

Appendix C

Notice in Lieu of Deed Notice

Return Address:
Dorothy Laguzza, Esq.,
K&L Gates LLP
One Newark Center, Tenth Floor
Newark, NJ 07102-5285

NOTICE IN LIEU OF DEED NOTICE

Instrument Number

THIS DOCUMENT SHALL BE DISTRIBUTED TO THE ENTITIES IDENTIFIED IN ACCORDANCE WITH N.J.A.C. 7:26C-7.2(b)2.

Prepared by: _____
[Signature]

[Print name below signature]

This Notice in Lieu of Deed Notice is made as of the ____ day of ____, ____, by the City of Jersey City, New Jersey, 280 Grove Street, Jersey City, New Jersey 07302 (“Owner”).

1. THE PROPERTY. The City of Jersey City is the owner in fee simple of certain real property designated as Caven Point Avenue and Pacific Avenue. This Notice in Lieu of Deed Notice is for the portion of Caven Point Avenue between Garfield Avenue and Pacific Avenue and the portion of Pacific Avenue between Caven Point Avenue and Carteret Avenue on the tax map of the City of Jersey City, Hudson County (the “Property”). The New Jersey Department of Environmental Protection (“NJDEP”) Program Interest Number (“Preferred ID”) for the contaminated site, part of which includes the Property, is G000005480. The Property is more particularly described in Exhibit A, which is attached hereto and made a part hereof.

2. REMEDIATION.

i. NJDEP has approved this Notice in Lieu of Deed Notice as an institutional control for the Property, which is part of the remediation of the Property. The Property is subject to a Partial Consent Judgment Concerning PPG Sites entered into by NJDEP, the Owner and PPG and approved by the Superior Court of New Jersey on June 26, 2019 (Superior Court of New Jersey, Chancery Division-Hudson County, Docket No. C-77-05 (“Consent Judgment”). Pursuant to the Consent Judgment, PPG has responsibility for remediation of all hazardous substances having emanated from Hudson County Chromate (HCC) Site 114 in accordance with the Consent Judgment.

ii. N.J.A.C. 7:26C-7 requires the Owner, among other persons, to obtain a soil remedial action permit for the soil remedial action at the Property. That permit will contain the monitoring, maintenance and biennial certification requirements that apply to the Property.

3. SOIL CONTAMINATION. PPG is responsible for remediation of the Property to address Chromate Chemical Production Waste (“CCPW”). PPG has remediated contaminated soil at the Property, such that soil contamination remains at certain areas of the Property that contains contaminants in concentrations that do not allow for the unrestricted use of the Property. Such soil contamination is described, including the type, concentration and specific location of such contamination, in Exhibit B, which is attached hereto and made a part hereof. As a result, there is a statutory requirement for this Notice in Lieu of Deed Notice in accordance with N.J.S.A. 58:10B-13. Attainment of the NJDEP soil criterion of 20 milligrams per kilogram (“mg/kg”) for hexavalent chromium remaining in soil was achieved using compliance averaging. Since attainment was achieved through the use of compliance averaging for non-residential use, a notice in lieu of deed notice must be established, in accordance with N.J.S.A 58:10B-13 to prevent residential use in the future.

4. CONSIDERATION. In accordance with the remedial action for the site that includes the Property, and in consideration of the terms and conditions of that remedial action, and other good and valuable consideration, the Owner has agreed to subject the Property to certain statutory and regulatory requirements that impose restrictions upon the use of the Property, to restrict certain uses of the Property, and to provide notice to subsequent owners, lessors, lessees and operators of the Property of the restrictions and the monitoring, maintenance, and biennial certification requirements outlined in this Notice in Lieu of Deed Notice and required by law, as set forth herein.

5A. RESTRICTED AREAS. Due to the use of compliance averaging that does not allow for unrestricted use, the Owner has agreed, as part of the remedial action for the Property, to restrict the use of certain parts of the Property (the “Restricted Areas”); a narrative description of these restrictions is provided in Exhibit C, which is attached hereto and made a part hereof. The Owner has also agreed to maintain a list of these restrictions for referral by government officials and other interested parties. The list of restrictions is available for review at the Jersey City Division of Engineering, Traffic and Transportation office or the Jersey City Municipal Utilities Authority (“JCMUA”) office.

5B. RESTRICTED LAND USES. The following statutory land use restrictions apply to the Restricted Areas:

i. The Brownfield and Contaminated Site Remediation Act, N.J.S.A. 58:10B-12.g(10), prohibits the conversion of a contaminated site, remediated to non-residential soil remediation standards that require the maintenance of engineering or institutional controls, to a child care facility, or public, private, or charter school without the Department’s prior written approval, unless a presumptive remedy is implemented; and

ii. The Brownfield and Contaminated Site Remediation Act, N.J.S.A. 58:10B-12.g(12), prohibits the conversion of a landfill, with gas venting systems and or leachate collection systems, to a single family residence or a child care facility.

5C. UTILITY COORDINATION MANUAL. A Utility Coordination Manual has been prepared for use by the owner, lessee, and/or operators for the protection of workers who may be

potentially exposed to chromium-impacted soils or groundwater in conjunction with utility or other ground intrusive work on the Property; the Utility Coordination Manual identifies health and safety requirements for the protection of personnel and contractors who may perform ground intrusive activities (e.g., digging, drilling, excavation) within the Restricted Area. Owner shall make the Utility Coordination Manual available to operators, tenants, contractors, and/or utility workers intending to conduct invasive work within the Restricted Area. The Jersey City Division of Engineering, Traffic, and Transportation, JCMUA and/or PPG will make the Utility Coordination Manual available to owners/operators, tenants, contractors, and/or utility workers in the event that the JCMUA and/or PPG are notified of invasive work by owners/operators, tenants, contractors and/or utility workers. The PPG Utility Coordination Manual that addresses the identification, notification, and coordination of work between PPG and the JCMUA related to the utilities located within the Restricted Area is attached to this Notice in Lieu of Deed Notice.

6A. CHANGE IN OWNERSHIP AND REZONING.

i. The Owner and the subsequent owners, lessors, and lessees, shall cause all leases, grants, and other written transfers of an interest in the Restricted Area to contain a provision expressly requiring all holders thereof to take the Property subject to the restrictions contained herein and to comply with all, and not to violate any of the conditions of this Notice in Lieu of Deed Notice. Nothing contained in this Paragraph shall be construed as limiting any obligation of any person to provide any notice required by any law, regulation, or order of any governmental authority.

ii. The Owner and the subsequent owners shall provide written notice to NJDEP on a form provided by NJDEP and available at www.nj.gov/srp/forms within 30 calendar days after the effective date of any conveyance, grant, gift, or other transfer, in whole or in part, of the Owner's or subsequent owner's interest in the Restricted Area.

iii. The Owner and the subsequent owners shall provide written notice to the Department, on a form available from the Department at www.nj.gov/srp/forms, within thirty (30) calendar days after the owner's petition for or filing of any document initiating a rezoning of the Property to residential.

6B. SUCCESSORS AND ASSIGNS. This Notice in Lieu of Deed Notice shall be binding upon Owner and upon Owner's successors and assigns, and subsequent owners, lessors, lessees and operators while each is an owner, lessor, lessee, or operator of the Property.

7A. ALTERATIONS, IMPROVEMENTS, AND DISTURBANCES.

i. The Owner and all subsequent owners, lessors, and lessees shall notify any person, including, without limitation, tenants, employees of tenants, and contractors, intending to conduct invasive work or excavate within the Restricted Areas, of the nature and location of contamination in the Restricted Areas, and, of the precautions necessary to minimize potential human exposure to contaminants.

ii. Except as provided in Paragraph 7B, below, no person shall make, or allow to be made, any alteration, improvement, or disturbance in, to, or about the Property which disturbs any engineering control at the Property without first retaining a licensed site remediation professional. Nothing herein shall constitute a waiver of the obligation of any person to comply with all applicable laws and regulations including, without limitation, the applicable rules of the Occupational Safety and Health Administration.

iii. A soil remedial action permit modification is required for any permanent alteration, improvement, or disturbance and the owner, lessor, lessee or operator shall submit the following within 30 days after the occurrence of the permanent alteration, improvement, or disturbance:

(A) A Remedial Action Workplan or Linear Construction Project notification and Final Report Form, whichever is applicable;

(B) A Remedial Action Report and Termination of Deed Notice Form; and

(C) A revised recorded Notice in Lieu of Deed Notice with revised Exhibits, and Remedial Action Permit Modification or Remedial Action Permit Termination form and Remedial Action Report.

iv. No owner, lessor, lessee or operator shall be required to obtain a Remedial Action Permit Modification for any temporary alteration, improvement, or disturbance, provided that the site is restored to the condition described in the Exhibits to this Notice in Lieu of Deed Notice, and the owner, lessee, or operator complies with the following:

(A) Restores any disturbance of an engineering control to pre-disturbance conditions within 60 calendar days after the initiation of the alteration, improvement or disturbance;

(B) Ensures that all applicable worker health and safety laws and regulations are followed during the alteration, improvement, or disturbance, and during the restoration;

(C) Ensures that human exposure to contamination in excess of the remediation standards does not occur; and

(D) Describes, in the next biennial certification the nature of the temporary alteration, improvement, or disturbance, the dates and duration of the temporary alteration, improvement, or disturbance, the name of key individuals and their affiliations conducting the temporary alteration, improvement, or disturbance, the notice the Owner gave to those persons prior to the disturbance.

