



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

PHILIP D. MURPHY
Governor

CATHERINE R. MCCABE
Commissioner

SHEILA Y. OLIVER
Lt. Governor

Site Remediation and Waste Management Program
Remediation Review Element
Bureau of Remedial Action Permitting
401 E. State Street
P.O. Box 420
Mail Code 401-05S
Trenton, NJ 08625-0420
Phone: (609) 984-2990

August 1, 2018

William Hague, Director
Remediation Design and Construction
Honeywell International Inc.
115 Tabor Road
Morris Plains NJ 07950

RE: Ground Water Remedial Action Permit
Site: Study Area SA-6 North Open Space Area
A/K/A Hudson Co Chromate 087, JCIA Site
Address: 501, 555 and 575 Route 440
City: Jersey City
County: Hudson
SRP Program Interest #: G000008710
Ground Water Remedial Action Permit #: RAP180002

Dear Mr. Hague:

Enclosed is a Ground Water Remedial Action Permit issued pursuant to the Site Remediation Reform Act, 58:10C-1 et seq. and the Administrative Requirements for the Remediation of Contaminated Sites at N.J.A.C. 7:26C-1 et seq. This permit becomes effective on August 8, 2018. Please note the referenced permit and program interest numbers and refer to them when corresponding with the Department.

The enclosed permit requires the permittee to conduct monitoring, maintenance and evaluation for compliance and effectiveness of the remedial action and its associated institutional control. The permit establishes all requirements necessary for demonstrating that the remedial action and control continue to be protective of public health, safety and the environment.

Please be aware that there are annual fees associated with this permit in accordance with N.J.A.C. 7:26C-4.6. These annual permit fees will be handled by invoicing the fee billing contact we have on record:

William Hague, Director
Remediation Design and Construction
Honeywell International Inc.
115 Tabor Road
Morris Plains, NJ 07950
Phone: (973) 455-2175
Email: william.hague@honeywell.com

Any changes to this contact should be brought to the Department's attention. Changes to fee billing contacts are updates and are not considered modifications to the permit.

The Department looks forward to future continued cooperation in working together to provide a healthy environment for the citizens of New Jersey and to protect its resources. Going forward, questions or comments regarding this permit should be addressed to the Bureau of Remedial Action Permitting at 609-984-2990, attention Robert Soboleski, Bureau Chief.

Sincerely,

A handwritten signature in black ink, appearing to read 'W. S. Hose', written in a cursive style.

William S. Hose, Assistant Director
Remediation Review Element

Enclosure

c: Municipal Clerk, Jersey City
rbyrne@jcnj.org

Jersey City Division of Health
smithv@jcnj.org

Hudson County Register
lsenerchia@hcnj.us

Hudson County Regional Health Commission
cnawrocki@hudsonregionalhealth.org

Dennis Nagg
Dennis.nagg@woodplc.com

New Jersey Department of Environmental Protection



Bureau of Remedial Action Permitting
401 East State Street
P.O. Box 420
Mail Code 401-05S
Trenton, NJ 08625-0420
Phone #: 609-984-2990

GROUND WATER REMEDIAL ACTION PERMIT
Active Groundwater Active Treatment

The New Jersey Department of Environmental Protection hereby grants you a Remedial Action Permit pursuant to N.J.S.A. 58:10C-1 et seq. and N.J.A.C. 7:26C-1 et seq. for the facility/activity named in this document. This permit is the regulatory mechanism used by the Department to help ensure your remedial action will be protective of human health and the environment.

This permit establishes the monitoring, maintenance, and evaluation requirements for determining the effectiveness of an on-going ground water remediation. The monitoring program for this site shall be consistent with the attached Ground Water Monitoring Plan. A Classification Exception Area/Well Restriction Area (CEA/WRA) has been established for the site and is consistent with the attached CEA/WRA Fact Sheet.

