

## **Attachment B**

### **Response-to-Comments Documents**

To Wayne Howitz, NJDEP

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CC Ronald Riccio, Site Administrator  
James Ray, Site Administrator PM  
Nancy Colson, Site Administrator Assistant  
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Subject Response to NJDEP/Weston's 08/24/2018 Comments and the City/ERFS's  
10/05/2018 Comments on the *Draft Remedial Action Work Plan (Soil) – Carteret  
Avenue*

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From Cameron Dixon  
Sandy Paulsen

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Date November 21, 2018

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On June 29, 2018, PPG/AECOM issued the *Draft Remedial Action Work Plan (Soil) – Carteret Avenue, Addendum to the Final Remedial Action Work Plan (Soil) Rev. 3, Garfield Avenue Group Sites* (AECOM, 2018b) (Draft Carteret RAWP). On behalf of the New Jersey Department of Environmental Protection (NJDEP), Weston Solutions, Inc. (Weston) provided comments on the Draft Carteret RAWP via email on August 24, 2018. On behalf of the City of Jersey City (the City), ERFS provided their comments on the document on October 5, 2018. This memorandum provides PPG/AECOM's responses to NJDEP/Weston's August 24, 2018 comments and to the City/ERFS's October 5, 2018 comments. Associated revisions have been incorporated into the *Final Remedial Action Work Plan (Soil) – Carteret Avenue, Addendum to the Final Remedial Action Work Plan (Soil) Rev. 4, Garfield Avenue Group Sites, Jersey City, Hudson County, New Jersey* (Final Carteret RAWP) (AECOM, 2018e).

## **NJDEP/Weston's 08/24/2018 General Comments**

### **GENERAL COMMENT 1**

***NJDEP/Weston General Comment 1:*** Overall, the remedial strategy outlined in the RAWP Addendum is consistent with the April 12, 2018 Carteret Avenue Proposed Remediation Plan Summary – Soil (Revision 1) [AECOM, 2018a] with the exceptions noted herein. PPG may move forward with the detailed design and pre-construction activities required to implement this RAWP Addendum, concurrent with revising the RAWP Addendum to address these comments. [RAWP Addendum = Draft Carteret RAWP]

**PPG/AECOM Response to General Comment 1:** Acknowledged.

### **GENERAL COMMENT 2**

***NJDEP/Weston General Comment 2:*** As per N.J.A.C. 7:26E-1.6(a)1, the RAWP Addendum must be certified by PPG; please include the certification in the final RAWP Addendum.

**PPG/AECOM Response to General Comment 2:** A Cover/Certification Form signed by a PPG representative is included in the Final Carteret RAWP.

## **NJDEP/Weston's 08/24/2018 Section-Specific Comments**

### **SECTION-SPECIFIC COMMENT 1**

***NJDEP/Weston Section-Specific Comment 1:*** *Cover:* Please include the Site Remediation Program (SRP) Program Interest (PI) Number on the cover of the RAWP Addendum and on all future submittals.

**PPG/AECOM Response to Section-Specific Comment 1:** The cover page of the Final Carteret RAWP has been revised to include the SRP RI Number for Carteret Avenue. PPG/AECOM will include the SRP PI Number on the cover page of future submittals.

### **SECTION-SPECIFIC COMMENT 2**

***NJDEP/Weston Section-Specific Comment 2:*** *Section 3.3:* Since the spring-line elevation of the 96-inch sewer is critical in determining maximum remedial excavation depth, please include in the RAWP Addendum the updated (e.g., including recent test pit information) construction plans that identify the revised sewer profile for the 96-inch sewer, rather than delaying submittal of this information to the Remedial Action Report. Also please incorporate this information into the Figures/Drawings presented within the RAWP Addendum.

**PPG/AECOM Response to Section-Specific Comment 2:** Elevation information collected during recent test-pitting activities was used to adjust the estimated elevations of the pipe upstream of the siphon and proposed excavation limits. No CCPW was observed during test pitting, and no samples were collected as it was not feasible to excavate deep enough in order to collect samples safely. The Remediation Design Drawings C-03.1 and C-03.2 and Figures 5-1A through 5-2C of the Final Carteret RAWP have been revised accordingly.

### **SECTION-SPECIFIC COMMENT 3**

***NJDEP/Weston Section-Specific Comment 3:*** *Section 3.4: Please note that comments relating to the list of constituents having emanated from Site 114, listed in this section of the RAWP Addendum, are being withheld pending submittal and review of the anticipated “emanating from” memorandum which is required as per the October 2, 2017 Response to NJDEP/Weston’s Comments on PPG’s ACO/JCO Site Parameters List (Revision 0). [ACO = Administrative Consent Order, JCO = Judicial Consent Order]*

**PPG/AECOM Response to Section-Specific Comment 3:** Acknowledged. Note that the referenced document (technical memorandum entitled *Halladay Street North, Carteret Avenue, Garfield Avenue – Emanating-From Parameters* [Roadway Emanating From Evaluation] [AECOM, 2018f]) was issued on September 20, 2018, and is currently under stakeholder review.

### **SECTION-SPECIFIC COMMENT 4**

***NJDEP/Weston Section-Specific Comment 4:*** *Section 3.5: Please identify the location of the Interim Remedial Measure (IRM) on one of the RAWP Addendum figures.*

**PPG/AECOM Response to Section-Specific Comment 4:** Drawing C-01.2 has been revised to include the location of the IRM located within Carteret Avenue and Section 3.5 has been revised accordingly, as presented in the Final Carteret RAWP.

### **SECTION-SPECIFIC COMMENT 5**

***NJDEP/Weston Section-Specific Comment 5:*** *Section 4.2: Monitoring wells 114-P2B4-MW1 and 132-P3A-MW5, which are proposed for decommissioning without replacement, are included in the list of wells to be sampled during the Garfield Avenue Group groundwater Remedial Investigation (GW RI). The Department reserves the right to request replacement of these wells contingent upon review of the forthcoming GW RI report.*

**PPG/AECOM Response to Section-Specific Comment 5:** Monitoring wells 114-P2B4-MW1 and 132-P3A-MW5 were sampled as part of the GW RI, as reported in the *Draft Groundwater Remedial Investigation Report, PPG Garfield Avenue Group, Hudson County Chromate Sites, Jersey City, New Jersey* (GW RIR), issued on October 1, 2018 (AECOM, 2018c). The GW RIR is currently under stakeholder review. Section 4.2 of the Final Carteret RAWP has been revised to state that NJDEP may request replacement of these wells, contingent on their review of the GW RIR.

### **SECTION-SPECIFIC COMMENT 6**

***NJDEP/Weston Section-Specific Comment 6:*** *Section 4.3.2: The text states that “...a 48-inch concrete combined sewer line runs along the eastern portion of Carteret Avenue. ... JCMUA has currently indicated that they cannot determine a safe excavation offset for this sewer, so excavation of the portion of Carteret Avenue from Halladay Street to Pacific Avenue will not be completed until the sewer is replaced, or an alternate agreement regarding remediation in that portion of the street is reached with JCMUA...” To date, discussions regarding deferral of remedial action related to the 48-inch sewer have been limited to Halladay Street North. A timeline is required for inclusion in the Master Schedule by which resolution will be reached related to the 48-inch sewer line in Carteret Avenue between Halladay Street and Pacific Avenue and any anticipated lag time between*

*reaching that resolution and implementing remedial action in Carteret Avenue between Halladay Street and Pacific Avenue. [JCMUA = Jersey City Municipal Utilities Authority]*

**PPG/AECOM Response to Section-Specific Comment 6:** JCMUA has indicated that the 48-inch sewer will be decommissioned. Excavation within the area of the 48-inch sewer will extend to elevation (El.) 3.5 feet in the North American Vertical Datum of 1988 (ft NAVD88), which is approximately 3.5 feet (ft) above the top of the pipe. Therefore, excavation in Carteret Avenue will not impact the existing 48-inch sewer. Section 4.3.2 of the Final Carteret RAWP has been revised to provide clarification.

The proposed excavation offset within the area adjacent to the 48-inch sewer is based solely on the findings of the structural evaluation of the Pacific Avenue building adjacent to the excavation area conducted by the Structural Engineer, as presented in Attachment B of the Final Carteret RAWP. There are currently no plans to demolish this building and the building is currently being remodeled to house a brewery; therefore, a timeline for inclusion of this area adjacent to the building in the Master Schedule is not feasible at this time.

#### **SECTION-SPECIFIC COMMENT 7**

**NJDEP/Weston Section-Specific Comment 7:** *Section 5.1: The remedial plan includes removal of source material, defined as visible CCPW and Cr<sup>+6</sup> concentrations in soil greater than 1,000 mg/kg extending below the spring-line of the pipe where present. However, Table 5-1B indicates several locations where Cr<sup>+6</sup> concentrations greater than 1,000 mg/kg will remain behind following the remedial action as presented in the RAWP Addendum (e.g., 114TP4-S at 14-15 feet below ground surface [ft bgs]; P4-WC-OPQR-17A at 10-15 ft bgs; P4-WC-UV-18A19A at 12-17 ft bgs). Soils associated with these samples must be removed. [bgs = below ground surface, CCPW = Chromate Chemical Production Waste, Cr<sup>+6</sup> = hexavalent chromium, mg/kg = milligrams per kilogram]*

**PPG/AECOM Response to Section-Specific Comment 7:** The proposed excavation limits have been revised so that soil corresponding to samples with Cr<sup>+6</sup> concentration greater than 1,000 mg/kg, including P4-WC-OPQR-17A (10.0 to 15.0 ft bgs), 114-TP4-S (14.0-15.0 ft bgs), and P4-WC-UV-18A19A (12-17 ft bgs), will be removed.

Table 5-1B has been revised to indicate the sample status of "Removed" for the 114-TP4-S (14.0-15.0 ft bgs) sample, which is consistent with the sample status presented on Figure 5-2B (Station 5+40).

Please note that data collected for waste characterization purposes only (e.g., P4-WC-OPQR-17A, P4-WC-UV-18A19A) has been excluded from the Final Carteret RAWP as this data represents composited samples, is not validated, and is not appropriate for use in remedial decision making.

### **SECTION-SPECIFIC COMMENT 8**

**NJDEP/Weston Section-Specific Comment 8:** *Section 5.2.4: As per N.J.A.C. 7:26E-5.5(b)4, the RAWP Addendum should present the findings of any design studies. Therefore, please include the structural engineering assessment performed on the One0One Pacific Avenue LLC building as part of the RAWP Addendum rather than deferring it until submittal of the RAR, as stated. [RAR = Remedial Action Report]*

**PPG/AECOM Response to Section-Specific Comment 8:** The structural evaluation of the Pacific Avenue buildings adjacent to the excavation area is included as Attachment B of the Final Carteret RAWP.

### **SECTION-SPECIFIC COMMENT 9**

**NJDEP/Weston Section-Specific Comment 9:** *Section 5.4, third paragraph: As the generator of the non-CCPW-impacted material, PPG is responsible for preparation of the fill reuse plan. If the reuse plan is submitted separate from this RAWP Addendum, it must be prepared and submitted in a time sufficient to allow Department approval prior to emplacing the fill.*

**PPG/AECOM Response to Section-Specific Comment 9:** PPG/AECOM has prepared a soil re-use plan for use of non-chrome fill to be excavated from Carteret Avenue and re-used as backfill beneath the clean corridor. This re-use plan is provided as Attachment C of the Final Carteret RAWP. Section 5.4 of the Final Carteret RAWP has been revised accordingly.