7B. EMERGENCIES. In the event of an emergency which presents, or may present, an unacceptable risk to the public health and safety, or to the environment, or an immediate environmental concern, see N.J.S.A. 58:10C-2, any person may temporarily breach an engineering control provided that that person complies with each of the following:

- i. Immediately notifies the Department of Environmental Protection of the emergency, by calling the DEP Hotline at 1-877-WARNDEP or 1-877-927-6337;
- ii. Hires a Licensed Site Remediation Professional (unless the Restricted Areas includes an unregulated heating oil tank) to respond to the emergency;
- iii. Limits both the actual disturbance and the time needed for the disturbance to the minimum reasonably necessary to adequately respond to the emergency;
- iv. Implements all measures necessary to limit actual or potential, present or future risk of exposure to humans or the environment to the contamination;
- v. Notifies the Department of Environmental Protection when the emergency or immediate environmental concern has ended by calling the DEP Hotline at 1-877-WARNDEP or 1-877-927-6337; and
- vi. Restores the engineering control to the pre-emergency conditions as soon as possible; and
- vii. Submits to the Department of Environmental Protection within 60 calendar days after completion of the restoration of the engineering control, a report including: (a) the nature and likely cause of the emergency; (b) the measures that have been taken to mitigate the effects of the emergency on human health and the environment; (c) the measures completed or implemented to restore the engineering control; and (d) any changes to the engineering control or site operation and maintenance plan to prevent reoccurrence of such conditions in the future.

8. TERMINATION OF NOTICE IN LIEU OF DEED NOTICE.

- i. This Notice in Lieu of Deed Notice may be terminated only upon recording a NJDEP-approved Termination of a Notice in Lieu of Deed Notice, available at N.J.A.C. 7:26C Appendix C, with the Affected Parties as identified in N.J.A.C. 7:26C-7.2(b)2, expressly terminating this Notice in Lieu of Deed Notice.
- ii. Within 30 calendar days after recording a NJDEP-approved Termination of a Notice in Lieu of Deed Notice, the owner of the property should apply to NJDEP for termination of the soil remedial action permit pursuant to N.J.A.C. 7:26C-7.

9. ACCESS. The Owner, and the subsequent owners, lessors, lessees, and operators agree to allow NJDEP, its agents and representatives access to the Property to inspect and evaluate the continued protectiveness of the remedial action that includes this Notice in Lieu of Deed Notice and to conduct additional remediation to ensure the protection of the public health and safety and of the environment if the subsequent owners, lessors, lessees, and operators, during their ownership, tenancy, or operation, and the Owner fail to conduct such remediation pursuant to this Notice in Lieu of Deed Notice as required by law. The Owner, and the subsequent owners, lessors, and lessees, shall also cause all leases, subleases, grants, and other written transfers of an

interest in the Restricted Area to contain a provision expressly requiring that all holders thereof provide such access to NJDEP.

10. ENFORCEMENT OF VIOLATIONS.

i. This Notice in Lieu of Deed Notice itself is not intended to create any interest in real estate in favor of NJDEP, nor to create a lien against the Property, but merely is intended to provide notice of certain conditions and restrictions on the Property and to reflect the regulatory and statutory obligations imposed as a conditional remedial action for this site.

ii. The restrictions provided herein may be enforceable solely by NJDEP against any person who violates this Notice in Lieu of Deed Notice. To enforce violations of this Notice in Lieu of Deed Notice, NJDEP may initiate one or more enforcement actions pursuant to N.J.S.A. 58:10-23.11, and N.J.S.A. 58:10C, and require additional remediation and assess damages pursuant to N.J.S.A. 58:10-23.11, and N.J.S.A. 58:10C.

11. SEVERABILITY. If any court of competent jurisdiction determines that any provision of this Notice in Lieu of Deed Notice requires modification, such provision shall be deemed to have been modified automatically to conform to such requirements. If a court of competent jurisdiction determines that any provision of this Notice in Lieu of Deed Notice is invalid or unenforceable and the provision is of such a nature that it cannot be modified, the provision shall be deemed deleted from this instrument as though the provision had never been included herein. In either case, the remaining provisions of this Notice in Lieu of Deed Notice shall remain in full force and effect.

12A. EXHIBIT A. Exhibit A includes the following maps of the Property and the vicinity:

i. Exhibit A-1: Vicinity Map - A map that identifies by name the roads, and other important geographical features in the vicinity of the Property (for example, USGS Quad map, Hagstrom County Maps);

ii. Exhibit A-2: Metes and Bounds Description - A tax map of lots and blocks as well as metes and bounds description of the restricted area within the Property, including references to tax lot and block numbers for the properties adjacent to the Property and distances from nearby intersections;

iii. Exhibit A-3: Property Map - A scaled map of the Property, scaled at one inch to 200 feet or less, and if more than one map is submitted, the maps shall be presented as overlays, keyed to a base map; and the Property Map shall include diagrams of major surface topographical features such as buildings, roads, and parking lots.

12B. EXHIBIT B. Exhibit B includes the following descriptions of the Restricted Areas:

i. Exhibit B: Restricted Area Map - A separate map for each restricted area that includes:

(A) As-built diagrams of each engineering control, including caps, fences, slurry walls, (and, if any) ground water monitoring wells, extent of the ground water classification exception area, pumping and treatment systems that may be required as part of a ground water engineering control in addition to the Notice in Lieu of Deed Notice;

(B) As-built diagrams of any buildings, roads, parking lots and other structures that function as engineering controls; and

(C) Designation of all soil and all upland sediment sample locations within the restricted areas that exceed any soil standard that are keyed into one of the tables described in the following paragraph.

ii. Exhibit B-2: Restricted Area Data Table - A separate table for each restricted area that includes either (A) or (B) through (F):

(A) Only for historic fill extending over the entire site or a portion of the site and for which analytical data are limited or do not exist, a narrative that states that historic fill is present at the site, a description of the fill material (e.g., ash, cinders, brick, dredge material), and a statement that such material may include, but is not limited to, contaminants such as PAHs and metals;

(B) Sample location designation from Restricted Area map (Exhibit B-1);

(C) Sample elevation based upon mean sea level;

(D) Name and chemical abstract service registry number of each contaminant with a concentration that exceeds the unrestricted use standard;

(E) The restricted and unrestricted use standards for each contaminant in the table; and

(F) The remaining concentration of each contaminant at each sample location at each elevation.

12C. EXHIBIT C. Exhibit C includes narrative description of the institutional controls as follows:

i. Exhibit C-1: Notice in Lieu of Deed Notice as Institutional Control: Exhibit C-1 includes a narrative description of the restriction and obligations of this Notice in Lieu of Deed Notice that are in addition to those described above, as follows:

(A) Description and estimated size in square feet of the Restricted Area as described above;

(B) Description of the restrictions on the Property by operation of this Notice in Lieu of Deed Notice; and

(C) The objective of the restrictions.

13. SIGNATURES. IN WITNESS WHEREOF, Owner has executed this Deed Notice as of the date first written above.

City of Jersey City

ATTEST: City of Jersey City

_____ By _____

[Print name and title]

[Signature]

STATE OF New Jersey SS.:
COUNTY OF Hudson

I certify that on _____, 20__, [Name of person executing document on behalf of Owner] personally came before me, and this person acknowledged under oath, to my satisfaction, that:

(a) this person is the business administrator of the City of Jersey City, the city named in this document;

(b) this document was signed and delivered by the city as its voluntary act and was duly authorized;

(c) this person signed this proof to attest to the truth of these facts.

[Signature]

[Print name and title of attesting witness]

Signed and sworn before me on _____, 20__

_____, Notary Public

[Print name and title]