Site: Study Area SA-6 North Open Space Area
A/K/A Hudson County Chromate 087, JCIA Site

<u>Facility Address:</u> 5501, 555 and 575 Route 440 Jersey City 07305-4807 Hudson County Block: 21901 Lots: 5, 9, 10	<u>Program Interest#:</u> G000008710 <u>Permit#:</u> RAP180002
<u>Person Responsible for Conducting the Remediation - Co-Permittee:</u> William Hague, Director Remediation Design and Construction HONEYWELL INTERNATIONAL INC 115 Tabor Road Morris Plains, NJ 07950 Phone: (973) 455-2175 Email: william.hague@honeywell.com	
<u>Property Owner - Co-Permittee:</u> Same as above	

Issuance Date:
08/01/2018

Effective Date:
08/08/2018

I. Authority

The Department is issuing this permit in accordance with N.J.S.A. 58:10C-1 et seq. and N.J.A.C. 7:26C-1et seq.

II. Permit Requirements

A. GROUND WATER MONITORING REPORTING AND REQUIREMENTS

1. Reporting Requirements

a. The permittee shall submit a monitoring report in accordance with the schedule in the attached Ground Water Monitoring Plan. Submit the monitoring report with the Remedial Action Protectiveness/Biennial Certification Form biennially from the effective date of this permit. [N.J.A.C. 7:26C- 7.9(a)]

b. The permittee shall operate, maintain, and monitor the institutional and/or engineering controls at the site, to ensure that the remedial action remains protective of public health and safety and the environment, and to ensure compliance with the requirements of the Ground Water Remedial Action Permit. This includes but is not limited to site inspections, ground water sampling, biennial submission of a Ground Water Remedial Action Protectiveness/Biennial Certification Form and Report, responding to any activities involving the institutional and/or engineering controls at the site, and responding to any public inquiries regarding the current status of the site. [N.J.A.C. 7:26C- 2.3(a and b)]

2. Sampling and Analysis

a. Sampling is to occur according to the applicable method(s) obtained from the Field Sampling Procedures Manual (the sampling method is noted in the site-specific Quality Assurance Performance Plan). [N.J.A.C. 7:26E- 2.1]

b. Samples are to be analyzed for the parameters listed in the attached Ground Water Monitoring Plan using the method or most recent revision of the method noted in the site-specific Quality Assurance Performance Plan. The method chosen must have adequate sensitivity to meet all applicable remediation standards/screening levels. The permittee shall collect and analyze samples pursuant to the attached Ground Water Monitoring Plan. [N.J.A.C. 7:26E- 2.1]

B. REMEDIAL ACTION PROTECTIVENESS/BIENNIAL CERTIFICATION FORM

1. Reporting Requirements

a. The permittee shall prepare and submit to the Department a Remedial Action Protectiveness/Biennial Certification Form every two years following the anniversary of the date of the effective date of this permit. The certification shall be submitted on the required form provided by the Department. Submit a Remedial Action Protectiveness/Biennial Certification Form biennially from the effective date of this permit. [N.J.A.C. 7:26C- 7.7(a)1]

2. Evaluation Requirements

a. The permittee shall certify, as required in this permit that the remedial action continues to be protective of the public health and safety and the environment. [N.J.A.C. 7:26C- 1.5(a)2]