### **SECTION-SPECIFIC COMMENT 10**

**NJDEP/Weston Section-Specific Comment 10:** *Section 5.5: The discussion of institutional and engineering controls states Impacts to remain in Carteret Avenue following excavation... will be documented in a notice in lieu of deed notice and handled under the Sewer Protocol. Carteret Avenue is not designated as a Sewer Site; however, if the City of Jersey City would agree, it could be managed consistent with the Sewer Protocol.*

**PPG/AECOM Response to Section-Specific Comment 10:** Additional Jersey City concurrence is not required to invoke the sewer protocol at Carteret Avenue. Specifically, the 2011 Consent Judgment provides that "sites or portions of Sites that constitute a Sewer Site shall be remediated in accordance with the Sewer Protocol attached as Exhibit B. The Sewer Protocol has been approved by Jersey City authorities." (See Paragraph 8 of the 2011 Consent Judgment). A Sewer Site is defined as "a Site or a portion of a Site at which CCPW was used for the bedding, fill, or otherwise used in the construction of municipal or public sewer, water mains or lines, sumps, pumps, transfer stations, other related components of a sewer or water distribution system or other utility lines. A complete list of known CCPW sites that are Sewer Sites is attached to this Consent Judgment at Appendix F, any other Site or portion of a Site that qualifies under the first sentence of this definition may utilize the Sewer Protocol for the remediation of such Site or portion thereof, as applicable." (See Paragraph 4 of the 2011 Consent Judgment). Carteret Avenue is part of the Garfield Avenue Group of Sites and contains a sewer line and, thus, is considered "any other Site or portion of a Site" that may utilize the Sewer Protocol under the 2011 Consent Judgment.

### **SECTION-SPECIFIC COMMENT 11**

**NJDEP/Weston Section-Specific Comment 11:** *Section 5.6: See Specific Comment 7.*

**PPG/AECOM Response to Section-Specific Comment 11:** In a November 7, 2018 email from Laura Amend-Babcock of Weston to Cameron Dixon of AECOM, Ms. Amend-Babcock stated “I apologize for the confusion. Specific Comment 11 was sent in error. Therefore, you can disregard Specific Comment 11.” Therefore, no response to this comment is required from PPG/AECOM.

## **SECTION-SPECIFIC COMMENT 12**

***NJDEP/Weston Section-Specific Comment 12: Section 5.7.2: Considering that backfill amended with FerroBlack-H (FBH) is being proposed at depth to serve in lieu of the disturbed meadow mat layer as a reducing environment between intermediate and shallow groundwater, and that JCMUA will be replacing the 96-inch sewer in the area of the siphon following remedial excavation, FBH-amended backfill must be used by JCMUA during their sewer rehabilitation process, or a capillary break must be established consistent with the requirements of the Department's Capillary Break Determination for Portions of the Garfield Avenue Group Sites letter dated 3/30/17.***

**PPG/AECOM Response to Section-Specific Comment 12:** Section 5.8 of the Final Carteret RAWP has been revised to state that any backfill material amended with FerroBlack®-H that is removed during rehabilitation of the 96-inch sewer will be replaced. As stated in Section 5.8, a determination of which party will be responsible for restoration activities in Carteret Avenue is pending negotiations between PPG and the City, and restoration will be conducted in accordance with the final agreement.

## **SECTION-SPECIFIC COMMENT 13**

***NJDEP/Weston Section-Specific Comment 13a: Figures: Figures the 5-1A through 5-2C show that the anticipated remedial limits will end in some locations (e.g., near Stations 3+90, 5+10, 7+80, 8+10, 8+20, 8+40, 8+50, 9+70) below the deepest known exceedances but shallower than the next clean sample below those exceedances. Where the excavation limits do not depict continuing the excavation to a clean pre-excavation sample, PPG must bias the post-remedial confirmation samples to areas of anticipated highest concentrations (i.e., pre-excavation exceedances, visually-observed CCPW impacts). If post-remedial samples indicate exceedances of remedial limits above the spring-line, PPG is expected to continue remediation to the deeper of clean confirmation samples or the spring-line of the pipe, consistent with the remedy as described in Section 5.1 of the RAWP Addendum.***

**PPG/AECOM Response to Section-Specific Comment 13a:** Post-excavation sampling will be biased toward areas where the greatest levels of CCPW-related impacts are anticipated. If post-excavation sampling results indicate that CCPW-related impacts remain above the spring-line, those impacts will be addressed in accordance with the approach presented in Section 5.1 of the Final Carteret RAWP.

***NJDEP/Weston Section-Specific Comment 13b: Figures: Figure 5-2A, cross section for Station 1+20 shows that remedial excavation will stop shallower than required to remove CCPW observed in boring MW4A. As the proposed excavation limit is shallower than the spring-line of the pipe, the remedial excavation must be extended in this area to fully remove the visible CCPW.***

**PPG/AECOM Response to Section-Specific Comment 13b:** Visible CCPW material will be excavated in Carteret Avenue, including visible CCPW material observed in boring MW4A, as described in Section 5.1 of the Final Carteret RAWP.

Figure 5-2A appears to depict a small portion of the CCPW observed in boring MW4A (observed from the ground surface to elevation 2.8 ft NAVD88) remaining below the excavation; however, this material is being removed based on the proposed excavation limits, which at this location extends to El. 1.5 ft NAVD88. The reason that visible CCPW material appears to remain above the excavation limits in this area is based on how the computer program (i.e., AutoCAD Civil 3D) used to generate the section view projects objects in two-dimensional space. No changes to the proposed excavation limits are required based on this comment.

***NJDEP/Weston Section-Specific Comment 13c: Figures:*** *Where the anticipated limits of remediation extend to the spring-line of the 96-inch sewer and pre-remedial sample results indicate an exceedance of the applicable remedial standards (e.g., Stations 5+40, 5+70, 6+30, 6+60) at or below the spring-line, PPG may wish to collect post-remedial samples to document as-built conditions for use in the Notice in Lieu of Deed Notice.*

**PPG/AECOM Response to Section-Specific Comment 13c:** Acknowledged. PPG will consider collecting additional post-excavation samples to further document post-remedial conditions for use in the Notice in Lieu of Deed Notice.

***NJDEP/Weston Section-Specific Comment 13d: Figures:*** *On Figure 5-2C, Station 9+60 shows the limits of remedial excavation slope up adjacent to 101 Pacific Avenue. PPG must provide justification as to why the slope is offset from the 101 Pacific Avenue property line to the point where the hexavalent chromium exceedance detected at P4-EE21A (at 6-6.5 feet below ground surface) will not be removed. See Specific Comment 8.*

**PPG/AECOM Response to Section-Specific Comment 13d:** The horizontal offset of 15 ft established for this area is based on the results of the structural evaluation of the Pacific Avenue buildings adjacent to the excavation area included as Attachment B of the Final Carteret RAWP.

***NJDEP/Weston Section-Specific Comment 13e: Figures:*** *See also Specific Comment 2.*

**PPG/AECOM Response to Section-Specific Comment 13e:** See PPG/AECOM response to Section-Specific Comment 2.

#### **SECTION-SPECIFIC COMMENT 14**

***NJDEP/Weston Section-Specific Comment 14a: Drawings:*** *The legend line type does not agree with the excavation cross sections for the Profile/Section Proposed Excavation Surface shown in Drawings X-01.1, X-01.2, X-02.1, and X-02.2. Further, the proposed excavation surface should be identified as an approximate depth/elevation until the elevation of the 96-inch sewer is confirmed. See Specific Comment 2.*

**PPG/AECOM Response to Section-Specific Comment 14a:** Drawing G-01 has been revised to reflect the appropriate line type for the proposed excavation surface. Note 2 has been added to Drawings X-01.1 and X-02.1, indicating that the proposed excavation limits may be revised based on the elevation of the 96-inch sewer spring-line. The revised drawings are included as part of the Final Carteret RAWP. See PPG/AECOM response to Section-Specific Comment 2.

***NJDEP/Weston Section-Specific Comment 14b: Drawings:*** *Please explain why the sections at Station 7+80 and 8+10 on Drawing X-02.2 are not restored with asphalt pavement.*



**PPG/AECOM Response to Section-Specific Comment 14b:** The final surface at Stations 7+80 and 8+10 on Drawing X-02.2 has been revised to include asphalt.

#### **SECTION-SPECIFIC COMMENT 15**

***NJDEP/Weston Section-Specific Comment 15: Non-Chrome Fill Excavation for Clean Corridor – Carteret Avenue: It is anticipated that the comments on Attachment B, presented below, will not impact PPG's ability to implement the remedial action as described in the body of the RAWP Addendum:***

**PPG/AECOM Response to Section-Specific Comment 15:** Please note that Attachment B referenced above has been revised to include the soil re-use plan and has been renamed, *Carteret Avenue Non-Chrome Fill Soil Re-Use Plan*. This revised document is provided as Attachment C of the Final Carteret RAWP. See PPG/AECOM responses below.

***NJDEP/Weston Section-Specific Comment 15a: Comments related to the identification of non-CCPW-related constituents that have emanated from Site 114 onto Carteret Avenue are being deferred until submittal and review of the forthcoming Halladay Street North, Carteret Avenue and Garfield Avenue – Emanating From Parameters memorandum.***

**PPG/AECOM Response to Section-Specific Comment 15a:** See PPG/AECOM response to Section-Specific Comment 3.

***NJDEP/Weston Section-Specific Comment 15b: Area 1 is roughly analogous to grids A14A, B14A, C14A, and D14A. Comparing the results from the 2/17/17 Carteret Avenue TEE, grids A14A and D14A required excavation to depths of 20 ft bgs and 6 ft bgs, respectively to address known Cr<sup>+6</sup> exceedances and grids B14A and C14A required additional sampling to a depth of 6 ft bgs each to confirm the absence of CCPW impacts. Therefore it is not confirmed at this time that the Area 1 clean corridor excavation is required solely to address non-CCPW impacts. [TEE = terminal excavation elevation]***

**PPG/AECOM Response to Section-Specific Comment 15b:** Figures 5-1A through 5-2A and Figure 5-2C of the Final Carteret RAWP present the available CCPW-related data associated with Non-Chrome Fill Areas. As shown in these figures, no CCPW-related impacts are present in these areas based on available data. PPG acknowledges that data gaps exist in these areas based on the sampling requirements set forth in the *Updated Method to Determine Compliance with the Department's Chromium Policy Garfield Avenue Group - Sites 114, 132, 133, 135, 137, and 143* (Method to Determine Compliance) (NJDEP, 2013). As such, additional sampling will be conducted as described in Section 5.4 of the Final Carteret RAWP to confirm the absence of CCPW-related impacts in Non-Chrome Fill Areas 1 through 4 in accordance with the Method to Determine Compliance.

***NJDEP/Weston Section-Specific Comment 15c: Area 2 is roughly analogous to grids E15A and F15A. Comparing the results from the 2/17/17 Carteret Avenue TEE, while E15A was identified as a "no-excavation" grid, F15A required excavation to a depth of 4 ft bgs to address visible CCPW identified in boring 143-P3A-F15A. Therefore it is not confirmed at this time that the Area 2 clean corridor excavation is required solely to address non-CCPW impacts.***

**PPG/AECOM Response to Section-Specific Comment 15c:** See PPG/AECOM response to NJDEP/Weston Section-Specific Comment 15b.

***NJDEP/Weston Section-Specific Comment 15d:*** Area 3 is roughly analogous to grids Z19A, AA19A, BB19A, CC20A, DD20A, EE20A, and EE21A. Comparing the results from the 2/17/17 Carteret Avenue TEE, while grids CC20A, DD20A, and EE20A were identified as “no excavation” grids, ZZ19A required excavation to a depth of 10 ft bgs, AA19A required excavation to a depth of 4 ft bgs, BB19A required excavation to a depth of 4 ft bgs, and EE21A required excavation to a depth of 8 ft bgs to address known Cr<sup>+6</sup> exceedances. Therefore it is not confirmed at this time that the Area 3 clean corridor excavation is required solely to address non-CCPW impacts.

**PPG/AECOM Response to Section-Specific Comment 15d:** See PPG/AECOM response to NJDEP/Weston Section-Specific Comment 15b.

***NJDEP/Weston Section-Specific Comment 15e:*** Area 4 is roughly analogous to grids DD21A, EE22A, and FF22A. Comparing the results from the 2/17/17 Carteret Avenue TEE, while grids BB21A, CC21A, DD21A, EE22A, and FF22A were identified as “no excavation” grids, BB21A required excavation to 16 ft bgs, CC21A required excavation to 2 ft bgs, and DD22A required excavation to 11 ft bgs to address known Cr<sup>+6</sup> exceedances. Therefore it is not confirmed at this time that the Area 3 clean corridor excavation is required solely to address non-CCPW impacts.