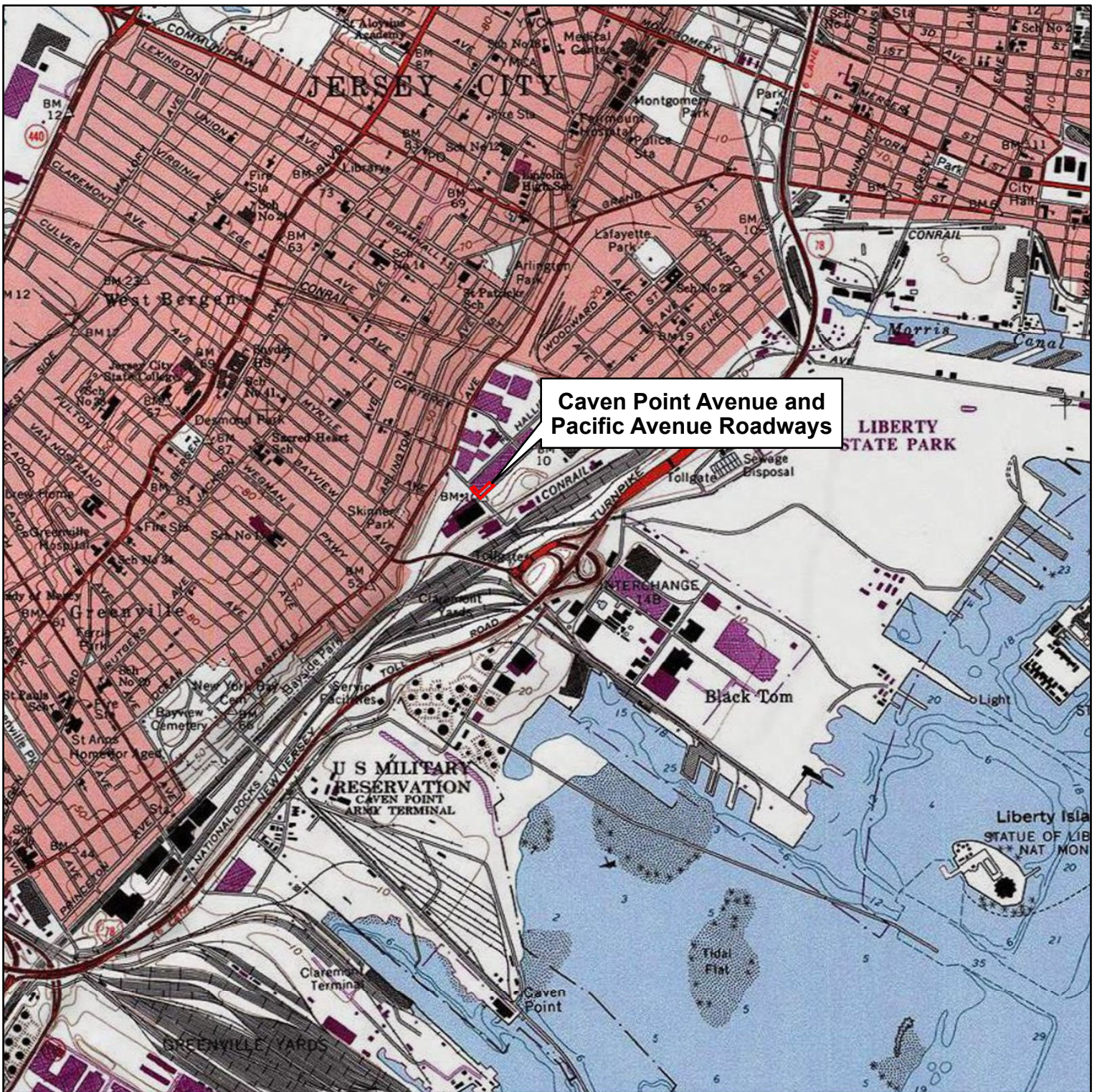
EXHIBIT A

Maps of the Property and Vicinity

Exhibit A-1: Vicinity Map

Exhibit A-2: Metes and Bounds Description

Exhibit A-3: Property Map



Caven Point Avenue and Pacific Avenue Roadways

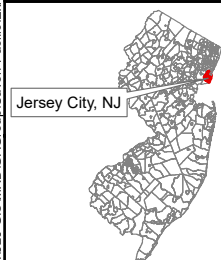
Legend

 Site Boundary

Notes:

1. State Plane NAD83 Coordinates, U.S. Survey Feet
2. USGS 7.5' Topographic Quadrangle - Jersey City NJ-NY. Esri ArcGIS map service, <http://services.arcgisonline.com/ArcGIS/services>

© 2020 GISMXD\GAGroup\Caven-Pacific\Exhibit A-1 (USGS).mxd



0 1,000 2,000 Feet



AECOM

30 Knightsbridge Rd.
Suite 520
Piscataway, NJ 08854
Phone: 732-564-3600

Vicinity Map

Caven Point Avenue and Pacific Avenue Roadways
Jersey City, Hudson County, New Jersey
Notice in Lieu of Deed Notice

Project No.: 60616701

Scale: 1:24,000

Date: 9/9/2021

Sheet: 1 of 1

EXHIBIT A-1

Exhibit A-2



Facilities Mapping Specialists
Environmental Site Mapping
Transportation and
Right-of-Way Surveys

Expert Witness Services
Aerial Base Mapping
Certified Drone Pilots
Hydrographic-Bathymetric Surveys

**DESCRIPTION OF A DEED NOTICE AREA LOCATED
OVER A PORTION OF CAVEN POINT AVENUE and PACIFIC AVENUE
IN JERSEY CITY, HUDSON COUNTY, NEW JERSEY**


BEGINNING at a point on the northeasterly sideline of Caven Point Avenue, a 60 feet wide right of way, where it is intersected by the northwesterly sideline of Pacific Avenue, an 80 feet wide right of way, said beginning point having a NAD83 (2011) New Jersey State Plane Coordinate of North: 682031.90 East: 610820.06 (US Survey Feet, measured in 2005); and runs thence

1. Along the northwesterly sideline of Pacific Avenue, North 46 degrees 42 minutes 53 seconds East 205.74 feet to a point; thence the following 9 course through Pacific Avenue and Caven Point Avenue
2. South 58 degrees 02 minutes 47 seconds East 79.29 feet to a point; thence
3. South 47 degrees 01 minutes 51 seconds West 89.79 feet to a point; thence
4. South 59 degrees 44 minutes 37 seconds West 6.95 feet to a point; thence
5. South 45 degrees 32 minutes 47 seconds West 118.66 feet to a point; thence
6. South 42 degrees 30 minutes 38 seconds West 56.98 feet to a point; thence
7. North 43 degrees 21 minutes 11 seconds West 66.42 feet to a point; thence
8. North 53 degrees 14 minutes 08 seconds West 54.30 feet to a point; thence
9. North 37 degrees 07 minutes 57 seconds West 78.52 feet to a point; thence
10. North 53 degrees 53 minutes 00 seconds East 47.48 feet to a point in the northeasterly line of Caven Point Avenue; thence
11. Along the northeasterly line of Caven Point Avenue, South 43 degrees 17 minutes 03 seconds East 110.85 feet to the point and place of BEGINNING.

Containing 25,995 square feet of land more or less.

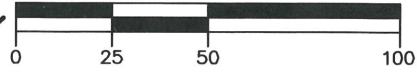
The basis of bearings for this description is the New Jersey State Plane Coordinate System NAD83 (2011).

This description was prepared in accordance with a plan entitled, "DEED NOTICE AREA LOCATED OVER A PORTION OF CAVEN POINT AVENUE & PACIFIC AVENUE, JERSEY CITY, HUDSON COUNTY NEW JERSEY", prepared by Borbas Surveying and Mapping, dated May 17, 2022.



J. Peter Borbas, PLS
NJ 24GS03165300
May 17, 2022





SCALE: 1"=50'



Halladay Street
60' WIDE R.O.W. PER TAX MAP

LOT 2
BLOCK 21509

LOT 1 (FORMERLY PLOT.H)
BLOCK 21509
DB 3382 PAGE 453

LOT 3 (FORMERLY
LOT A.1)
BLOCK 21509

Caven Point Avenue
60' WIDE R.O.W. PER TAX MAP

N53°53'00"E
47.48'
N37°07'57"W
78.52'
100.00'
S45°17'03"E
110.85'
N53°14'08"W
54.30'
54.30'

P.O.B.
N: 682031.90
E: 610820.06

25,995 SQ.FT.

Pacific Avenue
80' WIDE R.O.W. PER TAX MAP

N46°42'53"E
205.74'
S58°02'47"E
79.29'
S47°01'51"W
89.79'
S59°44'37"W
6.95'
S45°32'47"W
118.66'

LOT 20
BLOCK 21503

NOTES:

1. THE HORIZONTAL DATUM IS THE NEW JERSEY STATE PLANE COORDINATE SYSTEM NAD83 DETERMINED BY DIFFERENTIAL GPS ON DECEMBER 22, 2005 USING THE NGS CORS SYSTEM, REFERENCE STATIONS NJI2, SHKQ & LAMT.

REFERENCES:

1. DIGITAL BOUNDARY & TOPOGRAPHIC SURVEY PPG SITE LOT 3, BLOCK 21509 PREPARED BY BORBAS SURVEYING & MAPPING, LLC DATED MAY 07, 2018.

2. CITY OF JERSEY CITY TAX MAP 215.

**DEED NOTICE AREA
LOCATED OVER A PORTION
OF CAVEN POINT AVENUE &
PACIFIC AVENUE, JERSEY CITY
HUDSON COUNTY, NJ**



BORBAS SURVEYING & MAPPING, LLC
402 MAIN STREET, BOONTON, NEW JERSEY 07005
Phone (973) 316-8743 www.borbass.com
NJ CERTIFICATE OF AUTHORIZATION NO. 24GA28056200
Environmental Site Mapping o Hazardous Materials and Waste Surveys
Aerial Control and GPS Surveys o Topographic and Existing Condition Surveys
Remote Sensing and GIS o Hydrographic/Bathymetric Surveys o ALTA/NSPS Certified Surveys
Transportation and Right of Way Surveys o Deformation and Structure Monitoring Surveys


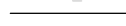
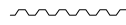

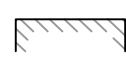
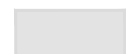
J. PETER BORBAS

NJ PROFESSIONAL LAND SURVEYOR 24GS03165300 PROFESSIONAL PLANNER 3884

Date: MAY 17, 2022

JOB NO.: 051201	SCALE: 1"=50'
PROJECT NAME: 051201	FIELD BOOK: N/A
DRAWING NO.: 051201_2022-05-17_CAVEN POINT AVE_DN	

LEGEND

-  PROPERTY LINE
-  EDGE OF CONCRETE
-  EXISTING SHEET PILE
-  CURB
-  EXISTING BUILDING
-  PROPERTY LIMITS FOR NOTICE IN LIEU OF DEED NOTICE