- b. The permittee shall conduct the remediation in accordance with all applicable statutes, rules, and guidance. [N.J.A.C. 7:26C- 1.2(a)]
- c. The Remedial Action Protectiveness/Biennial Certification Form shall include a comparison of the laws, Ground Water Quality Standards, and other regulations applicable at the time the Department established the ground water classification exception area, with any relevant subsequently promulgated or modified laws or regulations to determine whether the classification exception area remains protective. The results shall be provided in table format, comparing of applicable laws, regulations, and standards. [N.J.A.C. 7:26C- 7.9(b)2]
- d. The Remedial Action Protectiveness/Biennial Certification Form shall include an evaluation of whether there are any planned changes within a 25-year water use planning horizon for the aquifer(s) in which the ground water classification exception area is located since the Department established the ground water classification exception area or the last completed biennial review, whichever is more recent. [N.J.A.C. 7:26C- 7.9(b)3]
- e. The Remedial Action Protectiveness/Biennial Certification Form shall include an evaluation of whether there have been any actual changes in the ground water use since the Department established the ground water classification exception area or the last completed biennial review. The results of the evaluation of the changes in ground water use include a scaled map identifying all wells and/or waterlines found within one mile from any part of the boundaries of the ground water classification exception area. [N.J.A.C. 7:26C- 7.9(b)4]
- f. The permittee shall maintain a maintenance and evaluation log for each monitoring well used to establish the ground water classification exception area. The log shall include a description of any well damage or vandalism identified or repairs completed. If any of the damage resulted in the decommissioning of a well, provide a copy of the Well Abandonment Report. [N.J.A.C. 7:26C- 7.9(b)5]
- g. The Remedial Action Protectiveness/Biennial Certification Form shall include an evaluation of any land use disturbance that may intercept the water table within the area of the ground water classification exception area that could result in a contaminated discharge to surface water. If any such disturbances are identified, sample the ground water/surface water down-gradient and proximate to the land use disturbance to determine whether the ground water meets the more stringent of either: (1) The New Jersey Surface Water Quality Standards, N.J.A.C. 7:9B; or (2) The Federal Surface Water Quality Criteria, 40 CFR Part 131. [N.J.A.C. 7:26C- 7.9(b)6]
- h. The Remedial Action Protectiveness/Biennial Certification Form shall include an evaluation of the fate and transport of the ground water contamination plume, including any additional remediation conducted, modification of the remedial action, or proposed revision of the ground water classification exception area, and apply for a modification of the Ground Water Remedial Action Permit to ensure that the remedial action remains protective of the public health and safety and the environment. [N.J.A.C. 7:26C- 7.9(b)7i and (d)2]
- i. Within 180 calendar days after the anticipated expiration date of the ground water classification exception area, the permittee shall collect at least two rounds of ground water samples such that the time between sampling events accounts for seasonal fluctuations in the ground water table and the number of ground water samples collected is representative of the entire horizontal and vertical extent of the ground water classification exception area. If ground water samples indicate that contaminant concentrations have decreased to or below the applicable ground water quality standards throughout the ground water classification ex-

ception area, then the permittee may request that the Department remove the ground water classification exception area pursuant to N.J.A.C. 7:26C-7.3(g) and terminate the Ground Water Remedial Action Permit pursuant to N.J.A.C. 7:26C-7.13. If ground water samples indicate that contaminant concentrations have not decreased to or below the applicable ground water quality standards throughout the ground water classification exception area, then the permittee shall modify the remedial action by re-modeling the fate and transport of the ground water contaminant plume, proposing a revision to the ground water classification exception area, and applying for a modification of the Ground Water Remedial Action Permit pursuant to N.J.A.C. 7:26C-7.12. [N.J.A.C. 7:26C- 7.9(f)]

C. FINANCIAL ASSURANCE REQUIREMENTS

1. Reporting Requirements - Letter of Credit

a. The permittee shall have the issuer of the Letter of Credit notify the Department, and the person providing the Letter of Credit by certified mail that, if the issuer of the Letter of Credit decides not to extend the letter of credit beyond the expiration date. Submit a written notification of lapse of Letter of Credit prior to 120 days before the letter of credit expiration date. [N.J.A.C. 7:26C- 5.7(a)4]

b. The permittee shall prepare an estimate of the future costs to operate, maintain, and inspect all engineering controls subject to this permit, and submit it to the Department. Submit engineering controls maintenance cost estimate with the Protectiveness/Biennial Certification biennially from the effective date of this permit. [N.J.A.C. 7:26C- 7.10(a)1]

2. Financial Assurance - Maintenance

a. The permittee shall maintain financial assurance in an amount equal to or greater than the most recent estimated full cost to operate, maintain, and inspect all engineering controls that are part of any remedial action over the life of the permit. [N.J.A.C. 7:26C- 7.7(a)3]

D. FEES

1. For each year hereafter on the anniversary of the effective date of this permit, the Department shall invoice the permittees the amount of the annual Remedial Action Permit Fee. [N.J.A.C. 7:26C- 4.6]