**PPG/AECOM Response to Section-Specific Comment 15e:** See PPG/AECOM response to NJDEP/Weston Section-Specific Comment 15b.

#### **SECTION-SPECIFIC COMMENT 16**

***NJDEP/Weston Section-Specific Comment 16:*** Please ensure the format of the draft Notice in Lieu of Deed Notice is consistent with that provided to PPG via email from David Doyle to Crystal Leavey on August 8, 2018 at 4:03 PM, and also that it addresses all contaminants for which PPG is responsible (i.e., those which are determined to have emanated from Site 114). The Notice in Lieu of Deed Notice must also identify contaminants anticipated to remain following remedial excavation pending access to areas that are currently considered inaccessible.

**PPG/AECOM Response to Section-Specific Comment 16:** Per a phone conversation between AECOM and NJDEP on November 11, 2018, a draft notice in lieu of deed notice is not required to be submitted at this time, but will be required as part of the Remedial Action Report (RAR) phase. Therefore, the Final Carteret RAWP no longer includes the draft Notice in Lieu of Deed Notice. The draft Notice in Lieu of Deed Notice, to be provided as part of the future RAR submittal, will include CCPW-related impacts and “emanating from” impacts, specifically manufactured gas plant (MGP)-related impacts, that remain in soil above unrestricted use standards within Carteret Avenue following excavation.

## **The City/ERFS 10/05/2018 Text Comments**

### **TEXT COMMENT 1**

***The City/ERFS Text Comment 1:*** Section 3.3, p. 3-1: Last sentence on page refers to “construction plans”. Please identify what these plans are.

**PPG/AECOM Response to Text Section-Specific Comment 1:** Section 3.3 has been revised to indicate that information gathered during the recent test-pitting investigation conducted upstream of the siphon has been incorporated in the Remediation Design Drawings, as presented in the Final Carteret RAWP.

### **TEXT COMMENT 2**

***The City/ERFS Text Comment 2:*** Section 3.3, p. 3-2: Last paragraph in Section 3.3 states that the sewer pipe will be exposed “in several areas” – please state that this will occur where ever soils are determined to exceed 20ppm of hex-chrome. Additionally, please provide the rationale for selecting the three stations identified for bedding investigation. [hex-chrome = hexavalent chromium, ppm = parts per million]

**PPG/AECOM Response to Text Comment 2:** Test pits will not be conducted at every location where soils contain Cr<sup>+6</sup> at concentrations greater than the CrSCC. Rather, test pits are proposed at three locations between the siphon area and Halladay Street North to expose the sewer pipe and to investigate the sewer bedding material for the presence of CCPW material. The three proposed test pit locations were selected based on the highest pre-remediation concentration of Cr<sup>+6</sup> in soil at the approximate pipe elevations.

### **TEXT COMMENT 3**

***The City/ERFS Text Comment 3:*** Section 3.4, p. 3-2: Reference to “Section 5.3” at the end of this section must be changed to “Section 5.4”.

**PPG/AECOM Response to Text Comment 3:** Section 3.4 of the Final Carteret RAWP has been revised accordingly.

### **TEXT COMMENT 4**

***The City/ERFS Text Comment 4:*** Table 4-1, p. 4-1: Revise reference to SESCOP submittal date. [SESCP = Soil Erosion and Sediment Control Plan]

**PPG/AECOM Response to Text Comment 4:** Table 4-1 of the Final Carteret RAWP was revised to include the submittal and approval dates for the SESCOP re-certification application.

### **TEXT COMMENT 5**

***The City/ERFS Text Comment 5:*** Section 4.3.2, p. 4-4: Paragraph regarding the HSN sewer must be revised in light of JCMUA’s plans for re-routing the sewer line. [HSN = Halladay Street North]

**PPG/AECOM Response to Text Comment 5:** Section 4.3.2 of the Final Carteret RAWP has been revised accordingly. See also PPG/AECOM response to NJDEP/Weston's Section-Specific Comment 6.

#### **TEXT COMMENT 6**

**The City/ERFS Text Comment 6:** *Section 5.1, p. 5-1: Please add text that the excavation will extend "at least" down to elevation 3.5. Also include a reference to Section 5.2 for a detailed description of the excavation limits.*

**PPG/AECOM Response to Text Comment 6:** Excavation to establish a clean corridor in Carteret Avenue will be conducted to El. 3.5ft NAVD88, where feasible, as indicated in Section 5.1. As indicated in Section 5.1, additional excavation (i.e., beyond the clean corridor) will be conducted to remove soil with concentrations of Cr<sup>+6</sup> greater than 20 mg/kg down to the spring-line of the pipe, and deeper than the spring-line of the pipe to remove source material, where present. No revisions to Section 5.1 are required as a result of this comment.

#### **TEXT COMMENT 7**

**The City/ERFS Text Section-Specific Comment 7:** *Section 5.1, p. 5-1: Paragraph 3 regarding JCMUA responsibility to provide PE-stamped drawings – this is not acceptable to JCMUA. Discussions between PPG and JCMUA are needed to resolve this issue. [PE = Professional Engineer]*

**PPG/AECOM Response to Text Comment 7:** The text has been revised to remove the requirement for PE-stamped drawings per an agreement between PPG and JCMUA that was made at an October 22, 2018 meeting at the JCMUA office in Jersey City. During this meeting, a 4-ft offset was agreed upon for areas where excavation below the spring-line of the pipe is required; Section 5.1 of the Final Carteret RAWP has been revised accordingly.

#### **TEXT COMMENT 8**

**The City/ERFS Text Comment 8:** *Section 5.1, p. 5-1: Paragraph 4: Revise first sentence – it is the limited excavation that will protect the pipe – not the soils with Cr exceedances. Also, revise the reference to depictions of CCPW to remain – they do not appear to be depicted on Figs 5-1A & 5-1B.*

**PPG/AECOM Response to Text Comment 8:** Section 5.1 of the Final Carteret RAWP has been revised to state that limiting excavation in this area will protect the existing combined sewer. CCPW to remain does appear on Figures 5-1A and 5-1B, so no update has been made to the figure references.

#### **TEXT COMMENT 9**

**The City/ERFS Text Comment 9:** *Section 5.2.3: See Comment 5 above.*

**PPG/AECOM Response to Text Comment 9:** See PPG/AECOM response to the City/ERFS Section-Specific Comment 5. Section 5.2.3 of the Final Carteret RAWP has been revised accordingly.

#### **TEXT COMMENT 10**

**The City/ERFS Text Comment 10:** *Section 5.2.7: There is no mention of the boundary at HSS. [HSS = Halladay Street South]*

**PPG/AECOM Response to Text Comment 10:** Section 5.2.7 of the Final Carteret RAWP has been revised to include a reference to HSS.

#### **TEXT COMMENT 11**

**The City/ERFS Text Comment 11:** *Section 5.4, p. 5-4: Paragraph 1 reference to “MGP Product” – is this intended to mean free product? If not, please replace with “residual MGP impacts” or similar. Please revise all subsequent references as needed. Also, please provide a statement (or reference to Section 5.5) that indicates how PPG/PSE&G will remedy MGP-related impacts. [PSE&G = Public Service Electric and Gas Company]*

**PPG/AECOM Response to Text Comment 11:** Section 5.4 of the Final Carteret RAWP has been revised to refer to “MGP-related impacts” or “MGP-related ‘emanating from’ impacts,” clarifying that the “emanating from” impacts are MGP-related, and will be remediated as described in Section 5.5.

#### **TEXT COMMENT 12**

**The City/ERFS Text Comment 12:** *Section 5.4, p. 5-4: Paragraph 2: The City understands that PPG will be responsible for developing the soils re-use plan – please revise this text.*

**PPG/AECOM Response to Text Comment 12:** Section 5.4 of the Final Carteret RAWP has been revised accordingly.

#### **TEXT COMMENT 13**

**The City/ERFS Text Comment 13:** *Section 5.4, p. 5-4: Paragraph 3 – Reference to 2-foot clean fill cap – Won't this cap also serve as an Eng. Control for hex-chrome exceedances that will remain? – Please clarify. Also, please clarify that the cap will be placed (at depth) above the excavation surface.*

**PPG/AECOM Response to Text Comment 13:** Section 5.4 is specific to non-CCPW impacts, including MGP-related “emanating from” impacts. A discussion of the full function of the proposed clean fill cap (for both CCPW-related impacts and MGP-related “emanating from” impacts) is discussed in Section 5.5.

#### **TEXT COMMENT 14**

**The City/ERFS Text Comment 14:** *Section 5.5, p. 5-4: Paragraph 1 – Need to revise the text regarding the Sewer Protocol. Carteret is not a Sewer Site. City understands that PPG intends to*

*remedy deep remaining Cr impacts using methods consistent with the Sewer Protocols; references to the applicable documents are OK. [Cr = chromium]*

**PPG/AECOM Response to Text Comment 14:** See PPG/AECOM's response to NJDEP/Weston's Section-Specific Comment 10.

#### **TEXT COMMENT 15**

**The City/ERFS Text Comment 15:** *Section 5.5, p. 5-4: Paragraph 2 – It is not clear where the 2-foot clean fill cap will be placed – will it be above the terminal excavation surface or at some uniform elevation? Will there be a visual demarcation? Please add clarification here.*

**PPG/AECOM Response to Text Comment 15:** Sections 5.4 and 5.5 of the Final Carteret RAWP have been revised to indicate that the clean fill soil cap will be installed above the base of excavation or top of the re-used non-chrome fill. Section 5.5 has been revised to indicate that a visual demarcation layer will be installed between the base of the excavation (or top of re-used non-chrome fill) and the clean fill soil cap. Section 5.7.1 also notes that a visual demarcation layer will be installed prior to backfilling the excavation area.

#### **TEXT COMMENT 16**

**The City/ERFS Text Comment 16:** *Section 5.5, p. 5-4: Paragraph 3 – Please revise the end of the sentence to – "if required when [future] utility work is necessary".*

**PPG/AECOM Response to Text Comment 16:** Section 5.5 of the Final Carteret Avenue RAWP has been revised accordingly.

#### **TEXT COMMENT 17**

**The City/ERFS Text Comment 17:** *Section 5.5, p. 5-5: Paragraph 4 – Please indicate which RAR; i.e., PPG's or PSE&G's.*

**PPG/AECOM Response to Text Comment 17:** Please note that the paragraph referenced above has been deleted from the Final Carteret RAWP since a draft Notice in Lieu Deed Notice is not being submitted at this time (see PPG/AECOM response to NJDEP/Weston Section-Specific Comment 11). PPG will prepare an RAR for Carteret Avenue that will address remedial activities for CCPW-related impacts and MGP-related impacts. Section 5.5 has been revised to clarify that a draft notice in lieu of deed notice will be prepared by PPG and will include CCPW-related and MGP-related impacts that remain following excavation.

#### **TEXT COMMENT 18**

**The City/ERFS Text Comment 18:** *Section 5.6, p. 5-5: Paragraph 3 – Can we anticipate that excavation will extend toward Pacific if impacts are discovered in Carteret beyond the current boundary depicted in the RAWP?*

**PPG/AECOM Response to Text Comment 18:** CCPW-related impacts have been delineated based on the current dataset, and are not expected to extend further toward or into Pacific Avenue. As stated in Section 5.2.5, if conditions observed in the field indicate that the excavation must

extend closer to Pacific Avenue, excavation will be designed and sequenced to minimize impacts to existing infrastructure in Pacific Avenue. If impacts are observed to extend into Pacific Avenue, they will be addressed at a later date and are not part of the RAWP.

#### **TEXT COMMENT 19**

**The City/ERFS Text Comment 19:** Section 5.7.1, p. 5-5: *Will the excavated surface be surveyed? Also, change reference to “TEP” to “RAWP”.* [TEP = Technical Execution Plan]

**PPG/AECOM Response to Text Comment 19:** Section 5.7.1 of the Final Carteret RAWP has been revised to indicate that the excavation bottom will be surveyed by a professional surveyor licensed in the State of New Jersey. This section of the Final Carteret RAWP has also been revised to include the appropriate reference (i.e., to the RAWP and not to the TEP).