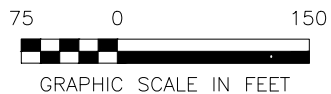
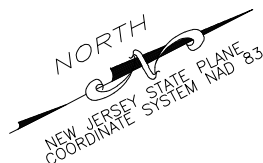
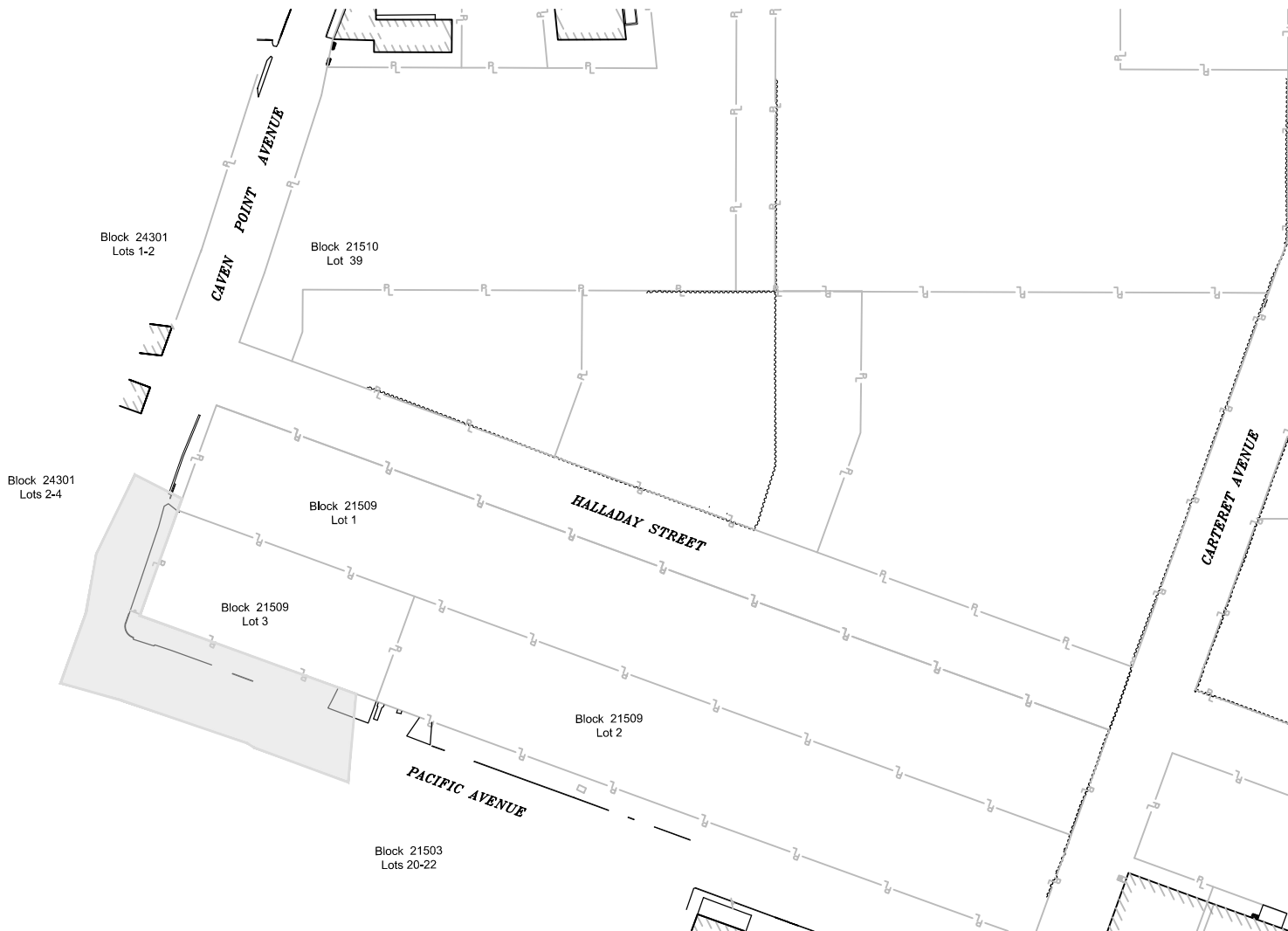
NOTES:

NAD83 - NORTH AMERICAN DATUM OF 1983

PI - PROGRAM INTEREST

1. PROPERTY BOUNDARIES ARE SOURCED FROM "DEED NOTICE AREA LOCATED OVER A PORTION OF CAVEN POINT AVENUE & PACIFIC AVENUE, JERSEY CITY, HUDSON COUNTY, NJ", PREPARED BY BORBAS SURVEYING & MAPPING, LLC, DATED MAY 17, 2022.

2. THE PROPERTIES REFERENCED IN THIS NOTICE IN LIEU OF DEED NOTICE ARE CAVEN POINT AVENUE AND PACIFIC AVENUE.




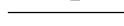
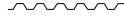

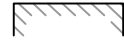

CAVEN POINT AVE. AND PACIFIC AVE. PI NUMBER G000005480 JERSEY CITY, HUDSON COUNTY, NEW JERSEY		PROPERTY MAP NOTICE IN LIEU OF DEED NOTICE
DATE: 05/18/2022	DRWN: SAP	EXHIBIT A-3

EXHIBIT B

Description of Restricted Area

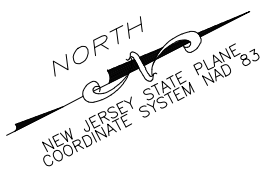
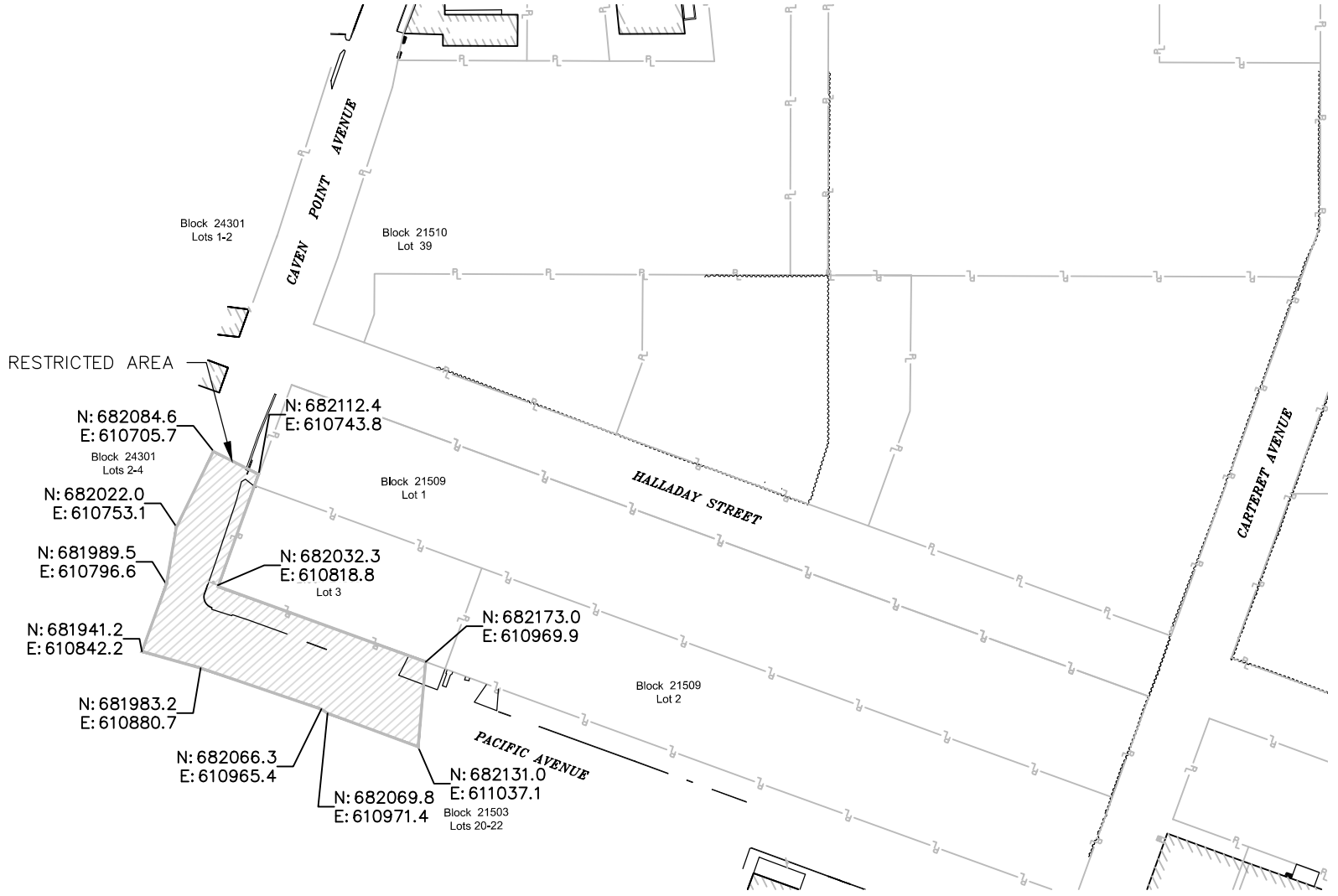
Exhibit B-1: Restricted Area Map (*Attainment of the NJDEP soil criterion of 20 mg/kg for hexavalent chromium remaining in soil was achieved using compliance averaging. Documentation of compliance is provided in **Attachment A** – Technical Memorandum entitled, Caven Point Avenue and Pacific Avenue Roadways Compliance Averaging for Hexavalent Chromium in Soil (Revision 1). Since attainment was achieved through the use of compliance averaging for non-residential use, a notice in lieu of deed notice must be established, in accordance with N.J.S.A 58:10B-13 to prevent residential use in the future.*)

Exhibit B-2: Restricted Area Data Table (*Not relevant as attainment of the NJDEP soil criterion of 20 mg/kg for hexavalent chromium remaining in soil was achieved using compliance averaging. Documentation of compliance is provided in **Attachment A** – Technical Memorandum entitled, Caven Point Avenue and Pacific Avenue Roadways Compliance Averaging for Hexavalent Chromium in Soil (Revision 1).*)