E. PERMIT TRANSFERS

1. The permittee shall, at least 60 days prior to the sale or transfer of the property, or transfer of the operation of the property, or termination of a lease, submit a Remedial Action Permit Transfer/Change of Ownership Application and pay the permit transfer fee to the Department. [N.J.A.C. 7:26C- 7.11(b)]

F. PERMIT MODIFICATIONS

1. Ground Water Permit Modifications

a. The permittee shall apply to have the Department modify a Remedial Action Permit within 30 days after a statement that the permittee has completed a protectiveness evaluation required in its permit and has determined that the remedial action is not adequately protective

of the public health and safety and of the environment, and stating the reasons for coming to this conclusion. [N.J.A.C. 7:26C- 7.12(b)1]

b. The permittee shall apply to have the Department modify a Remedial Action Permit within 30 days after the size, duration, or contaminants of a classification exception area need to be modified. [N.J.A.C. 7:26C- 7.12(b)2]

c. The permittee shall apply to have the Department modify a Remedial Action Permit within 30 days after the person responsible for conducting the remediation modifies the remedial action. [N.J.A.C. 7:26C- 7.12(b)4]

d. The permittee shall apply to have the Department modify a Remedial Action Permit within 30 days after the permittee changes its address. [N.J.A.C. 7:26C- 7.12(b)6]

G. PERMIT TERMINATIONS

1. A request for a permit termination can be filed by submitting a Remedial Action Permit Application to terminate the permit to the Department when the remedial action meets all applicable remediation standards without the need for the Remedial Action Permit and the remedial action is protective of the public health and safety and of the environment without the presence of the Remedial Action Permit. [N.J.A.C. 7:26C- 7.13]

H. FORM SUBMITTAL

1. Any forms, applications or documents required by this chapter that can be submitted in an electronic format shall be submitted electronically 90 days after the date that the Department informs the public in the New Jersey Register that the relevant electronic application is functional. [N.J.A.C. 7:26C- 1.6(c)]

2. All submissions required pursuant to this permit shall be made on forms approved and available from the Department. These forms and instructions for completing these forms can be found at <http://www.nj.gov/dep/srp/srra/forms>. [N.J.A.C. 7:26C- 1.6]

III. Permit Schedule

Permit Effective Date: 08/08/2018	
Submission Requirement	Due Date
Submit a Remedial Action Protectiveness/Biennial Certification Form	08/08/2020
Submit a Remedial Action Protectiveness/Biennial Certification Form	08/08/2022
Submit a Remedial Action Protectiveness/Biennial Certification Form	08/08/2024
Submit a Remedial Action Protectiveness/Biennial Certification Form	08/08/2026
Submit a Remedial Action Protectiveness/Biennial Certification Form	08/08/2028
Submit a Remedial Action Protectiveness/Biennial Certification Form	08/08/2030
Submit a Remedial Action Protectiveness/Biennial Certification Form	08/08/2032
Submit a Remedial Action Protectiveness/Biennial Certification Form	08/08/2034
Submit a Remedial Action Protectiveness/Biennial Certification Form	08/08/2036
Submit a Remedial Action Protectiveness/Biennial Certification Form	08/08/2038
Submit a Remedial Action Protectiveness/Biennial Certification Form	08/08/2040
Submit a Remedial Action Protectiveness/Biennial Certification Form	08/08/2042

Submit a Remedial Action Protectiveness/Biennial Certification Form	08/08/2044
Submit a Remedial Action Protectiveness/Biennial Certification Form	08/08/2046
Submit a Remedial Action Protectiveness/Biennial Certification Form	08/08/2048

Note: Remedial Action Protectiveness/Biennial Certification Forms are required to be submitted according to the schedule, and shall continue to be submitted until the Permit is terminated or modified.

Your Ground Water Remedial Action Permit under Administrative Requirements for the Remediation of Contaminated Sites, N.J.A.C. 7:26C-1 et seq. has been approved by the New Jersey Department of Environmental Protection.