#### **TEXT COMMENT 20:**

**The City/ERFS Text Comment 20:** Section 5.8, p. 5-7: *Please delete reference to “the City”. Also, regarding the discussion of details concerning final restoration, can PPG identify or propose an interim backfill restoration that will be achieved upon completion of remediation? This may require additional discussion.*

**PPG/AECOM Response to Text Comment 20:** Section 5.8 of the Final Carteret RAWP has been revised to remove references to the City pertaining to sewer rehabilitation.

Section 5.7.1 describes the proposed interim backfill; the excavation area will be backfilled with dense-graded aggregate (DGA) from the bottom of the excavation up to the bottom of the existing road subgrade elevation. Roadway subgrade elevations and final restoration elevations are presented in Remediation Design Drawings C-04.1, C-04.2, X-02.1, and X-02.2.

#### **TEXT COMMENT 21**

**The City/ERFS Text Comment 21:** Section 6.0 – *Delete portion of the text regarding the HSN remediation.*

**PPG/AECOM Response to Text Comment 21:** Section 6.0 of the Final Carteret RAWP has been revised accordingly.

### **The City/ERFS 10/05/2018 Figures Comments**

#### **FIGURES COMMENT 1**

**The City/ERFS Figures Comment 1:** Figure 5-2B: *Cross section at Station 4+20, boring XOSB-13 depicts Cr<sup>+6</sup> (2,140 ppm) and Sb (57.4) exceedances as “remaining”; corresponding tables (5-1A and 5-1B) showing these soils as “removed” – please resolve.* [Sb = antimony]

**PPG/AECOM Response to Figures Comment 2:** Figures 5-1A and 5-2B have been revised to indicate the correct sample status for XOSB-13, which is “removed”.

## **FIGURES COMMENT 2**

***The City/ERFS Figures Comment 2:*** 143-P3A-GT-F15A; 143-P3A-GT-C15A and others: Add note of explanation – why no analytical data.

**PPG/AECOM Response to Figures Comment 2:** A note has been added to the Figures 5-1A through 5-2C indicating no samples were collected for chemical analyses from borings advanced for geotechnical investigational purposes. Geotechnical borings are indicated by “GT” in their location ID. Revised figures are included as part of the Final Carteret RAWP.

## **The City/ERFS 10/05/2018 Tables Comments**

### **TABLES COMMENT 1**

***The City/ERFS Tables Comment 1:*** Each of the following entries in Tables 5-1A or 5-1B shows exceedances above 20 ppm in soils less than 20 feet bgs that will remain. However, no rationale is provided in the tables or corresponding figures why these soils with exceedances will remain. Please provide this rationale in the RAWP. Also, please cross check with Figures for consistency regarding remaining vs removed.

P4-A'14A 16 – 16.5 and 18-18.5  
P4-A14A 18-18.5  
114-MW22B 17.5-18  
P4-D14A 16-16.5  
P4-G14A 16-16.5  
P4-WC-OPQR-17A 10-15  
114-TP4-S 14-15  
P4-WC-UV-18A19A 12-17  
P4-Y19A 12-12.5  
P4-Z19A 8-8.5  
EF-100 0.5-1  
P4-EE21A 6-6.5

**PPG/AECOM Response to Tables Comment 1:** Table 5-1A of the Final Carteret RAWP has been revised to include a rationale for CrSCC exceedances to remain following excavation. No Chromium Soil Cleanup Criteria (CrSCC) exceedances presented in Table 5-1B are to remain following excavation.

As noted on Table 5-1A, CrSCC exceedances are anticipated to remain following excavation at P4-A'14A (16-16.5 ft bgs and 18-18.5 ft bgs, as well as 14-14.5 ft bgs), P4-A14A (18-18.5 ft bgs), 114-MW22B (17.5-18 ft bgs), P4-D14A (16-16.5 ft bgs), P4-G14A (16-16.5 ft bgs), EF-100 (0.5-1 ft bgs), and P4-EE21A (6-6.5 ft bgs).

The sample statuses for samples located at 114-TP4-S (14.0-15.0 ft bgs) on Table 5-1B, and P4-Y19A (12.0-12.5 ft bgs) and P4-Z19A (8.0-8.5 ft bgs) on Table 5-1A have been revised to “Removed” based on the revised proposed excavation limits and are consistent with the sample statuses presented in Figures 5-1B, 5-2B, and 5-2C.



Please note that data collected for waste characterization purposes only (e.g., P4-WC-OPQR-17A, P4-WC-UV-18A19A) has been excluded from the Final Carteret RAWP as this data represents composited samples, is not validated, and is not appropriate for use in remedial decision making. However, samples located at P4-WC-OPQR-17A (10.0 to 15.0 ft bgs) and P4-WC-UV-18A19A (12-17 ft bgs) will be removed based on the revised excavation limits. The revised figures, which include the revised proposed excavation limits, and tables are included as part of the Final Carteret RAWP.

### **The City/ERFS 10/05/2018 Attachment C Comments**

Please note that in the Final Carteret RAWP, Attachment B now contains the Structural Evaluation Results – Pacific Avenue Properties. Appendix C now contains the soil re-use plan, which has been renamed, *Carteret Avenue Non-Chrome Fill Soil Re-Use Plan* (AECOM, 2018d). This change in Attachment lettering is reflected in the City/ERFS comments and PPG/AECOM responses below.

#### **ATTACHMENT C COMMENT 1**

***The City/ERFS Attachment C Comment 1:*** Cover memo, paragraph 3, p. 1: *The City understands that PPG will be responsible for developing the soils re-use plan – please revise this text.*

**PPG/AECOM Response to Attachment B Comment 1:** PPG/AECOM has prepared a soil re-use plan for use of non-chrome fill excavated from Carteret Avenue as backfill within the clean corridor; this re-use plan is included as Attachment C of the Final Carteret RAWP [AECOM, 2018c]). Section 5.4 has been revised accordingly and is included as part of the Final Carteret RAWP.

#### **ATTACHMENT C COMMENT 2**

***The City/ERFS Attachment C Comment 2:*** Cover memo, p. 2, first paragraph: *There needs to be some reference here for the reader directing their attention to the data tables with hex-Cr results and other information that support the delineation of the areas designated as “non-chrome fill material.”*

**PPG/AECOM Response to Attachment C Comment 2:** The memo references Figures 1A through 2 and Tables 1A through 2E, which present the non-CCPW-related data associated with non-chrome fill in Carteret Avenue. Since there is no CCPW material within the non-chrome fill areas, Cr<sup>+6</sup> and CCPW-related metals (antimony, chromium, nickel, thallium, and vanadium) data are not provided as part of the referenced attachment. CCPW-related data for all areas within Carteret Avenue are provided as part of the Final Carteret RAWP (Revision 1) (AECOM, 2013). No revisions to the memo text are required as a result of this comment.

#### **ATTACHMENT C COMMENT 3**

***The City/ERFS Attachment C Comment 3:*** Cover memo, p. 2, table: *Volume of non-Cr fill to be removed (2,500 cy) does not seem to correspond to representation of same on Figures 1A and 1B (12,500 cy).*

**PPG/AECOM Response to Attachment C Comment 3:** Non-chrome fill volumes originally presented in the Draft Carteret RAWP were consistent between the referenced table and Figures

1A and 1B. It appears the 12,500 cy calculation was based on an erroneous interpretation of the volumes presented on Figures 1A and 1B and Table 2. For example, Area 1 should have been read as: "AREA 1 900 CY" not "AREA 1,900 CY".

In the Final Carteret RAWP, the volumes for Non-Chrome Fill Areas 1 through 4 have been revised, as presented in Attachment C, Figures 1A and 1B, and Table 2. Additionally, the formatting of Figures 1A and 1B has been revised to avoid confusion in the future.

#### **ATTACHMENT C COMMENT 4**

***The City/ERFS Attachment C Comment 4:*** Table 1A – First entry (133RI-EE23A-SW-N1) shows no results other than for Mercury – please explain.

**PPG/AECOM Response to Attachment C Comment 4:** This sample (133RI-EE23A-SW-N1) was collected for the sole purpose of delineating mercury impacts.

#### **ATTACHMENT C COMMENT 5**

***The City/ERFS Attachment C Comment 5:*** Table 1E – Results are included for two borings (143-RI-C15A-PB and 133-SI-UST3) that are not within the areas depicted as "non-chrome fill material" – please explain.

**PPG/AECOM Response to Attachment C Comment 5:** Data associated with 143-RI-C15A-PB and 133-SI-UST3 was included on Table 1E in error. Table 1E of the Final Carteret RAWP has been revised accordingly.

#### **References**

AECOM, 2018a. Technical Memorandum: *Carteret Avenue Proposed Remediation Plan Summary – Soil (Revision 1)*. April 12, 2018.

AECOM, 2018b. *Draft Remedial Action Work Plan (Soil) – Carteret Avenue, Addendum to the Final Remedial Action Work Plan (Soil) Rev. 3, Garfield Avenue Group Sites*. June 2018.

AECOM, 2018c. *Draft Groundwater Remedial Investigation Report, PPG Garfield Avenue Group, Hudson County Chromate Sites, Jersey City, New Jersey*. October 2018.

AECOM 2018d. Technical Memorandum: *Carteret Avenue Non-Chrome Fill Soil Re-Use Plan*. November 21, 2018.

AECOM, 2018e. *Final Remedial Action Work Plan (Soil) – Carteret Avenue, Addendum to the Final Remedial Action Work Plan (Soil) Rev. 4, Garfield Avenue Group Sites*. November 2018.

AECOM, 2018f. Technical Memorandum: *Halladay Street North, Carteret Avenue, Garfield Avenue – Emanating From Parameters*. September 20, 2018.

Response to NJDEP/Weston's 08/24/2018 Comments and the City/ERFS's 10/05/2018 Comments on the *Draft Remedial Action Work Plan (Soil) – Carteret Avenue*  
PPG, Jersey City, New Jersey

NJDEP, 2015. *Fill Material Guidance for SRP Sites, New Jersey Department of Environmental Protection, Site Remediation Program*. April 2015.

To Wayne Howitz, NJDEP

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CC Ronald Riccio, Site Administrator  
James Ray, Site Administrator PM  
Nancy Colson, Site Administrator Assistant  
David Doyle, NJDEP  
Prabal Amin, Weston Solutions, Inc.  
Laura Amend-Babcock, Weston Solutions, Inc.  
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Subject Response to NJDEP/Weston's 12/20/2018 Comments and the City/ERFS's  
01/17/2019 Comments on the *Final Remedial Action Work Plan (Soil) – Carteret  
Avenue*

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From Cameron Dixon  
Sandy Paulsen

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Date March 28, 2019

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On June 29, 2018, PPG/AECOM issued the *Draft Remedial Action Work Plan (Soil) – Carteret Avenue, Addendum to the Final Remedial Action Work Plan (Soil) Rev. 3, Garfield Avenue Group Sites* (AECOM, 2018a) (Draft Carteret RAWP). On behalf of the New Jersey Department of Environmental Protection (NJDEP), Weston Solutions, Inc. (Weston) provided comments on the Draft Carteret RAWP via email on August 24, 2018. On behalf of the City of Jersey City (the City), ERFS provided their comments on the document on October 5, 2018. On November 21, 2018, PPG/AECOM issued the *Final Remedial Action Work Plan (Soil) – Carteret Avenue, Addendum to the Final Remedial Action Work Plan (Soil) Rev. 4, Garfield Avenue Group Sites* (AECOM, 2018c) (Final Carteret RAWP). On December 20, 2018, Weston provided comments on the Final Carteret RAWP on behalf of the NJDEP, and ERFS issued comments on the Final Carteret RAWP on behalf of the City on January 17, 2019. This memorandum provides PPG/AECOM's responses to NJDEP/Weston's December 20, 2018 comments and to the City/ERFS's January 17, 2019 comments.