- LEGEND**
-  PROPERTY LINE
 -  EDGE OF CONCRETE
 -  EXISTING SHEET PILE
 -  CURB
 -  EXISTING BUILDING
 -  RESTRICTED AREA - Cr⁶ CONC. < CrSCC OF 20 MG/KG THROUGH COMPLIANCE AVERAGING

- NOTES:**
- CONC. - CONCENTRATION
 - Cr⁶ - HEXAVALENT CHROMIUM
 - CrSCC - NJDEP CHROMIUM SOIL CLEANUP CRITERIA
 - CONC. - CONCENTRATION(S)
 - MG/KG - MILLIGRAMS PER KILOGRAM
 - NAD83 - NORTH AMERICAN DATUM OF 1983
 - NJDEP - NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
 - N.J.S.A - NEW JERSEY STATUTES ANNOTATED
 - PI - PROGRAM INTEREST

1. THE PROPERTIES REFERENCED IN THIS NOTICE IN LIEU OF DEED NOTICE ARE CAVEN POINT AVENUE AND PACIFIC AVENUE.
2. PROPERTY BOUNDARIES ARE SOURCED FROM "DEED NOTICE AREA LOCATED OVER A PORTION OF CAVEN POINT AVENUE & PACIFIC AVENUE, JERSEY CITY, HUDSON COUNTY, NJ," PREPARED BY BORBAS SURVEYING & MAPPING, LLC, DATED MAY 17, 2022.
3. ATTAINMENT OF THE NJDEP SOIL CRITERION OF 20 MG/KG FOR Cr⁶ REMAINING IN SOIL WAS ACHIEVED USING COMPLIANCE AVERAGING. DOCUMENTATION OF THIS IS PROVIDED IN ATTACHMENT A OF THIS EXHIBIT. SINCE ATTAINMENT WAS ACHIEVED THROUGH THE USE OF COMPLIANCE AVERAGING FOR NON-RESIDENTIAL USE, A NOTICE IN LIEU OF DEED NOTICE MUST BE ESTABLISHED, IN ACCORDANCE WITH N.J.S.A. 58:10B-13 TO PREVENT RESIDENTIAL USE IN THE FUTURE.



CAVEN POINT AVE. AND PACIFIC AVE. PI NUMBER G000005480 JERSEY CITY, HUDSON COUNTY, NEW JERSEY		RESTRICTED AREA MAP
DATE: 05/20/2022	DRWN: SAP	EXHIBIT B-1

EXHIBIT C

Narrative descriptions of the institutional controls

Exhibit C-1: Notice in Lieu of Deed Notice as Institutional Control

EXHIBIT C

Narrative description of the institutional controls

Exhibit C-1: Notice in Lieu of Deed Notice as Institutional Control

(A) Description and estimated size of the Restricted Area:

The Notice in Lieu of Deed Notice is for soil (Soil Restricted Area), located within the right-of-way of Caven Point Avenue and Pacific Avenue in Jersey City, New Jersey, as depicted on **Exhibit B-1**.

In the Restricted Area, the constituent of concern is hexavalent chromium (Cr^{+6}) at concentrations less than the Chromium Soil Clean Up Criterion (CrSCC) of 20 milligrams per kilogram (mg/kg) attained through the use of compliance averaging. The estimated size of the Soil Restricted Area is 25,984 square feet (ft^2) (0.6 acres). Documentation of compliance is provided in **Attachment A** – Technical Memorandum entitled, *Caven Point Avenue and Pacific Avenue Roadways Compliance Averaging for Hexavalent Chromium in Soil (Revision 1)*.

(B) Descriptions of the restrictions on the Property by operation of this Notice in Lieu of Deed Notice:

The restrictions included in this Notice in Lieu of Deed Notice minimize exposure to the constituent of concern identified in **Exhibit C-1(A)**, Cr^{+6} at concentrations less than the CrSCC attained through the use of compliance averaging, in the Soil Restricted Area of Caven Point Avenue and Pacific Avenue. The Restricted Area is subject to the restrictions set forth in this Notice in Lieu of Deed Notice, specifically, the Restricted Area may not be used for residential purposes. No other restrictions apply with respect to Cr^{+6} . Exposure to humans and the potential impact to the environment are reduced through the use of this Notice in Lieu of Deed Notice for Cr^{+6} at concentrations less than the CrSCC attained through the use of compliance averaging.

(C) Objective of the restrictions:

The objective of the restrictions in this Notice in Lieu of Deed Notice is to permit continued use of the Property for non-residential purposes only while reducing the exposure of humans to, and the potential impact to the environment from, Cr^{+6} at concentrations less than the CrSCC attained through the use of compliance averaging.

Attachment A: Technical Memorandum entitled, *Caven Point Avenue and Pacific Avenue Roadways Compliance Averaging for Hexavalent Chromium in Soil (Revision 1)*.

Memorandum

To	Wayne Howitz, NJDEP	Page 1
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. Meghan Clemente, Jersey City Peter Baker, Jersey City David Spader, ERFS Dorothy Laguzza, K&L Gates Joe Lagrotteria, K&L Gates Mark Terril, PPG Jody Overmyer, PPG Rich Feinberg, PPG Aimee Ruitter, AECOM Sandy Paulsen, AECOM	
Subject	Caven Point Avenue and Pacific Avenue Roadways Compliance Averaging for Hexavalent Chromium in Soil (Revision 1)	
From	Claire Hunt	
Date	February 25, 2022	

Introduction

This memorandum provides documentation of attainment of compliance for hexavalent chromium (Cr⁺⁶) in soil with the New Jersey Department of Environmental Protection (NJDEP) chromium soil cleanup criterion (CrSCC) for a site-specific soil sample set from the Caven Point Avenue and Pacific Avenue Roadways in accordance with the NJDEP’s *Technical Guidance for the Attainment of Remediation Standards and Site-Specific Criteria* (September 24, 2012, Version 1.0) (NJDEP, 2012). Samples that exceed the CrSCC but fall within undisturbed native deposits or meadow mat are compliant with the Chromium Policy (NJDEP, 2007) per the Method to Determine Compliance (NJDEP, 2013), and are not included in this memorandum.

The following soil samples (**Table 1**) with Cr⁺⁶ concentrations greater than the chromium soil cleanup criterion (CrSCC) for Cr⁺⁶ of 20 milligrams per kilogram (mg/kg) remain in place within the Caven Point Avenue and Pacific Avenue Roadways:

Table 1: Soil Samples Remaining with Cr⁺⁶ Concentrations Greater than the CrSCC and Not Compliant with the Chromium Policy

Location ID	Sample ID	Depth Interval (ft bgs)	Sample Elevation (ft NAVD88)	Cr ⁺⁶ (mg/kg)
135-MW1C	PPG 1351CB(1.8-2.3) DUPJ49116-15	1.8 - 2.3	8.1 - 7.6	20.1 J
ASM-T49A	ASM-T49A-4.0-4.5	4.0 - 4.5	5.9 - 5.4	32.9
ASM-U49A	ASM-U49A-4.0-4.5	4.0 - 4.5	6.6 - 6.1	21.1
ASM-X46A	ASM-X46A-4.0-4.5	4.0 - 4.5	6.4 - 5.9	153 J
ASM-X46A-SW-E2	ASM-X46A-SW-E-8.2-8.7	8.2 - 8.7	6.0 - 5.5	162 RA
ASM-Y44A-SW-E2	ASM-Y44A-SW-E-3.7-4.2	3.7 - 4.2	6.5 - 6.0	31.8 RA

Notes:

bgs - below ground surface
 ft - foot or feet

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

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

NAVD88 - North American Vertical Datum of 1988

Figure 1 and **Figure 2** depict boring/sample locations, as well as analytical results for soil samples where Cr⁺⁶ remains in place within the Caven Point Avenue and Pacific Avenue Roadways at concentrations greater than the CrSCC.

Boring logs, laboratory reports, and data validation reports for samples reported herein are included as part of the *Draft Caven Point Avenue and Pacific Avenue Roadways Remedial Action Report Tables and Figures*, dated August 31, 2020, except where otherwise noted.

Delineation

Soil samples with Cr⁺⁶ concentrations greater than the CrSCC that remain in place within the Caven Point Avenue and Pacific Avenue Roadways are delineated as presented in **Table 2** through **Table 6**:

Table 2: Delineation of Sample PPG 1351CB(1.8-2.3) DUPJ49116-15

Location ID	Depth Interval (ft bgs)	Sample Elevation (ft NAVD88)	Date Collected	Cr ⁺⁶ Result (mg/kg)	Direction
EF-21	2.0 - 2.5	8.0 - 7.5	4/18/2011	<0.57 U	East
ASM-Y43A-SW-E1	2.0 - 2.5	8.5 - 8.0	12/20/2017	2.0 RA	North
135-MW1B	5.2 - 5.7	4.8 - 4.3	3/22/2007	<2.33 UJ	Vertical
PAC-Z46A	3.4 - 3.9	6.4 - 5.9	8/2/2018	1.5 J	South
ASM-X45A-SW-E1	6.3 - 6.8	8.0 - 7.5	10/23/2017	0.76 J (2.3 J)	West

Notes:

U - The analyte was not detected above the sample reporting limit shown.

UJ - The analyte was not detected above the sample reporting limit shown and the reporting limit was approximate.

