THE ELM GROUP

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May 2, 2022

-- Via E-Mail (Lynne.Mitchell@dep.nj.gov) and U.S. Mail --

Lynne Mitchell, Assistant Director
Site Remediation Program, Division of Remediation Management
New Jersey Department of Environmental Protection
401 East State Street
PO Box 420
Trenton, NJ 08625-0420

RE: Former Hatco Site, 1020 King Georges Post Road, Fords, New Jersey
Preferred ID No. G000003943

Dear Ms. Mitchell:

The former Hatco Corporation (Hatco) site is an operating industrial manufacturing facility located off King Georges Post Road in Fords, Woodbridge Township, Middlesex County, New Jersey (Hatco Facility). The Hatco Site is tracked under the New Jersey Department of Environmental Protection (NJDEP) Site Remediation Program (SRP) as Preferred ID No. G000003943. The Hatco Facility is currently operated by Lanxess Corporation (Lanxess). Weston Solutions, Inc. (Weston) is an environmental services company that agreed in 2005 to assume responsibility for remediation of certain environmental contamination on or emanating from the Hatco Facility (for the "Hatco Remediation Site," whether on the Hatco Facility or having migrated therefrom). This work is being completed under a Risk-Based Disposal Approval from the U.S. Environmental Protection Agency (EPA) dated March 30, 2005, and an Administrative Consent Order with NJDEP recorded on August 16, 2005, which incorporates by reference the terms of a Remediation Agreement and Settlement Agreement, both dated April 8, 2005. Under the terms of these agreements, Weston is only responsible for environmental contamination resulting from pollution conditions caused by operations or conditions existing prior to November 4, 2002 at, under or migrated or migrating from the Hatco Facility. Also, Weston expressly is not deemed to be an owner or operator with respect to the Hatco Remediation Site.

A 26-acre freshwater wetland area associated with Crows Mill Creek (Crows Mill Creek Wetland) is located south of the Hatco Facility. Only a small portion (approximately one acre or less) of the Crows Mill Creek Wetland has been impacted by historical Hatco Facility operations and is herein referred to as Hatco Area of Concern (AOC) 25. Through extensive investigations and using multiple lines of evidence, Weston has learned that there are at least three other sources of contamination that are responsible for the vast majority of the

contamination in the Crows Mill Creek Wetland. Weston has nevertheless been seeking to design and implement a comprehensive remedial approach for the entire Crows Mill Creek Wetland in collaboration with other responsible parties in a fair and equitable process. However, prior attempts to engage the other responsible parties in a collaborative effort have been unsuccessful. We are requesting that NJDEP notify the other parties of their responsibility to remediate their portion of the contamination in the Crows Mill Creek Wetland, in accordance with the data. This will facilitate the necessary holistic remediation for this area.

Background

Hatco AOC 25 is located offsite to the south of the Hatco Facility and consists of a small portion of Crows Mill Creek Wetland that extends approximately 320 feet south of Riverside Drive. Crows Mill Creek is a small stream that historically flowed south across the Hatco Facility and through the off-site wetland area. Runoff from the Hatco Facility was redirected from Crows Mill Creek into a man-made channel known as Channel D in 1966. The Crows Mill Creek Wetland is comprised of portions of three properties, with the northern lot owned by EPEC Polymers, Inc. (EPEC), the middle lot owned by Gredel Properties, LLC (Gredel) and the southern lot owned by Woodbridge Township. Historical releases of wastewater from the Hatco Facility containing polychlorinated biphenyls (PCBs) and bis (2-ethylhexyl) phthalate (BEHP) entered Crows Mill Creek and, to a much lesser extent, Channel D, and thereby impacted Hatco AOC 25, which again is only a small portion of the overall Crows Mill Creek Wetland. These properties and areas are depicted on **Figure 1**. **Figure 2** shows the current Industrial Site Recovery Act (ISRA) boundaries and associated Case Numbers for surrounding parcels, including the Hatco Remediation Site.

From approximately 1957 through 1970, Hatco operated a pretreatment system that consisted of a series of interconnected pretreatment and recovery ponds located on the Hatco Facility. The ponds discharged into Crows Mill Creek until 1966 when the discharge was redirected into Channel D as the facility transitioned from surface water discharge to the Middlesex County Utilities Authority treatment plant. All offsite wastewater discharges from Hatco ceased in 1970.

Wastewater was treated in the pond system to recover light non-aqueous phase liquid (LNAPL) (containing BEHP and PCBs) that was sold as off-spec product and to settle out sediment (containing PCBs) that accumulated in the bottom of the ponds. Both PCBs and BEHP are largely insoluble in water and offsite migration to the Crows Mill Creek Wetland, to the extent there was any, would have been primarily via LNAPL migration and sediment transport, and perhaps a small fraction dissolved in surface water. The pond system was designed to prevent LNAPL and sediment migration and would have effectively trapped the vast majority of the mass of these compounds onsite. The ponds were decommissioned beginning in 1969 and the accumulated sediments were transferred to onsite impoundments ('muck areas') that were capped in place and later remediated by Weston, along with the

former ponds. A small portion of the sediments removed from the ponds escaped the muck impoundments before they were closed in 1970/1971 and flowed into Woodbridge Pond. Weston completed remediation of Woodbridge Pond and submitted the Response Action Outcome (RAO) for this work in January 2021.