### **NJDEP/Weston's 12/20/2018 Adequacy Assessment**

#### **ADEQUACY ASSESSMENT - SECTION-SPECIFIC COMMENT 2**

**NJDEP/Weston Section-Specific Comment 2 (08/24/2018):** *Section 3.3: Since the spring-line elevation of the 96-inch sewer is critical in determining maximum remedial excavation depth, please*

*include in the RAWP Addendum the updated (e.g., including recent test pit information) construction plans that identify the revised sewer profile for the 96-inch sewer, rather than delaying submittal of this information to the Remedial Action Report. Also please incorporate this information into the Figures/Drawings presented within the RAWP Addendum.*

**PPG/AECOM Response to Section-Specific Comment 2 (11/21/2018):** Elevation information collected during recent test-pitting activities was used to adjust the estimated elevations of the pipe upstream of the siphon and proposed excavation limits. No CCPW was observed during test pitting, and no samples were collected as it was not feasible to excavate deep enough in order to collect samples safely. The Remediation Design Drawings C-03.1 and C-03.2 and Figures 5-1A through 5-2C of the Final Carteret RAWP have been revised accordingly. [CCPW = Chromate Chemical Production Waste]

**Assessment of Adequacy of Response to Section-Specific Comment 2 (12/20/2018):**

*The response is adequate; however, the referenced figures depict the elevation of the siphon invert as approximately 10 feet (ft) shallower than previously noted. Please confirm that the siphon elevation, as depicted in the revised RAWP Addendum, reflects actual conditions.*

**PPG/AECOM Response to Section-Specific Comment 2 Adequacy Assessment (03/28/2019):** The siphon elevations depicted on Remediation Design Drawings C-03.1 and C-03.2 and Figures 5-1A through 5-2C of the Final Carteret RAWP are estimated and were revised from the Draft Carteret RAWP based on currently available information, including the former Morris Canal elevations and historical data regarding sewer construction. The actual siphon elevations will be determined in the field during excavation.

**ADEQUACY ASSESSMENT - SECTION-SPECIFIC COMMENT 3**

**NJDEP/Weston Section-Specific Comment 3 (08/24/2018):** *Section 3.4: Please note that comments relating to the list of constituents having emanated from Site 114, listed in this section of the RAWP Addendum, are being withheld pending submittal and review of the anticipated “emanating from” memorandum which is required as per the October 2, 2017 Response to NJDEP/Weston’s Comments on PPG’s ACO/JCO Site Parameters List (Revision 0). [ACO = Administrative Consent Order, JCO = Judicial Consent Order]*

**PPG/AECOM Response to Section-Specific Comment 3 (11/21/2018):** Acknowledged. Note that the referenced document (technical memorandum entitled *Halladay Street North, Carteret Avenue, Garfield Avenue – Emanating-From Parameters* [Roadway Emanating From Evaluation] [AECOM, 2018b]) was issued on September 20, 2018, and is currently under stakeholder review.

**Assessment of Adequacy of Response to Section-Specific Comment 3 (12/20/2018):**

*The response is adequate; however, please note that the contaminants determined to have emanated-from Site 114 onto Carteret Avenue must be addressed in the requested Technical Execution Plan (TEP); see General Comment 1, below. [TEP = Technical Execution Plan]*

**PPG/AECOM Response to Section-Specific Comment 3 Adequacy Assessment (03/28/2019):** See PPG/AECOM response to General Comment 1. Parameters determined

to have emanated from Site 114 into Carteret Avenue have been addressed in the *Technical Addendum to the Final Carteret RAWP, Garfield Avenue Group Sites, Jersey City, Hudson County, New Jersey* (Carteret RAWP Technical Addendum) (AECOM, 2019a). See PPG/AECOM response to General Comment 1.

## **ADEQUACY ASSESSMENT - SECTION-SPECIFIC COMMENT 7**

***NJDEP/Weston Section-Specific Comment 7 (08/24/2018):*** *Section 5.1: The remedial plan includes removal of source material, defined as visible CCPW and Cr<sup>+6</sup> concentrations in soil greater than 1,000 mg/kg extending below the spring-line of the pipe where present. However, Table 5-1B indicates several locations where Cr<sup>+6</sup> concentrations greater than 1,000 mg/kg will remain behind following the remedial action as presented in the RAWP Addendum (e.g., 114TP4-S at 14-15 feet below ground surface [ft bgs]; P4-WC-OPQR-17A at 10-15 ft bgs; P4-WC-UV-18A19A at 12-17 ft bgs). Soils associated with these samples must be removed. [Cr<sup>+6</sup> = hexavalent chromium, mg/kg = milligrams per kilogram]*

**PPG/AECOM Response to Section-Specific Comment 7 (11/21/2018):** The proposed excavation limits have been revised so that soil corresponding to samples with Cr<sup>+6</sup> concentration greater than 1,000 mg/kg, including P4-WC-OPQR-17A (10.0 to 15.0 ft bgs), 114-TP4-S (14.0-15.0 ft bgs), and P4-WC-UV-18A19A (12-17 ft bgs), will be removed.

Table 5-1B has been revised to indicate the sample status of "Removed" for the 114-TP4-S (14.0-15.0 ft bgs) sample, which is consistent with the sample status presented on Figure 5-2B (Station 5+40).

Please note that data collected for waste characterization purposes only (e.g., P4-WC-OPQR-17A, P4-WC-UV-18A19A) has been excluded from the Final Carteret RAWP as this data represents composited samples, is not validated, and is not appropriate for use in remedial decision making.

***Assessment of Adequacy of Response to Section-Specific Comment 7 (12/20/2018):*** *The cut line as shown on Section 5+40 on Figure 5-2B at the location of 114-TP4-S must be extended to achieve a status of "Removed" as indicated on Table 5-1B. Regarding the waste classification samples P4-WC-OPQR-17A (10.0 to 15.0 ft bgs) and 114-TP4-S (14.0-15.0 ft bgs), please note that the elevations of the source material exceedances reported in the June 2018 RAWP Addendum were consistent with the required excavation limits achieved in adjacent grids previously remediated on properties south of Carteret Avenue. PPG must address these source materials during the Carteret remedial action.*

**PPG/AECOM Response to Section-Specific Comment 7 Adequacy Assessment (03/28/2019):** All known source material, including material at 114-TP4-S and P4-WC-OPQR-17A, will be excavated based on the proposed excavation limits as presented in the Final Carteret RAWP. While it may appear that a very small portion of the Cr<sup>+6</sup> exceedance at 114-TP4-S shown in Figure 5-2B of the Final Carteret RAWP will remain following excavation, that is based on how the computer program (i.e., AutoCAD Civil 3D) used to generate the section view projects objects in two-dimensional space; the entire sample will be excavated. No changes to the proposed excavation limits are required based on this comment.

## **ADEQUACY ASSESSMENT - SECTION-SPECIFIC COMMENT 10**

***NJDEP/Weston Section-Specific Comment 10 (08/24/2018):*** *Section 5.5: The discussion of institutional and engineering controls states Impacts to remain in Carteret Avenue following excavation...will be documented in a notice in lieu of deed notice and handled under the Sewer Protocol. Carteret Avenue is not designated as a Sewer Site; however, if the City of Jersey City would agree, it could be managed consistent with the Sewer Protocol.*

**PPG/AECOM Response to Section-Specific Comment 10 (11/21/2018):** Additional Jersey City concurrence is not required to invoke the sewer protocol at Carteret Avenue. Specifically, the 2011 Consent Judgment provides that “sites or portions of Sites that constitute a Sewer Site shall be remediated in accordance with the Sewer Protocol attached as Exhibit B. The Sewer Protocol has been approved by Jersey City authorities.” (See Paragraph 8 of the 2011 Consent Judgment). A Sewer Site is defined as “a Site or a portion of a Site at which CCPW was used for the bedding, fill, or otherwise used in the construction of municipal or public sewer, water mains or lines, sumps, pumps, transfer stations, other related components of a sewer or water distribution system or other utility lines. A complete list of known CCPW sites that are Sewer Sites is attached to this Consent Judgment at Appendix F, any other Site or portion of a Site that qualifies under the first sentence of this definition may utilize the Sewer Protocol for the remediation of such Site or portion thereof, as applicable.” (See Paragraph 4 of the 2011 Consent Judgment). Carteret Avenue is part of the Garfield Avenue Group of Sites and contains a sewer line and, thus, is considered “any other Site or portion of a Site” that may utilize the Sewer Protocol under the 2011 Consent Judgment.

***Assessment of Adequacy of Response to Section-Specific Comment 10 (12/20/2018):***  
*The Department disagrees that Carteret Avenue meets the definition of Sewer Site identified in the 2011 Consent Judgement. Specifically, Carteret Avenue is not listed in Appendix F of the 2011 Consent Judgement, and to date, there is insufficient evidence that “...CCPW was used for the bedding, fill, or otherwise used in the construction...” of the 96-inch sewer beneath Carteret Avenue. Based on the conceptual site model, the sewer existed prior to placement of CCPW waste within the footprint of Carteret Avenue and within the former Morris Canal. Nonetheless, the Department stands behind the prior comment that Carteret Avenue is not designated as a Sewer Site, but that that PPG may manage Carteret Avenue consistent with the Sewer Protocol provided that City of Jersey City agrees.*

**PPG/AECOM Response to Section-Specific Comment 10 Adequacy Assessment (03/28/2019):** Acknowledged. No revisions to the Final Carteret RAWP are required based on this comment.

## **NJDEP/Weston’s 12/20/2018 General Comment**

### **GENERAL COMMENT 1**

***NJDEP/Weston General Comment 1 (12/20/2018):*** *Due to the high level of coordination required among multiple stakeholders and the importance of proper execution of dewatering activities to*

*implement elements of this remedy, the Department requests that PPG develop a TEP to describe the technical/design details for the remedy approach.*

**PPG/AECOM Response to General Comment 1 (03/28/2019):** PPG/AECOM has prepared a technical addendum to the Final Carteret RAWP (Carteret RAWP Technical Addendum), in lieu of a TEP, to provide additional technical details about the remediation approach for Carteret Avenue.

## **NJDEP/Weston's 12/20/2018 Section-Specific Comments**

### **SECTION-SPECIFIC COMMENT 1**

***NJDEP/Weston Section-Specific Comment 1 (12/20/2018):*** *Table of Contents: Please remove the dates associated with each referenced document in the List of Appendices. Also, since the documents referenced in the List of Appendices are "living documents," the updated elements of these documents should be included in the requested TEP; see General Comment 1.*

**PPG/AECOM Response to Section-Specific Comment 1 (03/28/2019):** As agreed upon during a phone conversation between Weston and AECOM on March 20, 2019, only elements of the appendices listed in the Final Carteret RAWP that are specific to the Carteret Avenue remediation are required to be included in the Carteret RAWP Technical Addendum. As such, the Air Monitoring Plan amendment for the Carteret Avenue remediation area was included in the Carteret RAWP Technical Addendum as Attachment B. An update to the Contingency and Communications Plan – Personnel and Emergency Contact Information was also provided as Attachment C. See PPG/AECOM response to General Comment 1.

### **SECTION-SPECIFIC COMMENT 2**

***NJDEP/Weston Section-Specific Comment 2 (12/20/2018):*** *Section 5.2.3: The text of the RAWP Addendum was revised to indicate that the excavation along Halladay Street North and Halsted will be sloped to the ground surface rather than the bottom of the excavation on these sites. PPG must ensure that any impacts that remained following the Halsted excavation along Carteret Avenue are addressed during the Carteret Avenue remediation, and any impacts that may remain along the Halladay Street North/Carteret boundary are addressed during the future Halladay Street North remedial action.*

**PPG/AECOM Response to Section-Specific Comment 2 (03/28/2019):** Acknowledged. No CCPW-related impacts remain in Halsted adjacent to Carteret Avenue following excavation in Halsted. However, if CCPW-related impacts are observed within the slope along Halsted during excavation in Carteret Avenue, impacts will be removed as part of the Carteret Avenue excavation. CCPW-related impacts that may remain within the slope along Halladay Street North following excavation in Carteret Avenue will be remediated as part of the Halladay Street North excavation. Note that the excavation limits adjacent to Halladay Street North presented in the Draft Carteret RAWP were based on the assumption that excavation in Halladay Street North would be conducted prior to excavation in Carteret Avenue. No revisions to the Final Carteret RAWP are required based on this comment.