Sincerely,



Date: August 1, 2018

William S. Hose, Assistant Director
Remediation Review Element

IV. Attachments:

- A. CEA/WRA Fact Sheet
 - B. Ground Water Monitoring Plan
- CEA ID: CEA1459109
Block: 21901 Lots: 5, 9, 10

Attachment A

Classification Exception Area/Well Restriction Area Fact Sheet

Case Information:

Preferred Id:	G000008710
RAP Number:	RAP180002
Case Name:	Study Area SA-6 North Open Space AOC
Address:	501, 555 and 575 Route 440 Jersey City
County:	Hudson

--- Site Location: Refer to Exhibit A ---

Block and Lot of the CEA:

<i><u>Subject Item</u></i>	<i><u>Block</u></i>	<i><u>Lot</u></i>	<i><u>Municipality</u></i>	<i><u>Off-Site</u></i>
CEA101459109	21901	5	Jersey City	No
CEA101459109	21901	9	Jersey City	No
CEA101459109	21901	10	Jersey City	No

Facility Contacts:

<u>Co-Permittees:</u> Person Responsible for Conducting the Remediation:	William Hague, Director Remediation Design and Construction HONEYWELL INTERNATIONAL INC 115 Tabor Road Morris Plains, NJ 07950 Phone: (973) 455-2175 Email: william.hague@honeywell.com
Property Owner:	Same as above

CEA Information:

<u>Subject Item</u>	<u>Description</u>
CEA101459109	RCRA capped Chromium Plume

<u>Subject Item</u>	<u>Affected Aquifer</u>	<u>Vertical Depth</u>
CEA101459109	Fill	20
CEA101459109	Passaic Formation	50

<u>Subject Item</u>	<u>Classification</u>
CEA101459109	II-A

Contaminants:

This CEA/WRA applies only to the contaminants listed in the table below. All constituents standards (N.J.A.C. 7:9C-1.6) apply at the designated boundary.

<u>Subject Item</u>	<u>Contaminant</u>	<u>Concentration (1)</u>	<u>GWQS (2)</u>
CEA101459109	Chromium	18100 micrograms per liter	70 micrograms per liter
CEA101459109	Chromium (VI)	19600 micrograms per liter	70 micrograms per liter

Note: (1) Maximum concentration detected at the time of CEA establishment
(2) Ground Water Quality Standards

--- CEA Boundaries: Refer to Exhibit B ---

Projected Term of CEA:

<u>Subject Item</u>	<u>Date Established</u>
CEA101459109	8/1/2018

<u>Subject Item</u>	<u>Duration in Years</u>
CEA101459109	Indeterminate

<u>Subject Item</u>	<u>Expected Expiration Date</u>
CEA101459109	

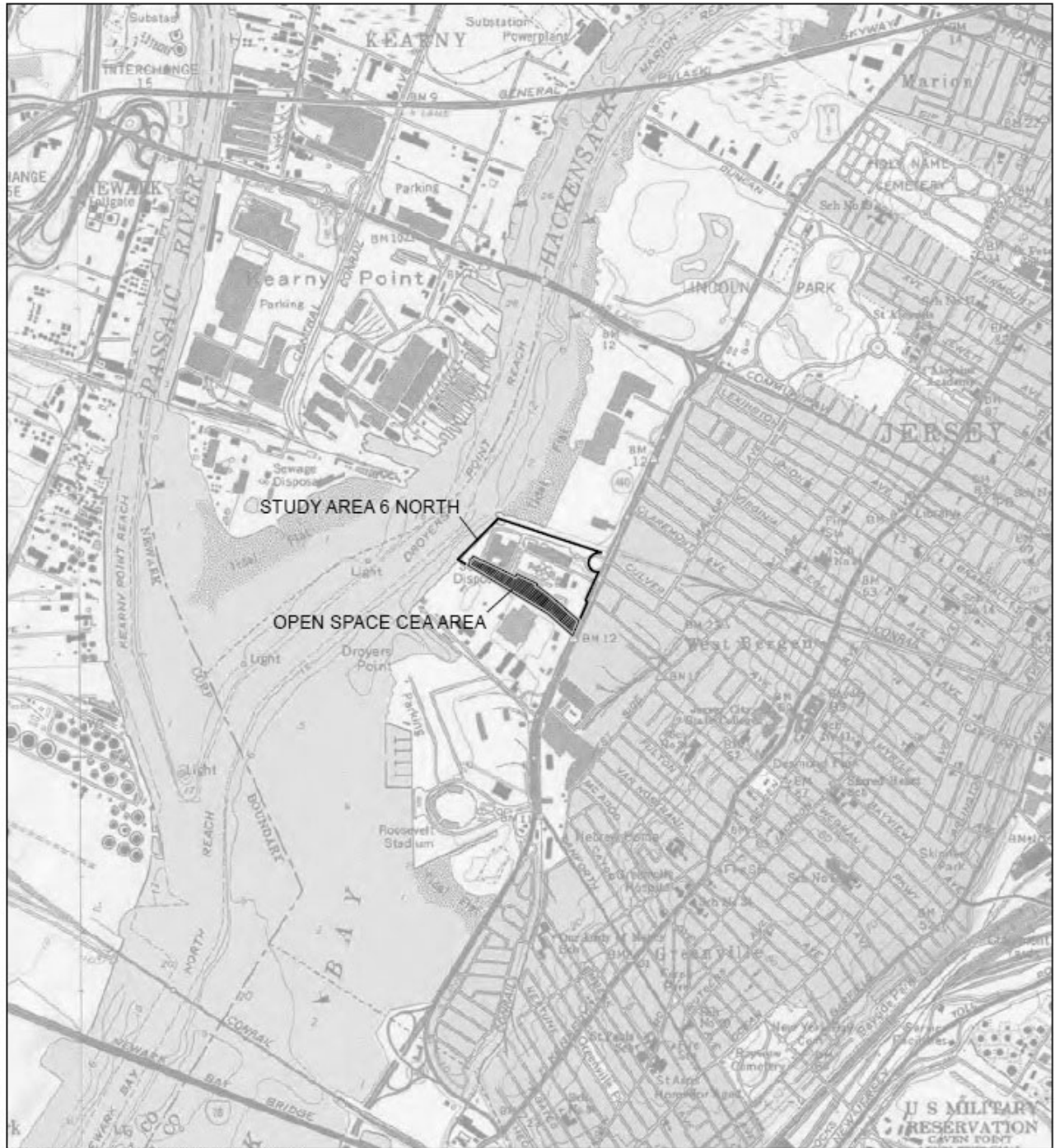
Note: Since ground water quality data indicates exceedance of contaminants above the Primary Drinking Water Standards, and the designated uses of Class II-A aquifers include potable use, the CEA established for this site is also a Well restriction Area. The extent of the Well Restriction Area shall coincide with the boundaries of the CEA.

Well Restrictions set within the boundaries of the CEA

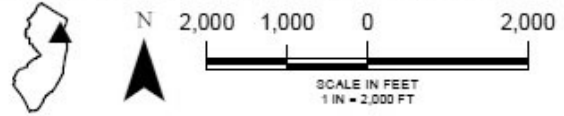
<u>Subject Item</u>	<u>Restriction</u>
CEA101459109	Double Case Wells: With the exception of monitoring wells installed into the first water bearing zone, any proposed well to be installed within the CEA/WRA boundary shall be double cased to an appropriate depth in order to prevent any vertical contaminant migration pathways. This depth is either into a confining layer or 50

	feet below the vertical extent of the CEA.
CEA101459109	Evaluate Production Wells: Any proposed high capacity production wells in the immediate vicinity of the CEA/WRA should be pre-evaluated to determine if pumping from these wells would draw a portion of the contaminant plume into the cone of capture of the production wells or alter the configuration of the contaminant plume.
CEA101459109	Sample Potable Wells: Any potable well to be installed within the footprint of the CEA/WRA shall be sampled annually for the parameters of concern. The first sample shall be collected prior to using the well. If contamination is detected, contact your local Health Department. If the contamination is above the Safe Drinking Water Standards, then the NJDEP Hot Line should be called. Treatment is required for any well that has contamination above the Safe Drinking Water Standards.