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

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

Table 3: Delineation of Sample ASM-T49A-4.0-4.5

Location ID	Depth Interval (ft bgs)	Sample Elevation (ft NAVD88)	Date Collected	Cr ⁺⁶ Result (mg/kg)	Direction
CAV-R50A	4.1 - 4.6	5.9 - 5.4	8/1/2018	2.5 J	West
ASM-T49A	6.0 - 6.5	3.9 - 3.4	8/15/2016	<0.48 UJ	Vertical
CAV-T51A	2.4 - 2.9	6.6 - 6.1	8/1/2018	2.9 J	South
ASM-W49AR ¹	7.5 - 8.0	6.7 - 6.2	9/28/2016	1.7 J	East
ASM-T49AR ¹	7.5 - 8.0	6.6 - 6.1	9/27/2016	1.7 J	North

Notes:

¹The boring log, for this sampling location is provided in **Attachment 2**; The laboratory report and data validation report associated with this sampling location are provided in **Attachment 3** and **Attachment 4**, respectively.

UJ - The analyte was not detected above the sample reporting limit shown and the reporting limit was approximate.

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

Table 4: Delineation of Sample ASM-U49A-4.0-4.5

Location ID	Depth Interval (ft bgs)	Sample Elevation (ft NAVD88)	Date Collected	Cr ⁺⁶ Result (mg/kg)	Direction
CAV-R50A	6.1 - 6.6	3.9 - 3.4	8/2/2018	2.6 J	West
ASM-U49A	6.0 - 6.5	4.6 - 4.1	8/15/2016	<0.4 U (0.39 U)	Vertical
CAV-T51A	2.4 - 2.9	6.6 - 6.1	8/1/2018	2.9 J	South
ASM-U49AR ¹	8.0 - 8.5	6.1 - 5.6	9/27/2016	0.52 J	North
ASM-W49AR ¹	7.5 - 8.0	6.7 - 6.2	9/28/2016	1.7 J	East

Notes:

¹The boring log, for this sampling location is provided in **Attachment 2**; The laboratory report and data validation report associated with this sampling location are provided in **Attachment 3** and **Attachment 4**, respectively.

U - The analyte was not detected above the sample reporting limit shown.

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

Table 5: Delineation of Samples ASM-X46A-4.0-4.5 and ASM-X46A-SW-E-8.2-8.7

Location ID	Depth Interval (ft bgs)	Sample Elevation (ft NAVD88)	Date Collected	Cr ⁺⁶ Result (mg/kg)	Direction
EF-21	4.0 - 4.5	6.0 - 5.5	4/18/2011	<0.58 U	East
ASM-X46A-PB	10.2 - 10.7	3.8 - 3.2	12/27/2017	<0.56 RA	West
ASM-Y43A-SW-E2	4.0 - 4.5	6.5 - 6.0	12/20/2017	1.3 RA	North
PAC-Z46A	3.4 - 3.9	6.4 - 5.9	8/2/2018	1.5 J	Southeast
ASM-X46A	8.0 - 8.5	2.4 - 1.9	8/18/2016	3.5 J	Vertical

Notes:

U - The analyte was not detected above the sample reporting limit shown.

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

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

Table 6: Delineation of Sample ASM-Y44A-SW-E-3.7-4.2

Location ID	Depth Interval (ft bgs)	Sample Elevation (ft NAVD88)	Date Collected	Cr ⁺⁶ Result (mg/kg)	Direction
EF-21	4.0 - 4.5	6.0 – 5.5	4/18/2011	<0.58 U	East
ASM-Y44A-SW-E3	5.7 - 6.2	4.5 - 4.0	12/20/2017	1.1 RA	West
ASM-Y43A-SW-E2	4.0 - 4.5	6.5 - 6.0	12/20/2017	1.3 RA	North
PAC-Z46A	3.4 - 3.9	6.4 - 5.9	8/2/2018	1.5 J	South
ASM-Y44A	4.0 - 4.5	6.2 - 6.7	8/18/2016	12.8 J	Vertical

Notes:

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

Functional Areas

The Cr⁺⁶ CrSCC is based on the inhalation pathway (**Attachment 1**). The functional areas for the inhalation pathway are limited to 0.5 acre for residential use. The extent of the functional areas within the site boundary are shown in **Figure 1** and **Figure 2**. The shape is generally rectangular within the site boundary. Remaining samples within the functional area extents were collected from deeper than 2 feet below ground surface to the undisturbed native deposits or meadow mat and are considered to be part of the functional areas for the calculation.

Compliance Averaging

Compliance with the Cr⁺⁶ CrSCC is demonstrated through spatial averaging. Theissen polygons were created within Functional Area 1 and Function Area 2 as shown in **Figure 1** and **Figure 2**, respectively. The sample selection process is as follows:

1. All of the samples for Cr⁺⁶ that fall within a functional area (horizontally and vertically), including samples that are associated with a functional area but are located beyond the physical limits of a functional area are identified. Samples falling in the undisturbed native deposits or meadow mat are excluded.
2. The maximum concentration is selected at each sample location for use in the weighted average (refer to **Table 7** and **Table 8** below). The maximum of the concentration for detections or the Method Detection Limit (MDL)/Reporting Limit (RL) for non-detects is selected.

Table 7: Samples Used to Determine Weighted Average Concentration for Samples ASM-T49A-4.0-4.5, and ASM-U49A-4.0-4.5 (Function Area 1)

Location ID	Sample Depth (ft bgs)	Sample Elevation (ft NAVD88)	Date Collected	Maximum Cr ⁺⁶ Result (mg/kg)	Area (sf)	Area x Maximum Cr ⁺⁶ Result (sf*mg/kg)
135-B12	8.5 - 9.0	1.3 - 0.8	12/19/2006	<2.4 UJ	132	317
ASM-S48A-SW-S1	2.4 - 2.9	9.7 - 9.2	11/15/2017	6.6	65	429
ASM-S48A-SW-S2	4.4 - 4.9	7.7 - 7.2	11/15/2017	2.5	27	68

ASM-T48A-SW-S2	3.4 - 3.9	7.0 - 6.5	10/20/2017	2.7 RA	69	186
ASM-T48A-SW-S3	5.4 - 5.9	5.1 - 4.6	10/20/2017	3.1 RA	68	211
ASM-T49A	4.0 - 4.5	5.9 - 5.4	8/15/2016	32.9	1,259	41,421
ASM-T49AR ¹	12.5 - 13.0	1.6 - 1.1	9/27/2016	3.1 J	76	236
ASM-U49A	4.0 - 4.5	6.6 - 6.1	8/15/2016	21.1	922	19,454
ASM-V49A ¹	6.0 - 6.5	8.1 - 7.6	8/12/2016	3.3 J	441	1,455
ASM-W49A	2.0 - 2.5	8.0 - 7.5	8/15/2016	2.1	403	846
CAV-R50A	6.1 - 6.6	3.9 - 3.4	8/2/2018	2.6 J	638	1,659
CAV-T51A	2.4 - 2.9	6.6 - 6.1	8/1/2018	2.9 J	2,202	6,386
CAV-W51A	12.0 - 12.5	(-3.0) - (-3.5)	8/1/2018	1.3 J	1,293	1,681
Total					7,595	74,349

Notes:

¹ The boring log, for this sampling location is provided in **Attachment 2**; The laboratory report and data validation report associated with this sampling location are provided in **Attachment 3** and **Attachment 4**, respectively.

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

UJ - The analyte was not detected above the sample reporting limit shown and the reporting limit was approximate.

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

sf – square feet

Weighted Average Concentration for Functional Area 1 = 74,349 sf x mg/kg / 7,595 sf = 10 mg/kg

Table 8: Samples Used to Determine Weighted Average Concentration for Samples ASM-X46A-SW-E-8.2-8.7, ASM-X46A-4.0-4.5, ASM-Y44A-SW-E-3.7-4.2, and PPG 1351CB(1.8-2.3) DUPJ49116-15 (Functional Area 2)

Location ID	Sample Depth (ft bgs)	Sample Elevation (ft NAVD88)	Date Collected	Maximum Cr ⁺⁶ Result (mg/kg)	Area (sf)	Area x Maximum Cr ⁺⁶ Result (sf*mg/kg)
135-B12	8.5 - 9.0	1.3 - 0.8	12/19/2006	<2.4 UJ	1,304	3,130
135-B13	4.8 - 5.3	5.1 - 4.6	12/12/2006	4.1 J	240	984
135-MW1B	9.0 - 9.4	1.0 - 0.6	03/22/2007	2.4 UJ	612	1,469
135-MW1C	1.8 - 2.3	8.1 - 8.6	12/13/2006	20.1 J	1,014	20,381
135-P3C-X47AR	10.0 - 10.5	(-0.2) - (-0.7)	12/02/2014	2.1	974	2,045
ASM-W47A ¹	14.0 - 14.5	0 - (-0.5)	8/11/2016	0.83 J	24	20
ASM-W48A ¹	12.0 - 12.5	2.0 - 1.5	8/19/2016	3.7 J	1,210	4,477
ASM-W49A	2.0 - 2.5	5.1 - 4.6	8/15/2016	2.1	211	443
ASM-W49AR ¹	9.5 - 10.0	4.7 - 4.2	8/15/2016	2.9 J	234	679
ASM-X44A-PB	11.5 - 12.0	2.5 - 2.0	12/18/2017	0.65 RA	1	1
ASM-X45A ¹	12.0 - 12.5	2.3 - 1.8	8/17/2016	3.4 RA	25	85
ASM-X45A-SW-E1	6.3 - 6.8	8.0 - 7.5	10/23/2017	2.3 J	454	1,044
ASM-X45A-SW-E2	8.3 - 8.8	6.0 - 6.5	10/23/2017	3.2 J	64	205