### **SECTION-SPECIFIC COMMENT 3**

**NJDEP/Weston Section-Specific Comment 3 (12/20/2018):** *Section 5.8: The Department recommends that the City Engineering Department review all engineering aspects of the Carteret Avenue remedy pertaining to potential infrastructure impacts.*

**PPG/AECOM Response to Section-Specific Comment 3 (03/28/2019):** The City Engineering Department has been provided copies of the Draft Carteret RAWP and the Final Carteret RAWP as well as all construction-related documents issued to date, for review and comment. Additionally, the City Engineering Department will be provided with a copy of the Carteret RAWP Technical Addendum upon issuance, as well as future construction-related documents.

### **SECTION-SPECIFIC COMMENT 4**

**NJDEP/Weston Section-Specific Comment 4 (12/20/2018):** *Drawing C-03.2: It is unclear as to why the previously-identified contour along the northern side of Carteret Avenue at the intersection of Halladay Street North has been revised compared to the June 2018 version of the RAWP Addendum. Please clarify.*

**PPG/AECOM Response to Section-Specific Comment 4 (03/28/2019):** The excavation limits adjacent to Halladay Street North presented in the Draft Carteret RAWP were based on the assumption that excavation in Halladay Street North would be conducted prior to excavation in Carteret Avenue. The revised excavation limits presented in the Final Carteret RAWP were based on the current plan in which excavation in Carteret Avenue will be conducted prior to excavation in Halladay Street North. The excavation limits in Halladay Street North will be designed so that CCPW-related impacts that remain in the excavation slope between Carteret Avenue and Halladay Street North following excavation in Carteret Avenue will be removed as part of the Halladay Street North excavation.

### **SECTION-SPECIFIC COMMENT 5**

**NJDEP/Weston Section-Specific Comment 5 (12/20/2018):** *Attachment B, Structural Evaluation Results – Pacific Avenue Properties:*

- a) *The memorandum is titled Excavation Offset to Protect Adjacent Properties; 78 Halladay Street (Halsted Building) Demolition and Remediation; Jersey City, N.J. Please confirm that the analysis is specific to the 101 Pacific building.*
- b) *The memorandum does not discuss whether other building-protection methods (e.g., sheet piling) were evaluated that may allow PPG to increase the removal quantities of impacted material, while also protecting the building structure and satisfying the City's requirement for an 8-foot clean corridor excavation throughout Carteret Avenue. These methods must be evaluated and identified.*

- c) *The proposed excavation will require the lowering of groundwater levels through dewatering, particularly around-the-clock dewatering as requested by the City to protect the sewer line. Recognizing that lowering the groundwater elevation can drive settlement, please describe the anticipated zone of influence for the dewatering activities, and what methods will be used to prevent and monitor settlement which may impact infrastructure in the vicinity. The potential benefits of the use of sheet piling should be considered in this regard; see Section-Specific Comment 4b.*

**PPG/AECOM Response to Section-Specific Comment 5a (03/28/2019):** As specified in Attachment B of the Final Carteret RAWP, the structural evaluation was conducted for all properties adjacent to Halsted, which include 101-105 Pacific Avenue and 107-123 Pacific Avenue.

**PPG/AECOM Response to Section-Specific Comment 5b (03/28/2019):** Alternate support of excavation methods were evaluated, but none of the methods that would allow excavation closer to the building were acceptable due to the risks of damage to the building. Additionally, there is not sufficient space between the 96-inch sewer, the 48-inch sewer, and the building to drive sheet piling safely. No revisions to Attachment B of the Final Carteret RAWP are being made at this time based on this comment.

**PPG/AECOM Response to Section-Specific Comment 5c (03/28/2019):** Excavation dewatering was considered in the slope stability analysis conducted as part of the structural evaluation for the Pacific Avenue properties. Based on the results of the structural evaluation, a 15-foot excavation buffer with a maximum slope of 1.5H:1V was established adjacent to the Pacific Avenue properties to protect the 101 Pacific Avenue building, as stated in the Final Carteret RAWP. The excavation adjacent to the building at 101 Pacific is a shallow excavation that extends only to elevation 3.5 feet in the North American Datum of 1988 (NAVD88). The Halsted excavation, which was conducted under the conditions established as part of the structural evaluation, extended to elevation -2 feet NAVD88 with full dewatering, and no significant movement of the building was observed. The risks associated with installation of the sheet pile (as seen in other phases of work in the Garfield Avenue Group) are much higher than the known risks with the current approach. Note that reference to Section-Specific Comment 4b is in error and should reference Section-Specific Comment 5b. See PPG/AECOM response to Section-Specific Comment 5b.

## **SECTION-SPECIFIC COMMENT 6**

**NJDEP/Weston Section-Specific Comment 6 (12/20/2018): Attachment C, Carteret Avenue Non-Chrome Fill Soil Re-Use Plan:**

- a) *The reuse plan is not wholly consistent with the requirements of the Department's Fill Material Guidance for SRP Sites (NJDEP SPR, April 2015, Version 3) [NJDEP, 2015]. Please refer to Section 5.3 of the Guidance which requires a variance from the Technical Requirements for Site Remediation for historic fill relocation.*
- b) *It is understood that a significant volume of clean fill has been imported/placed on the original Carteret Avenue grade throughout the course of the remedial program. Please ensure that all work related to fill re-use, including associated analyses of sample depths and elevations, considers the elevation increase of the roadway.*

- c) *For clarification, the Department requires that soils proposed for reuse do not contain CCPW-related impacts, are determined not to be hazardous waste, and do not contain non-historic fill constituents (e.g., PCBs). The Department also believes that the results of the test pit sampling program, as described in Section 3 of the reuse plan, must be considered in the proposed soil reuse approach. [PCBs = polychlorinated biphenyls]*
- d) *Introduction, Second Paragraph: The text indicates that the remediation of non-CCPW and non-MGP-impacted historic fill must be managed by the City of Jersey City. However, it is not clear whether PPG, in their capacity as property owner for the majority of the sites to the south of and abutting Carteret Avenue, has determined whether there are contaminants that have emanated from those sites northward into the footprint of Carteret Avenue (e.g., reported PCB 1248 exceedance in 143-DD1-B03 adjacent to the former Talarico Auto property). This assessment should be performed by PPG's Licensed Site Remediation Professional (LSRP) for those sites, and coordinated with the City's LSRP. [MGP = manufactured gas plant]*
- e) *Section 3. Characterization Sampling: The text indicates that a total of nine stockpile samples will be collected, based on a total of 6,100 cubic yards of soil proposed for reuse, "... as specified in Table 1 of the ... Fill Material Guidance for SRP Sites..." Please note that Table 1 of the Guidance defaults to 20 samples for volumes of soil between 6,000 and 7,000 cubic yards, or a reduction to 13 samples with justification.*

**PPG/AECOM Response to Section-Specific Comment 6a (03/28/2019):** Advanced notice of varying from the technical requirement pursuant to N.J.A.C. 7:26E-1.7 on a separate form is no longer required by NJDEP; rather, the text of the technical memorandum entitled, *Carteret Avenue Non-Chrome Fill Soil Re-Use Plan (Revision 1)* (Carteret Soil Re-Use Plan Rev 1) (AECOM, 2019b) has been revised to indicate where a variance is taken under N.J.A.C. 7:26E-1.7. The Carteret Soil Re-Use Plan Rev 1 is provided as Attachment A of the Carteret RAWP Technical Addendum.

**PPG/AECOM Response to Section-Specific Comment 6b (03/28/2019):** Acknowledged. The excavation design is based on elevations and not depths; therefore, changes in the roadway elevations over time will not affect the excavation design. The material placed on top of the roadway is not being considered for re-use and will be transported off site for disposal.

**PPG/AECOM Response to Section-Specific Comment 6c (03/28/2019):** Acknowledged. Non-chrome fill to be re-used within the Carteret Avenue excavation will be free of CCPW-related impacts and will be determined to be non-hazardous, as stated in the Carteret Soil Re-Use Plan Rev 1. Additionally, the non-chrome fill areas presented in the Carteret Soil Re-Use Plan Rev 1 have been revised to exclude the PCB 1248 exceedance in 143-DD1-B03.

**PPG/AECOM Response to Section-Specific Comment 6d (03/28/2019):** PPG's LSRP has reviewed existing data for PPG-owned properties adjacent to areas designated for soil re-use (i.e., Halsted and Sites 133, 135, and 143). There is no indication of contaminants having emanated from Halsted or Sites 133 and 135 into Carteret Avenue. With the potential exception of PCBs, non-chrome, non-historic fill related soil contamination observed on Site 143 has been delineated within the property boundary and there is no evidence that contaminants have migrated off of the property. With regard to the PCB exceedance detected at boring location 143-DD1-B03 within Carteret Avenue, there is insufficient data to determine whether these impacts are related to historic activities at Site 143 or are associated with an off-site condition. Thus, the non-chrome fill

excavation area adjacent to Site 143 has been revised to exclude the PCB 1248 exceedance in 143-DD1-B03.

**PPG/AECOM Response to Section-Specific Comment 6e (03/28/2019):** Acknowledged. A total of 13 stockpile samples will be collected in accordance with N.J.A.C. 7:26E and as specified in Table 1 of the *Fill Material Guidance for SRP Sites* (NJDEP, 2015). The text has been revised accordingly and is included as part of the Carteret Soil Re-Use Plan Rev 1.

## The City/ERFS's 01/17/2019 Section-Specific Comments

### SECTION-SPECIFIC COMMENT 1

**The City/ERFS Section-Specific Comment 1 (01/17/2019):** Section 1.0, p. 1-1, 2nd paragraph: Change reference to "City's LSRP" to "JCMUA LSRP".

**PPG/AECOM Response to Section-Specific Comment 1 (03/28/2019):** As confirmed during a phone conversation between ERFS and AECOM on March 13, 2019, LSRP responsibilities for Carteret Avenue will reside with the City and not JCMUA. No changes to the Final Carteret RAWP are required because of this comment.

### SECTION-SPECIFIC COMMENT 2

**The City/ERFS Section-Specific Comment 2 (01/17/2019):** Section 4.3.1, p. 4-3, last sentence: change "confirm" to "ensure".

**PPG/AECOM Response to Section-Specific Comment 2 (03/28/2019):** PPG will ensure that active businesses in the area maintain sufficient access to water service during construction. This change will be incorporated should the Final Carteret RAWP be revised at a future date; no revisions to the Final Carteret RAWP are currently required from the provided comments.

### SECTION-SPECIFIC COMMENT 3

**The City/ERFS Section-Specific Comment 3 (01/17/2019):** Section 4.3.2, p. 4-4, 2nd and 3rd paragraphs: Text indicates that 48-inch sewer will not be impacted by the remedial excavation:

- a. RAWP should include plans to evaluate the bedding beneath the 48-inch sewer line for CCPW-impacts (assuming that Halladay St North project will be conducted after the Carteret project);
- b. A portion of Carteret in the area of the 48-inch sewer is to remain unexcavated, or only partially excavated, due to structural concerns for the nearby building. Has PPG

*coordinated this with JCMUA? The City cannot agree to this without additional information. See also NJDEP's 12/20/18 email comment 4b;*

- c. *Drawing C-02.2 appears to show complete removal of the 48-inch sewer line, which would contradict the text of the RAWP;*
- d. *Third paragraph notes that catch basins and drain connections are to be removed and replaced. Please specify who will be responsible for replacement.*

**PPG/AECOM Response to Section-Specific Comment 3a (03/28/2019):** A plan for investigating the bedding beneath the 48-inch sewer is included as part of the Carteret RAWP Technical Addendum.

**PPG/AECOM Response to Section-Specific Comment 3b (03/28/2019):** PPG has coordinated with NJDEP and JCMUA. There is no indication, based on available data, that CCPW-related impacts are present beneath the 48-inch sewer. However, PPG/AECOM will conduct a sewer bedding investigation beneath the 48-inch sewer following decommissioning of the pipe. If the 48-inch sewer is decommissioned prior to the start of remedial excavation in Carteret Avenue, PPG/AECOM will initiate the sewer bedding investigation during construction. See PPG/AECOM response to NJDEP/Weston's Section-Specific Comment 5b, which is the correct reference to "NJDEP's 12/20/18 email comment 4b".