Exhibit A (Site Location Map)



NAD 1983 STATEPLANE NEW JERSEY FIPS 2500 FEET



LEGEND

-  OPEN SPACE AREA CEA
-  STUDY AREA 6 NORTH BOUNDARY

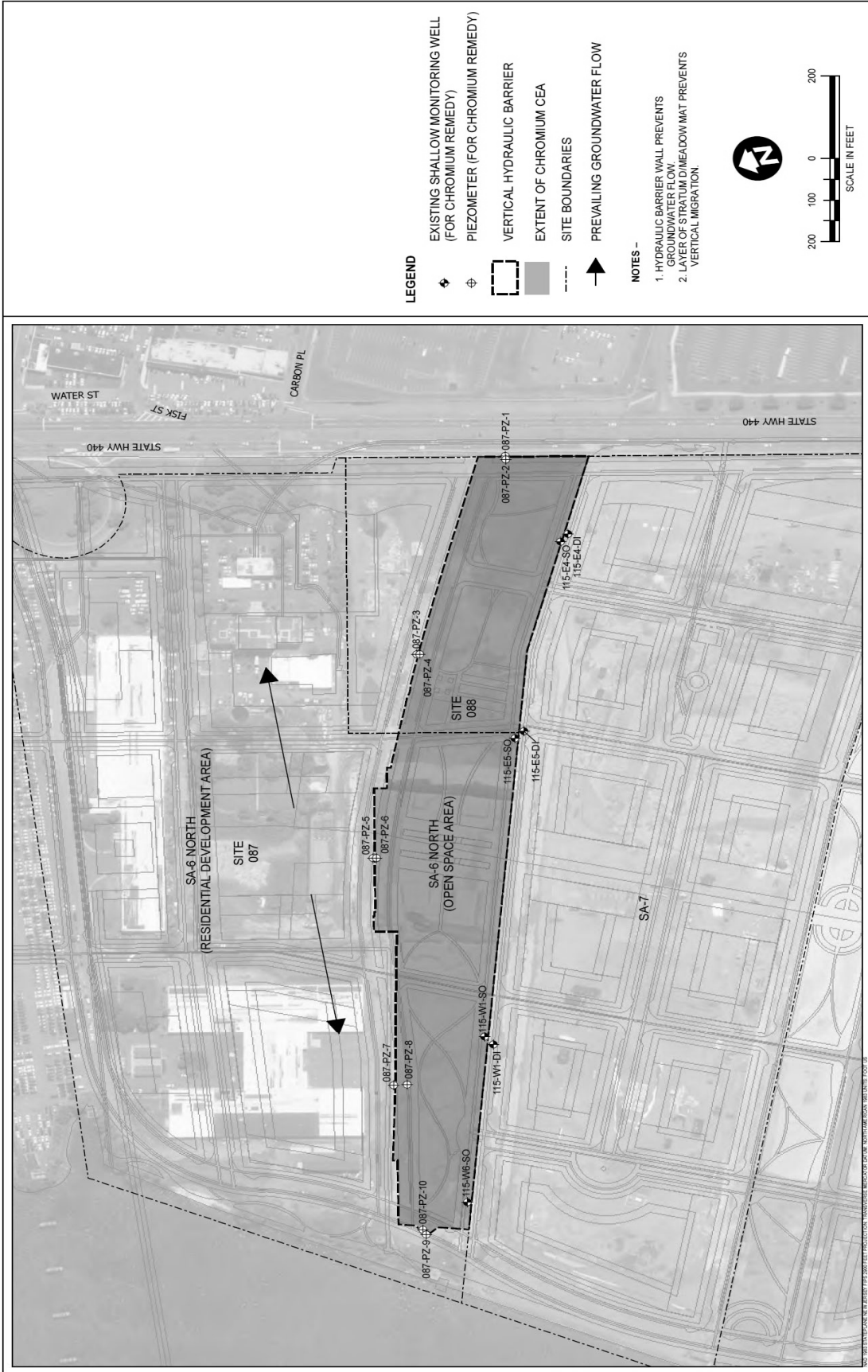
ESRI BASEMAP; UNITED STATES GEOLOGICAL SURVEY (USGS) 7.5-MINUTE QUADRANGLE MAP. COPYRIGHT © 2013 NATIONAL GEOGRAPHIC SOCIETY, i-CUBED.