ASM-X45A-SW-E3	10.3 - 10.8	4.0 - 3.5	10/23/2017	1.6 J	79	126
ASM-X45A-SW-S3	10.3 - 10.8	4.0 - 3.5	10/23/2017	1.3 J	33	43
ASM-X46A	4.0 - 4.5	6.4 - 5.9	8/18/2016	153 J	166	25,398
ASM-X46A-PB	10.2 - 10.7	3.8 - 3.3	12/27/2017	<0.56 RA	102	57
ASM-X46A-SW-E1	6.2 - 6.7	8.0 - 7.5	12/27/2017	4.6 RA	638	2,935
ASM-X46A-SW-E2	8.2 - 8.7	6.0 - 5.5	12/27/2017	162 RA	86	13,932
ASM-X47A-PB	5.9 - 6.4	4.0 - 3.5	12/27/2017	0.83 RA	24	20
ASM-X47A-SW-E2	3.9 - 4.4	6.0 - 5.5	12/27/2017	<0.17 RA	1,670	284
ASM-Y43A-PB	8.0 - 8.5	2.5 - 2.0	12/20/2017	0.8 RA	54	43
ASM-Y43A-SW-E1	2.0 - 2.5	8.5 - 8.0	12/20/2017	2.0 RA	379	758
ASM-Y43A-SW-E2	4.0 - 4.5	6.5 - 6.0	12/20/2017	1.3 RA	43	56
ASM-Y43A-SW-E3	6.0 - 6.5	4.5 - 4.0	12/20/2017	0.80 RA	46	37
ASM-Y44A	4.0 - 4.5	6.2 - 5.7	8/16/2016	12.8 J	650	8,320
ASM-Y44A-SW-E2	3.7 - 4.2	6.5 - 6.0	12/20/2017	31.8 RA	78	2,480
ASM-Y44A-SW-E3	5.7 - 6.2	4.5 - 4.0	12/20/2017	1.1 RA	158	174
EF-21	12.0 - 12.5	(-2.0) - (-2.5)	4/19/2011	1.7 J	567	964
EF-22	5.5 - 6.0	3.9 - 3.4	4/19/2011	0.63 UJ	1,950	1,229
PAC-Y50A	10.8 - 11.3	(-1.2) - (-1.7)	8/2/2018	2.2 J	2,620	5,764
PAC-Z46A	3.8 - 4.3	6.0 - 5.5	8/2/2018	1.7 J	1,284	2,183
Total					16,994	99,766

Notes:

¹ The boring log, for this sampling location is provided in **Attachment 2**; The laboratory report and data validation report associated with this sampling location are provided in **Attachment 3** and **Attachment 4**, respectively.

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

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

UJ - The analyte was not detected above the sample reporting limit shown and the reporting limit was approximate.

Weighted Average Concentration for Functional Area 2 = 99,766 sf x mg/kg / 16,994 sf = 6 mg/kg

Conclusions

The spatially weighted average Cr⁺⁶ concentration within the study area at Caven Point Avenue and Pacific Avenue Roadways for ASM-T49A-4.0-4.5 and ASM-U49A-4.0-4.5 is 10 mg/kg, which is compliant with the 20 mg/kg CrSCC.

The spatially weighted average Cr⁺⁶ concentration within the study area at the Caven Point Avenue and Pacific Avenue Roadways for ASM-X46A-SW-E-8.2-8.7, ASM-X46A-4.0-4.5, ASM-Y44A-SW-

E-3.7-4.2, and PPG 1351CB(1.8-2.3) DUPJ49116-15 is 6 mg/kg, which is compliant with the 20 mg/kg CrSCC.

Attachments:

Figure 1 – Compliance Averaging Evaluation, Hexavalent Chromium in Soil, Caven Point Avenue & Pacific Avenue Roadways – Functional Area 1

Figure 2 – Compliance Averaging Evaluation, Hexavalent Chromium in Soil, Caven Point Avenue & Pacific Avenue Roadways – Functional Area 2

Attachment 1 – NJDEP Environmental Criteria for Cr⁺⁶

Attachment 2 – Boring Logs

Attachment 3 – Laboratory Reports

Attachment 4 – Data Validation Reports

References


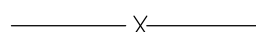


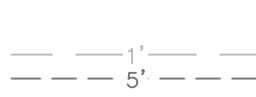





NJDEP, 2007. NJDEP Memorandum from Lisa P. Jackson to Irene Kropp, Subject: *Chromium Moratorium*. February 8, 2007.

NJDEP, 2012. *Technical Guidance for the Attainment of Remediation Standards and Site-Specific Criteria, Version 1.0*. September 24, 2012.

NJDEP, 2013. Letter from Thomas Cozzi to M. Michael McCabe, Subject: Re: *Updated Method to Determine Compliance with the Department's Chromium Policy, Garfield Avenue – Sites 114, 132, 133, 135, 137, and 143, Jersey City, NJ*. August 13, 2013.

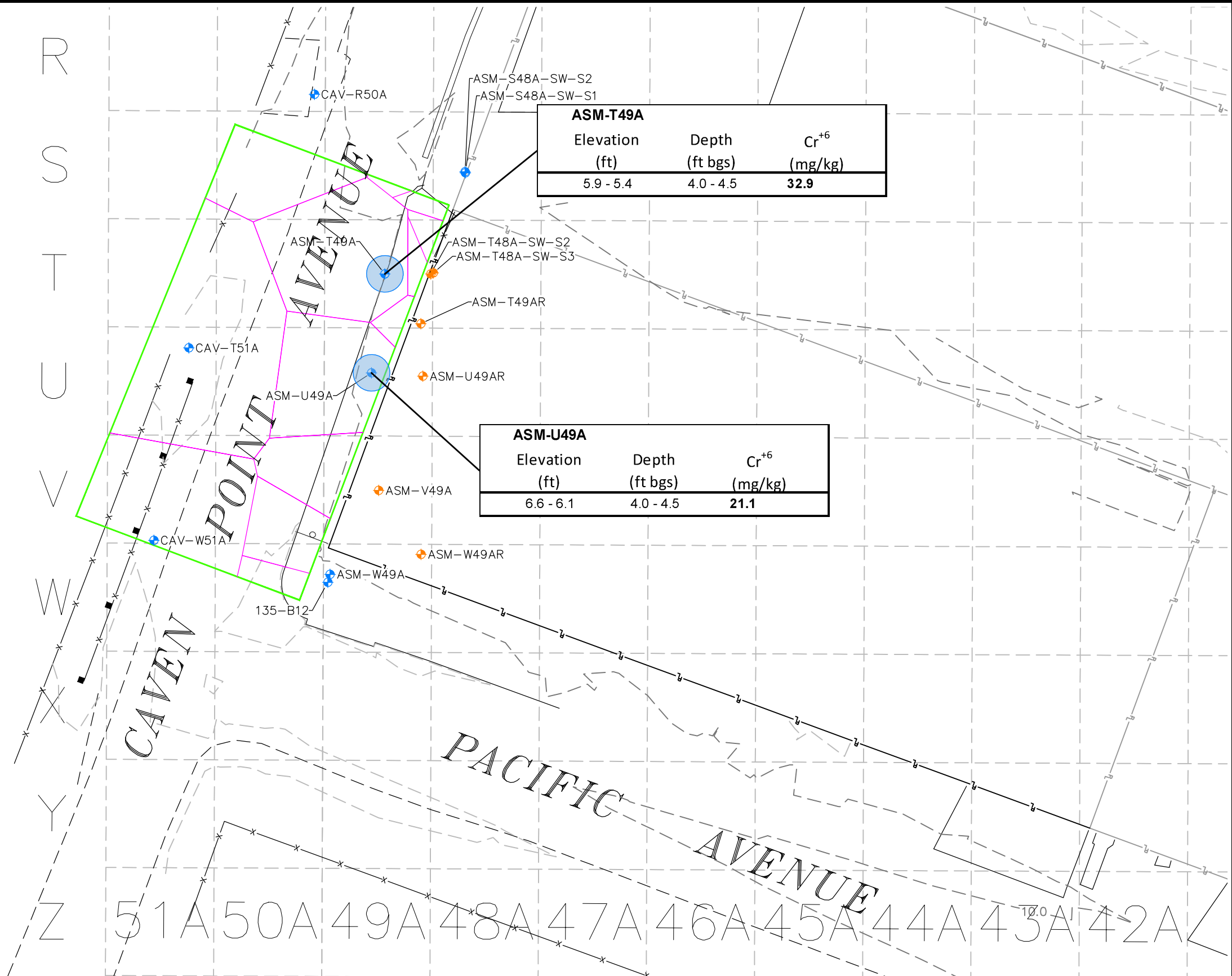
Figures

LEGEND

-  PROPERTY LINE
-  FENCE
-  EDGE OF PAVEMENT
-  EDGE OF CONCRETE
-  PRE-REMEDIATION GROUND SURFACE ELEVATION CONTOURS 1' INTERVAL 5' INDEX
-  SOIL SAMPLE LOCATION - REMAINING IN SOIL - CAVEN POINT AVENUE & PACIFIC AVENUE ROADWAYS
-  SOIL SAMPLE LOCATION - REMAINING IN SOIL - OFF SITE
-  LOCATION OF SOIL SAMPLE WITH Cr⁺⁶ CONCENTRATION GREATER THAN THE CrSCC OF 20 mg/kg WITHIN FUNCTIONAL AREA
-  THEISSEN POLYGON
-  FUNCTIONAL AREA

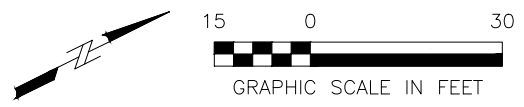
NOTES:

- bgs BELOW GROUND SURFACE
- Cr⁺⁶ HEXAVALENT CHROMIUM
- CrSCC NJDEP CHROMIUM SOIL CLEANUP CRITERION
- ft FOOT OR FEET
- mg/kg MILLIGRAMS PER KILOGRAM
- NJDEP NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION




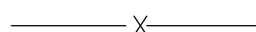



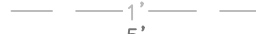
ASM-T49A		
Elevation (ft)	Depth (ft bgs)	Cr ⁺⁶ (mg/kg)
5.9 - 5.4	4.0 - 4.5	32.9



ASM-U49A		
Elevation (ft)	Depth (ft bgs)	Cr ⁺⁶ (mg/kg)
6.6 - 6.1	4.0 - 4.5	21.1




PPG GARFIELD AVENUE GROUP SITES JERSEY CITY, NEW JERSEY	COMPLIANCE AVERAGING EVALUATION HEXAVALENT CHROMIUM IN SOIL CAVEN POINT AVENUE & PACIFIC AVENUE ROADWAYS - FUNCTIONAL AREA 1
DATE: 02/02/2022 DRWN: JJA	FIGURE 1

LEGEND

-  PROPERTY LINE
-  FENCE
-  EDGE OF PAVEMENT
-  EDGE OF CONCRETE
-  PRE-REMIEDIATION GROUND SURFACE ELEVATION CONTOURS 1' INTERVAL
-  5' INTERVAL 5' INDEX

-  EF-122 SOIL SAMPLE LOCATION - REMAINING IN SOIL - CAVEN POINT AVENUE & PACIFIC AVENUE ROADWAYS
-  EF-122 SOIL SAMPLE LOCATION - REMAINING IN SOIL - OFF SITE

 LOCATION OF SOIL SAMPLE WITH Cr⁺⁶ CONCENTRATION GREATER THAN THE CrSCC of 20 mg/kg WITHIN FUNCTIONAL AREA

 THEISSEN POLYGON

 FUNCTIONAL AREA

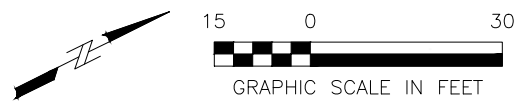
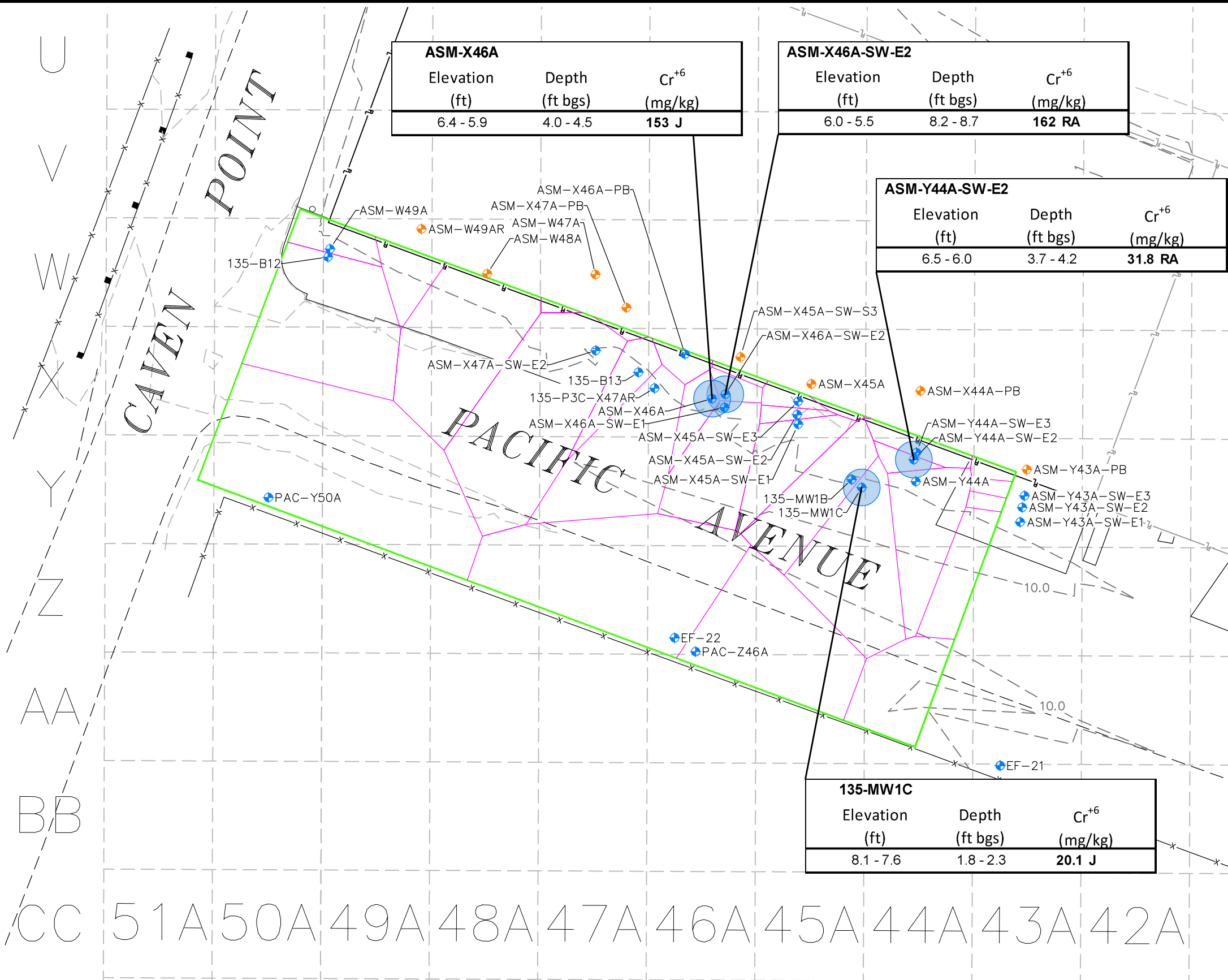
NOTES:

- bgs BELOW GROUND SURFACE
- Cr⁺⁶ HEXAVALENT CHROMIUM
- CrSCC NJDEP CHROMIUM SOIL CLEANUP CRITERION
- ft FOOT OR FEET
- mg/kg MILLIGRAMS PER KILOGRAM
- NJDEP NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

QUALIFIERS

J - INDICATES THE RESULT IS AN ESTIMATED VALUE; THE ASSOCIATED NUMERICAL VALUE IS AN APPROXIMATE CONCENTRATION OF THE ANALYTE IN THE SAMPLE.

RA - THE RESULT WAS REJECTED DUE TO DEFICIENCIES BUT IS CONSIDERED USABLE FOR DECISION-MAKING PURPOSES.



PPG GARFIELD AVENUE GROUP SITES JERSEY CITY, NEW JERSEY	COMPLIANCE AVERAGING EVALUATION HEXAVALENT CHROMIUM IN SOIL CAVEN POINT AVENUE & PACIFIC AVENUE ROADWAYS - FUNCTIONAL AREA 2
DATE: 02/02/2022	DRWN: JJA
FIGURE 2	

Attachment 1

NJDEP Environmental Criteria for Cr⁺⁶

CHROMIUM SOIL CLEANUP CRITERIA

September 2008 Revised April 2010¹

The Department did not develop soil remediation standards for trivalent or hexavalent chromium as part of its Remediation Standards rules at N.J.A.C. 7:26D. The Department was awaiting the release of the final report from the National Toxicology Program (NTP) study evaluating hexavalent chromium as an oral carcinogen prior to proposing soil remediation standards. The NTP report was released in August 2008. The Department is reviewing the report and will make a determination regarding the adoption of remediation standards for chromium. Until such time, the Department will continue to use the following soil cleanup criteria for trivalent and hexavalent chromium as guidance.

Soil Cleanup Criteria for Chromium

Residential (mg/kg)						
Contaminant	CAS No.	Ingestion-Dermal	Inhalation	Allergic Contact Dermatitis (ACD)	Soil PQL	Residential Criterion
Trivalent Chromium	16065-83-1	120,000	NA	NA	2	120,000
Hexavalent Chromium	18540-29-9	240	270	Site-specific determination	2	240 or ACD value whichever is lower

Non-Residential (mg/kg)						
Contaminant	CAS No.	Ingestion-Dermal	Inhalation	Allergic Contact Dermatitis	Soil PQL	Non-Residential Criterion
Trivalent Chromium	16065-83-1	NA	NA	NA	2	Not Regulated
Hexavalent Chromium	18540-29-9	6,100	20	Site-specific determination	2	20

NA = Standard not available

¹ This revision corrects the CAS numbers that were mistakenly used for trivalent and hexavalent chromium in the September 2008 version. The CAS numbers were inadvertently switched.

Impact to ground water soil remediation standards must be developed on a site-specific basis for chromium. For Class II ground water, the ground water quality standard is 70 ug/l measured as total chromium but assuming that it is all in the form of hexavalent chromium.

In addition to the cleanup criteria listed above, all remedial actions at sites that have hexavalent chromium must comply with Commissioner Jackson's memorandum dated February 8, 2007. A copy of this memorandum can be found on the Department web site at

<https://www.nj.gov/dep/dsr/chromium/Memo%20Lifting%20the%20Chromium%20Moratorium.pdf>

More information about the Department chromium work group and chromium research efforts are available on the NJDEP web site at <http://www.state.nj.us/dep/dsr/chromium>.

Attachment 2

Boring Logs (*Provided Separately*)

Attachment 3

Laboratory Reports (*Provided Separately*)

Attachment 4

Data Validation Reports (*Provided Separately*)