**PPG/AECOM Response to Section-Specific Comment 3c (03/28/2019):** Remediation Drawing C-02.2, included as part of Final Carteret RAWP, indicates that the water line that runs from Pacific Avenue into Carteret Avenue, where it terminates, is to be decommissioned and not the 48-inch sewer.

**PPG/AECOM Response to Section-Specific Comment 3d (03/28/2019):** Cost-sharing negotiations between PPG and the City regarding which party will be responsible for conducting restoration in Carteret Avenue are ongoing and a final agreement has not yet been reached.

#### **SECTION-SPECIFIC COMMENT 4**

**The City/ERFS Section-Specific Comment 4 (01/17/2019):** *Section 4.4, p. 4-4: Change Carteret "Street" to "Avenue".*

**PPG/AECOM Response to Section-Specific Comment 4 (03/28/2019):** Acknowledged. However, the revision is minor and does not warrant reissuing of the Final Carteret RAWP.

#### **SECTION-SPECIFIC COMMENT 5**

**The City/ERFS Section-Specific Comment 5 (01/17/2019):** *Section 5.1, P. 5-1, 2nd paragraph: First sentence states that "Remedial excavation will extend across the entire span of the Carteret Ave 60-foot span..." However, there is a portion of Carteret Avenue adjacent to the building on the NW corner of the Pacific/Carteret intersection that has been eliminated from the excavation*

*program due to structural concerns for the 101 Pacific building. Although Section 5.2.4 provides elaboration, this represents a limitation on the remediation of chromium-impacts that PPG is responsible for, and a change to the agreed-upon removal/reuse of historic fill to create a clean corridor for utility work in the Carteret. These limitations are not clearly stated in this section of the RAWP. It is noted that the NJDEP has asked for additional information regarding this issue in their 12/20/19 comment issued by Weston (Comments 4a and b). The City cannot agree to the proposed limitations of the Carteret excavation at this time.*

**PPG/AECOM Response to Section-Specific Comment 5 (03/28/2019):** See PPG/AECOM's Response to NJDEP/Weston's Section-Specific Comments 5a and 5b, which is the correct reference to NJDEP's "12/20/19 comment issued by Weston (Comments 4a and b)". Based on the Carteret Avenue coordination call on Wednesday March, 20, 2019, it is AECOM's understanding that the City has agreed to the limitation of the Carteret Avenue excavation.

#### **SECTION-SPECIFIC COMMENT 6**

**The City/ERFS Section-Specific Comment 6 (01/17/2019):** *Section 5.2.3, p. 5-2: Add reference to Halladay Street North excavation and indicate that materials in the sloped portion will be remediated as part of HSN project.*

**PPG/AECOM Response to Section-Specific Comment 6 (03/28/2019):** See PPG/AECOM response to NJDEP/Weston's response to Section-Specific Comment 2. No revisions to the Final Carteret RAWP are being made at this time based on this comment.

#### **SECTION-SPECIFIC COMMENT 7**

**The City/ERFS Section-Specific Comment 7 (01/17/2019):** *Section 5.4, p. 5-4, paragraph 4: Regarding to the reference to the soil re-use plan for non-CCPW (historic) fill. Will the fill materials be added to the NILODN? [NILODN = notice in lieu of deed notice]*

**PPG/AECOM Response to Section-Specific Comment 7 (03/28/2019):** Historic fill contaminants that remain within Carteret Avenue following remediation are the responsibility of the property owner (i.e., the City). Therefore, PPG is not responsible for including historic fill contaminants in a Notice in Lieu of Deed Notice for Carteret Avenue. Analytical data collected by PPG/AECOM for Carteret Avenue will be provided to the City's LSRP should the City wish to include historic fill contaminants in a NILODN for Carteret Avenue implemented by the City.

#### **SECTION-SPECIFIC COMMENT 8**

**The City/ERFS Section-Specific Comment 8 (01/17/2019):** *Section 5.5, p. 5-4: City agrees with NJDEP position that the Carteret roadway is not a Sewer Site and City believes that all references to the Sewer Protocol are unnecessary and should be deleted from the RAWP. The remedy for*

*chromium and MGP impacts is provided in the RAWP, therefore the “Remediation Protocols” of the Sewer Protocol do not apply (neither do they accurately describe the remedy or procedures that PPG will implementing). The on-going management of the remaining chromium impacts is described in the AMEC SOP – Procedure for Coordinating Utility Work Within Chromium Soil Areas (January 2017) and the AMEC Workers Training Manual for Managing Contaminated Soils and Groundwater (January 2017). Both documents have been accepted and are in use by the JCMUA. It must be noted however, that these documents are specific to chromium impacts; therefore, additional provisions and procedures may be needed for MGP impacts to supplement the above referenced SOP and worker training materials. The City requests that PPG confer with NJDEP regarding the need additional provisions for the post-remedial management of residual contamination.*

**PPG/AECOM Response to Section-Specific Comment 8 (03/28/2019):** NJDEP has agreed that while Carteret Avenue is not specifically listed as a Sewer Site per the September 7, 2011 Consent Judgment (2011 Consent Judgment) (Superior Court of New Jersey, Law Chancery Division – Hudson County, 2011), PPG may manage Carteret Avenue consistent with the Sewer Protocol provided that City of Jersey City agrees. See NJDEP/Weston's 10/20/2018 Assessment of Adequacy of Response to Section-Specific Comment 10 and PPG/AECOM's associated response. NJDEP confirmed that there is no precedent for preparing documents similar to the SOP and worker training manual documents referenced above for MGP-related material, as communicated in a telephone conversation between AECOM and NJDEP/Weston on March 25, 2019; such documents are required for CCPW-related material per the Sewer Protocol.

### **SECTION-SPECIFIC COMMENT 9**

**The City/ERFS Section-Specific Comment 9 (01/17/2019): Attachment C – Soil Reuse Plan, Paragraph 2:** Change reference to “City's LSRP” to “JCMUA LSRP”.

**PPG/AECOM Response to Section-Specific Comment 9 (03/28/2019):** As confirmed during a phone conversation between ERFS and AECOM on March 13, 2019, LSRP responsibilities for Carteret Avenue will reside with the City and not JCMUA. No changes to the Final Carteret RAWP are required because of this comment.

### **SECTION-SPECIFIC COMMENT 10**

**The City/ERFS Section-Specific Comment 10 (01/17/2019): Attachment C – Soil Reuse Plan, Table 1:**

- a) Under, “Organization” for Joe Cunha: Change to “Jersey City Division of Engineering, Traffic and Transportation”;
- b) Change “Role” for Joe Cunha to “Owner's Representative”

**PPG/AECOM Response to Section-Specific Comment 10a (03/28/2019):** Table 1 of the Carteret Soil Re-Use Plan Rev 1 (AECOM, 2019b) has been revised accordingly.

**PPG/AECOM Response to Section-Specific Comment 10b (03/28/2019):** Table 1 of the Carteret Soil Re-Use Plan Rev 1 (AECOM, 2019b) has been revised accordingly.

### **SECTION-SPECIFIC COMMENT 11**

**The City/ERFS Section-Specific Comment 11 (01/17/2019): Attachment C – Soil Reuse Plan, “Non-Chrome Fill”, 2nd paragraph:** *sates “No CCPW-impacts have been identified”; what about MGP-impacts? Have the fill materials been adequately characterized for MGP? There seems to be a lot of sample results in the tables, but no specific reference in the text.*

**PPG/AECOM Response to Section-Specific Comment 11 (03/28/2019):** The referenced text has been revised to include language regarding the absence of MGP-related impacts in the non-chrome fill material based on currently available data. The revised text is included as part of the Carteret Soil Re-Use Plan Rev 1. As stated in the Carteret Soil Re-Use Plan Rev 1, under Characterization Sampling, “Non-chrome material to be re-used on site will be visibly free of petroleum product/sheen, MGP impacts (i.e., oil-like material/tar-like material [OM/TM]), and chromium impacts. Non-chrome fill material that exhibits visible MGP impacts (i.e., OM/TM) or visual CCPW impacts, or contains hexavalent chromium or CCPW metals concentrations greater than applicable standards based on characterization sampling results will not be re-used on site and will be managed as hazardous waste and disposed of off site in accordance with applicable disposal facility requirements and federal, state, and local regulations.” The paragraph following the text referenced in this comment (i.e., “Non-Chrome Fill”, 3<sup>rd</sup> paragraph), includes a reference to the non-CCPW-related data presented in the Carteret Soil Re-Use Plan Rev 1.

### **SECTION-SPECIFIC COMMENT 12**

**The City/ERFS Section-Specific Comment 12 (01/17/2019): Attachment C – Soil Reuse Plan, Soil Reuse Plan:**

- a) *Under “3) Characterization Sampling”, it is not clear to what degree the non-chrome fill will (or has been) be tested for MGP.*
- b) *Final paragraph – revise text to reflect a finalized MOU and Cost allocation agreement with the JCMUA and the City;*
- c) *Under “6) Institutional and Engineering Controls” – fix typo in last sentence (p. 5).*

**PPG/AECOM Response to Section-Specific Comment 12a (03/28/2019):** Section 3 of the Carteret Soil Re-Use Plan Rev 1 has been revised to include additional details for characterization sampling, which will include sampling for CCPW-related compounds and for waste characterization (WC) parameters. As described in the Carteret Soil Re-Use Plan Rev 1, if characterization sampling indicates the presence of CCPW-related impacts or if the WC results indicate that the stockpiled material is hazardous, the material will not be re-used within the excavation and will be managed as hazardous waste. Additionally, non-chrome fill material to be re-use within the Carteret Avenue excavation will not contain free liquid, including free product, and will be visibly free of petroleum product/sheen, MGP impacts (i.e., OM/TM), and CCPW-related impacts.

**PPG/AECOM Response to Section-Specific Comment 12b (03/28/2019):** Cost-sharing negotiations between PPG and the City are ongoing and a final agreement has not yet been reached.



**PPG/AECOM Response to Section-Specific Comment 12c (03/28/2019):** The referenced text has been revised accordingly and is included as part of the Carteret Soil Re-Use Plan Rev 1.

## References

AECOM, 2018a. *Draft Remedial Action Work Plan (Soil) – Carteret Avenue, Addendum to the Final Remedial Action Work Plan (Soil) Rev. 3, Garfield Avenue Group Sites*. June 2018.

AECOM, 2018b. Technical Memorandum: *Halladay Street North, Carteret Avenue, Garfield Avenue – Emanating From Parameters*. September 20, 2018.

AECOM, 2018c. *Final Remedial Action Work Plan (Soil) – Carteret Avenue, Addendum to the Final Remedial Action Work Plan (Soil) Rev. 4, Garfield Avenue Group Sites*. November 2018.

AECOM, 2019a. *Technical Addendum to the Final Carteret RAWP, Garfield Avenue Group of Sites, Jersey City, Hudson County, New Jersey*. March 2019.

AECOM, 2019b. Technical Memorandum: *Carteret Avenue Non-Chrome Fill Soil Re-Use Plan (Revision 1)*. March 28, 2019.

NJDEP, 2015. *Fill Material Guidance for SRP Sites, New Jersey Department of Environmental Protection, Site Remediation Program*. April 2015. Version 3.0.

Superior Court of New Jersey, Chancery Division – Hudson County, 2011. *Docket No. C-77-05, Consent Judgment*. September 7, 2011.

To Wayne Howitz, NJDEP

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CC Ronald Riccio, Site Administrator  
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Prabal Amin, Weston Solutions, Inc.  
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Dorothy Laguzza, LeClairRyan  
Joe Lagrotteria, LeClairRyan  
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Subject Response to NJDEP/Weston's 04/26/2019 Comments and the City/ERFS's  
05/04/2019 Comments on the *Technical Addendum to the Final Remedial Action  
Work Plan (Soil) – Carteret Avenue*

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From Cameron Dixon  
Sandy Paulsen

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Date June 6, 2019

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The *Technical Addendum to the Final Remedial Action Work Plan (Soil) – Carteret Avenue* submittal and review history is as follows:

- On March 29, 2019, PPG/AECOM issued the *Technical Addendum to the Final Remedial Action Work Plan (Soil) – Carteret Avenue*, dated March 28, 2019 (AECOM, 2019a) (Carteret RAWP Technical Addendum), which was prepared as an addendum to the *Final Remedial Action Work Plan (Soil) – Carteret Avenue* (Final Carteret RAWP) (AECOM, 2018) to provide additional technical details about the remedial approach for Carteret Avenue.
- On April 26, 2019, on behalf of the New Jersey Department of Environmental Protection (NJDEP), Weston Solutions, Inc. (Weston) provided comments on the Carteret RAWP Technical Addendum via email.
- On May 4, 2019, on behalf of the City of Jersey City (the City), ERFS provided their comments on the document.