wood.
 ENVIRONMENT & INFRASTRUCTURE
 SOLUTIONS, INC.
 200 AMERICAN METRO BLVD, SUITE 113
 HAMILTON, NEW JERSEY 08619

EXHIBIT A
 SITE VICINITY MAP
 OPEN SPACE AREA CEA
 STUDY AREA 6 NORTH
 JERSEY CITY, NEW JERSEY

PROJ. NO.	3480170588	07/24/2018	REV.
DWN. BY.	WSL	CHKD BY.	NAW

Exhibit B (CEA Boundaries)



<p>EXHIBIT B-1A CLASSIFICATION EXCEPTION AREA MAP OPEN SPACE AREA STUDY AREA 6 NORTH JERSEY CITY, NEW JERSEY</p>	
<p>PROJECT NUMBER: 3480160524</p>	<p>CHECKED/DATE: NAW 07/24/2018</p>
<p>PREPARED/DATE: WSL 07/24/2018</p>	<p>CHECKED/DATE: NAW 07/24/2018</p>
<p>DATE</p>	<p>STATUS</p>
<p>REV. NO.</p>	<p>APPROVED BY</p>

Attachment B
Ground Water Monitoring Plan for
Ground Water Remedial Action Permit

Case Information:

Preferred ID:	G000008710
RAP Number:	RAP180002
Case Name:	Study Area SA-6 North Open Space AOC
Address:	501, 555 and 575 Route 440
City:	Jersey City
County:	Hudson County
Block and Lot of the Site:	Block: 21901 Lot: 5, 9, 10

Monitoring Schedule:

Well to be sampled	Type of Well	Easting	Northing	Sampling Schedule	Reporting Schedule	Sampling parameters for each well
115-E4-SO	Area of Concern	603480.0	685090.0	Quarterly	Biennially	Depth to Water Table from Top of Inner Well Casing (ft)
115-E5-SO	Area of Concern	603099.3	685381.4	Quarterly	Biennially	Depth to Water Table from Top of Inner Well Casing (ft)
115-W6-SO	Area of Concern	602121.0	685951.0	Quarterly	Biennially	Depth to Water Table from Top of Inner Well Casing (ft)
115-W1-SO	Area of Concern	602463.9	685748.8	Quarterly	Biennially	Depth to Water Table from Top of Inner Well Casing (ft)
087-PZ-01	Area of Concern	603719.0	685108.0	Quarterly	Biennially	Depth to Water Table from Top of Inner Well Casing (ft)
087-PZ-02	Area of Concern	603710.2	685111.3	Quarterly	Biennially	Depth to Water Table from Top of Inner Well Casing (ft)
087-PZ-03	Area of Concern	603365.3	685484.2	Quarterly	Biennially	Depth to Water Table from Top of Inner Well Casing (ft)
087-PZ-04	Area of Concern	603361.6	685478.8	Quarterly	Biennially	Depth to Water Table from Top of Inner Well Casing (ft)
087-PZ-05	Area of Concern	602959.3	685779.8	Quarterly	Biennially	Depth to Water Table from Top of Inner Well Casing (ft)
087-PZ-06	Area of Concern	602956.0	685773.1	Quarterly	Biennially	Depth to Water Table from Top of Inner Well Casing (ft)
087-PZ-07	Area of Concern	602442.3	685973.9	Quarterly	Biennially	Depth to Water Table from Top of Inner Well Casing (ft)
087-PZ-08	Area of Concern	602430.4	685947.7	Quarterly	Biennially	Depth to Water Table from Top of Inner Well Casing (ft)
087-PZ-09	Area of Concern	602087.3	686064.8	Quarterly	Biennially	Depth to Water Table from Top of Inner Well Casing (ft)
087-PZ-10	Area of Concern	602101.8	686066.4	Quarterly	Biennially	Depth to Water Table from Top of Inner Well Casing (ft)