Ground water	Site wide groundwater impacted by Chromate Chemical Production Waste (CCPW) metals including Chromium and other contaminants of concern (COCs) on or emanating from Site 114 associated with historical operations at Site 114	Yes		RI	03/24/2021			Ground Water	Metals	VO	Other	Remediation Standards	Ground Water		Bioremediation	Chemical Reduction	No	<p>Total chromium (Cr) is the primary COC in the area. Other COCs reported at concentrations exceeding the NJDEP GWQS include CCPW metals, other TAL metals, VOCs and SVOCs. Concentrations of Cr and CCPW metals greater than the GWQS extend off of Site 114 across Garfield Avenue, Carteret Avenue, Halladay Street, Pacific Avenue, and Forrest Street. This AOC includes both on-site and off-site impacts.</p> <p>Remedial Investigation of groundwater is documented in the 2021 Draft Groundwater Remedial Investigation Report (GW-077). Delineation of CCPW metals, which includes Cr, and other constituents identified to be on or emanating from Site 114 is complete in the shallow, intermediate, and deep water-bearing zones. Additional delineation of Cr in the bedrock water bearing zone is necessary in the southwest quadrant of Site 114.</p> <p>Between 2010 and 2020, chromium-impacted soil was excavated from HCC Sites 114, 132, 133 East, 135, 137 North, 143, and 186, from adjacent properties (Al Smith Moving &amp; Furniture Company, Forrest Street Properties, and the former Halsted Corporation property), and adjacent roadways (Carteret Avenue, Halladay Street, Pacific Avenue, Garfield Avenue, and Forrest Street). Excavated material was disposed of at licensed, off-site locations in accordance with applicable regulations. During restoration activities, groundwater engineering controls were installed and/or maintained, including a capillary break, amended backfill, competent meadow mat, and sheet pile.</p> <p>Two in-situ treatment technologies, including a bioprecipitation approach and an abiotic chemical reduction process, were pilot tested at Site 114. Performance monitoring of these pilot tests have been completed, and both technologies were effective in reducing the concentration of Cr and Cr<sup>6+</sup> in groundwater in the study areas.</p> <p>To expedite the treatment of groundwater associated with the portion of the GA Group Sites that is impacted with Cr and Cr<sup>6+</sup>, a phased groundwater Interim Remedial Measure (IRM) approach was developed. Phase I has been implemented per the 2017 Discharge to Groundwater Permit-By-Rule Authorization Request. The Phase I IRM focused primarily on the intermediate and upper portion of the deep water-bearing zones in the southwest quadrant of Site 114 in areas where source removal in the shallow and intermediate zones has been completed and where elevated Cr<sup>6+</sup> is present in the groundwater. The Phase I IRM also included a small Cr-impacted area in the shallow water-bearing zone. Phase II was initiated in October 2020 in accordance with the 2019 Discharge to Groundwater Permit-By-Rule Request. The Phase II focuses on the intermediate and deep water bearing zones in the northwest and southeast quadrant of Site 114. The third phase of the groundwater IRMs (Phase III) is being planned to treat Cr-contaminated groundwater in the shallow, intermediate, and deep water-bearing zones in areas that are not targeted by the Phase I and II IRMs. Phase III IRM operations are expected to begin in September 2021. The three IRMs use a combination of demonstrated active remediation technologies including in situ anaerobic bioprecipitation (ISAB) and in situ chemical reduction (ISCR) to achieve the remediation objectives.</p> <p>A CEA was established by PPG on June 11, 2018 for groundwater contamination related to historical operations at Site 114. A separate CEA was implemented by PSEG for this area that covers the former MGP located on the northeastern portion of Site 114. A revised CEA and a request for a Historic Fill virtual CEA was submitted with the groundwater RIR in March 2021.</p>