- On June 6, 2019, PPG/AECOM issued the *Final Remedial Action Work Plan (Soil) – Carteret Avenue (Revision 1)*(AECOM, 2019d) (Final Carteret RAWP [Revision 1]), which includes as an attachment the *Technical Addendum to the Final Remedial Action Work Plan (Soil) – Carteret Avenue (Revision 1)* (AECOM, 2019e) (Carteret RAWP Technical Addendum [Revision 1]), addressing NJDEP/Weston's April 26, 2019 comments and the City/ERFS's May 4, 2019 comments on the Carteret RAWP Technical Addendum.
- PPG/AECOM's responses to NJDEP/Weston's April 26, 2019 comments and to the City/ERFS's May 4, 2019 comments are provided herein.

## **NJDEP/Weston's 04/26/2019 General Comment**

### **GENERAL COMMENT 1**

**NJDEP/Weston General Comment 1 (04/26/2019):** *The Department believes that PPG may move forward with the planned remedial action in Carteret Avenue while addressing these comments. In addition, since comments on the Carteret Avenue Remedial Action Work Plan (RAWP) have been addressed by submittal of the response-to-comment document and the Technical Addendum, these materials should be made an integral part of the RAWP.*

**PPG/AECOM Response to General Comment 1 (06/06/2019):** PPG/AECOM concurs that PPG can move forward with the planned remedial action in Carteret Avenue; excavation commenced on June 3, 2019.

The Final Carteret RAWP (Revision 1) includes the Carteret RAWP Technical Addendum (Revision 1) and response-to-comments technical memoranda as attachments.

## **NJDEP/Weston's 04/26/2019 Section-Specific Comments**

### **SECTION-SPECIFIC COMMENT 1**

**NJDEP/Weston Section-Specific Comment 1 (04/26/2019):** *Section 2.2, first paragraph: The text indicates that dewatering will maintain "[d]ry conditions...at all times during excavation below the top of pipe." Since the requirement for full-time dewatering was required by Jersey City, the appropriate City agencies should confirm whether the dewatering approach is acceptable to protect infrastructure.*

**PPG/AECOM Response to Section-Specific Comment 1 (06/06/2019):** JCMUA and the City approvals of the dewatering and backfill approach for the Carteret Avenue remediation were given via an indemnification agreement signed by PPG, Entact, JCMUA, and the City; the signed indemnification agreement referenced a the Carteret RAWP, which describes the dewatering and backfill approach.

## **SECTION-SPECIFIC COMMENT 2**

**NJDEP/Weston Section-Specific Comment 2 (04/26/2019):** Section 2.3, last sentence: See Specific Comment 1.

**PPG/AECOM Response to Section-Specific Comment 2 (06/06/2019):** See PPG/AECOM's response to Section-Specific Comment 1.

## **SECTION-SPECIFIC COMMENT 3**

**NJDEP/Weston Section-Specific Comment 3 (04/26/2019):** Section 2.5: *If the stockpile of non-chrome fill material to be reused will be located on Site 132, the property owner (Jersey City Redevelopment Agency) should be notified.*

**PPG/AECOM Response to Section-Specific Comment 3 (06/06/2019):** PPG has notified the Site 132 property owner (Jersey City Redevelopment Agency [JCRA]) via their legal counsel.

## **SECTION-SPECIFIC COMMENT 4**

**NJDEP/Weston Section-Specific Comment 4 (04/26/2019):** Section 2.7: *Presuming that the City agrees to the reuse of non-CCPW-impacted soils, and considering that PPG is responsible for addressing the MGP-related contaminants that have been determined to have emanated from Site 114, PPG must include sampling for those constituents in the non-CCPW-related soils proposed for reuse. The findings of the soil reuse samples, by stockpile, must be incorporated into the future notice in lieu of deed notice for any MGP-related constituents that exceed remedial standards for the (surveyed) locations where the specific fill is placed. [CCPW = Chromate Chemical Production Waste, MGP = manufactured gas plant]*

**PPG/AECOM Response to Section-Specific Comment 4 (06/06/2019):** The technical memorandum entitled, *Carteret Avenue Non-Chrome Fill Soil Re-Use Plan (Revision 2)* (AECOM, 2019f), has been revised to include discrete sampling for MGP-related impacts that have emanated from Site 114 into Carteret Avenue, and is included as Attachment F of the Final Carteret RAWP (Revision 1). MGP-related analytical results associated with reused material will be provided to PSEG for inclusion in the future notice in lieu of deed notice for MGP-related impacts.

## **SECTION-SPECIFIC COMMENT 5**

**NJDEP/Weston Section-Specific Comment 5 (04/26/2019):** Section 3.5: *The appropriate City agencies should confirm the adequacy of the vibration and settlement monitoring plan.*

**PPG/AECOM Response to Section-Specific Comment 5 (06/06/2019):** A courtesy copy of the vibration and settlement monitoring plan for the Carteret Avenue remedial excavation will be submitted to the City and JCMUA.

#### **SECTION-SPECIFIC COMMENT 6**

**NJDEP/Weston Section-Specific Comment 6 (04/26/2019):** *Section 4.0: It is noted that emergency contacts for J. Fletcher Creamer & Son, Inc. and the to-be-identified structural monitor are not included in the referenced Revision 8 Contingencies and Communication Plan. Table 1 (Non-Emergency Contacts) should be updated to include emergency contact information specific to the Carteret Avenue remedial excavation (i.e., issues related to pipe deficiencies and/or issues resulting from vibration and settlement).*

**PPG/AECOM Response to Section-Specific Comment 6 (06/06/2019):** Table 1 in the Carteret RAWP Technical Addendum (Revision 1) and the *Contingency and Communications Plan – Full Scale Remediation, Garfield Avenue Group, Jersey City, New Jersey (Revision 9)* (CCP [Revision 9]) (AECOM, 2019c), which was issued on May 30, 2019, have been revised to include the contact information for J. Fletcher Creamer & Son, Inc. Contact information for the structural monitor has yet to be determined. The CCP will be updated once the structural monitor has been identified.

#### **SECTION-SPECIFIC COMMENT 7**

**NJDEP/Weston Section-Specific Comment 7 (04/26/2019):** *Attachment A, Fill Reuse Plan: See Specific Comment 4.*

**PPG/AECOM Response to Section-Specific Comment 7 (06/06/2019):** See PPG/AECOM's response to NJDEP/Weston Section-Specific Comment 4.

#### **SECTION-SPECIFIC COMMENT 8**

**NJDEP/Weston Section-Specific Comment 8 (04/26/2019):** *Attachment C: Please also update Contingency and Communications Plan Figure 2-2 (Evacuation Routes) and Figure 2-3 (Real-Time Action Level Communications Protocol) as well as Table 2-1 that was provided in Attachment C.*

**PPG/AECOM Response to Section-Specific Comment 8 (06/06/2019):** Table 2-1 and Figure 2-2 of the CCP (Revision 9) have been revised to account for the Carteret Avenue remediation technical approach and procedures. No edits were required to Figure 2-3 of the CCP (Revision 9).

## The City/ERFS's 05/04/2019 Section-Specific Comments

### **SECTION-SPECIFIC COMMENT 1**

**The City/ERFS Section-Specific Comment 1 (05/04/2019):** *Section 2.2, Excavation Around 96-inch Combined Sewer, p. 2-1: The description of excavation procedures does not refer to soft dig procedures for excavation within 24-inches of the 96-inch sewer line. Please acknowledge that soft dig procedures will be used and provide appropriate references to other documents that provide the details of these procedures.*

**PPG/AECOM Response to Section-Specific Comment 1 (06/06/2019):** The methods for excavating within 24-inches of the 96-inch combined sewer described in Section 2.2 of the Carteret RAWP Technical Addendum are the methods that JCMUA agreed upon during a bi-weekly Carteret Avenue meeting between PPG, JCMUA, the City, the Site Administrator, and NJDEP on December 5, 2018; these methods will be used in lieu of hand-digging or vacuum excavation within that buffer. Section 2.2 of the Carteret RAWP Technical Addendum (Revision 1) has been revised to clarify that the mini-excavator to be used to conduct excavation within 24-inches of the sewer will be outfitted with a rubber bucket.

### **SECTION-SPECIFIC COMMENT 2**

**The City/ERFS Section-Specific Comment 2 (05/04/2019):** *Section 2.5, Stockpiling, p. 2-2: JCRA has been alerted by the Law Department of PPG's intent to stockpile excavated soils on Site 132 for reuse in the remedial excavation. No response from JCRA has been received to date regarding this issue. It is strongly suggested that PPG contact and notify JCRA directly (as the property owner) of this planned activity.*

**PPG/AECOM Response to Section-Specific Comment 2 (06/06/2019):** PPG has notified the Site 132 property owner (JCRA) via their legal counsel.

### **SECTION-SPECIFIC COMMENT 3**

**The City/ERFS Section-Specific Comment 3 (05/04/2019):** *Section 3.5, Vibration and Settlement Monitoring: Please include the City Engineer (Joe Cunha) and JCMUA (Rich Haytas) on the distribution list when the proposed Vibration and Settlement Monitoring Plan is issued and for all subsequent correspondence regarding the monitoring activities.*

**PPG/AECOM Response to Section-Specific Comment 3 (06/06/2019):** Joe Cunha and Rich Haytas will be included in the distribution list for the forthcoming vibration and settlement monitoring plan and they will be included in subsequent related correspondence.

#### **SECTION-SPECIFIC COMMENT 4**

**The City/ERFS Section-Specific Comment 4 (05/04/2019):** *Section 4.0, Stakeholder Communication: Please add the City Engineer (Joe Cunha) to the list of non-emergency contacts.*

**PPG/AECOM Response to Section-Specific Comment 4 (06/06/2019):** Table 1 – Structural Emergency Contacts – Carteret Avenue Remediation (previously Table 1 – Non-Emergency Contacts) of the Carteret RAWP Technical Addendum (Revision 1) has been revised accordingly.

#### **References**

AECOM, 2018. *Final Remedial Action Work Plan (Soil) – Carteret Avenue, Addendum to the Final Remedial Action Work Plan (Soil) Rev. 4, Garfield Avenue Group Sites, Jersey City, Hudson County, New Jersey.* November 2018.

AECOM, 2019a. *Technical Addendum to the Final Remedial Action Work Plan (Soil) – Carteret Avenue, NJDEP Program Interest Number: G000005480, PPG Garfield Avenue Group, Hudson County Chromate Sites, Jersey City, New Jersey.* March 2019.

AECOM, 2019b. *Technical Memorandum: Carteret Avenue Non-Chrome Fill Soil Re-Use Plan (Revision 1).* March 28, 2019.

AECOM, 2019c. *Contingency and Communications Plan – Full Scale Remediation, Garfield Avenue Group, Jersey City, New Jersey (Revision 9), Garfield Avenue Group, Jersey City, New Jersey.* May 2019.

AECOM, 2019d. *Final Remedial Action Work Plan (Soil) – Carteret Avenue (Revision 1), Addendum to the Final Remedial Action Work Plan (Soil) Rev. 4, Garfield Avenue Group Sites, Jersey City, Hudson County, New Jersey.* June 2019.

AECOM, 2019e. *Technical Addendum to the Final Remedial Action Work Plan (Soil) – Carteret Avenue (Revision 1), NJDEP Program Interest Number: G000005480, PPG Garfield Avenue Group, Hudson County Chromate Sites, Jersey City, New Jersey.* June 2019.

AECOM, 2019f. *Technical Memorandum: Carteret Avenue Non-Chrome Fill Soil Re-Use Plan (Revision 2).* June 6, 2019.