Weston characterized the extent of Hatco Facility impacts to the Crows Mill Creek Wetland between 2005 and 2010. However, at a meeting with EPA, NJDEP, and EPEC on October 19, 2010, the agencies (EPA and NJDEP) directed Weston to conduct more extensive delineation of PCB and BEHP contamination in the Crows Mill Creek Wetland based on data provided by EPEC that had been collected along the western boundary of the wetland, closer to its own former chemical plant. Following that meeting, Weston conducted sampling efforts for PCBs and BEHP in the Crows Mill Creek Wetland, collecting and analyzing over 1,000 soil and sediment samples at substantial cost to Weston. Analysis of the data set, including the distribution pattern of PCBs, BEHP, and several confirmed EPEC tracer contaminants not associated with Hatco operations, established that the majority of the observed contamination in the Crows Mill Creek Wetland actually originated from the former EPEC/Ashland and Gredel operations and not from the Hatco Facility. Distribution patterns for PCBs and BEHP are shown **in Figures 3a** and **3b**.

Lines of Evidence

In response to the disparate PCB and BEHP distribution in the Crows Mill Creek Wetland, and pursuant to N.J.A.C. 7:26E-3.9, Weston conducted an investigation into historical industrial activities on the adjacent EPEC and Gredel properties. Investigation included expert aerial photographic review, surface water pathway analysis and mapping, and review of available environmental reports and records. The results of this investigation confirmed there are at least three other non-Hatco sources of PCB and BEHP contamination to the Crows Mill Creek Wetland. Based on these initial findings, Weston developed a Multiple Lines of Evidence (MLE) approach in accordance with the NJDEP Commingled Plume and Off-Site Source technical guidance documents[1]. The MLE approach included development of an updated comprehensive Conceptual Site Model (CSM) with a pathway assessment, contaminant distribution modeling (Kriging analysis), concentration profiles and transects along identified pathways, statistical analysis, and identification of unique tracer compounds for the various sources.

Our investigation conclusively shows that there were at least the following sources of PCBs and BEHP to the Crows Mill Creek Wetland:

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[1] NJDEP Commingle Plume Technical Guidance Document v1.1, March 2018 and Off-Site Source Ground Water Investigation Technical Guidance v1.1, September 2018.

1. **Ashland/Tenneco/EPEC Facility**: The former Ashland and Tenneco/EPEC chemical plants manufactured phenolic resins, paints, varnishes, plasticizers, and chlorinated pesticides, among other organic chemicals. The facilities were located immediately west of the Crows Mill Creek Wetland and situated along a series of three ponds (West Lake, Middle Lake, and Hartman's Pond) that originally drained from west to east and discharged into the Crows Mill Creek Wetland via a culvert beneath a former clay-mining railroad berm. The pond system received industrial wastewater and stormwater runoff from both chemical plants from before 1920 through 1966. EPEC also dumped solid and liquid industrial wastes containing non-aqueous phase liquid (NAPL) directly into Hartman's Pond from at least 1947 through 1975. The use of PCBs by EPEC and Ashland has been well documented. NAPL containing BEHP and PCBs have been documented on the former Ashland Facility. PCBs have been documented at the EPEC site up to 17,000 mg/kg in soils, and 150,000 mg/L in drummed wastes. Groundwater beneath the former EPEC Facility sludge disposal area and settling ponds contains PCBs three orders-of-magnitude above groundwater quality standards. Aerial photographs show that in the fall of 1966, EPEC breached the railroad berm and drained Hartman's Pond into the Crows Mill Creek Wetland. Ditches were dug in the wetland to accelerate the draining process and direct the discharge away from the EPEC property. The distribution of PCB and BEHP contamination in the central portion of the wetland closely aligns with the Hartman's Pond outfall and the two drainage ditches dug by EPEC. Closure of the Ashland and EPEC chemical plants was completed under Licensed Site Remediation Professional (LSRP) oversight with little sampling for PCBs and BEHP. EPEC's ISRA case remains open.

2. **EPEC NAPL Dumping Area**: Large volumes of liquid wastes (including NAPL) were dumped on EPEC property in the northwest corner of the Crows Mill Creek Wetland between at least 1954 and 1980, adjacent to the former clay-mining railroad berm. The dumping and subsequent migration of the liquid wastes over 600 feet to the south and east are clearly visible on aerial photographs from that timeframe. Analysis of NAPL samples from this area shows high concentrations of PCBs and BEHP as well as butylated hydroxytoluene (BHT), a unique compound manufactured at the former Ashland chemical plant located west of the wetland. BHT is not found on the Hatco Facility, but was used extensively by EPEC. The dumping area corresponds to EPEC's AOC4. EPEC's LSRP issued an RAO for their portion of the Crows Mill Creek Wetland (including EPEC AOC4 and EPEC AOC-D) on March 1, 2019, identifying the Hatco Facility as the source of the contamination. This conclusion is incorrect. The dumping area is upgradient and west of any identified migration pathway from the Hatco Facility. Also, the high concentrations of BHT (as well as several other compounds that are also not compounds of concern at the Hatco Remediation Site) confirms that the Hatco Facility is not the source of the dumping and/or the resulting contamination.

3. **Cardell/Gredel Facility**: The Gredel property located adjacent to the Crows Mill Creek Wetland to the east was used by Cardell, Inc. from 1966 through the early 2000s for the storage, processing, and blending of soil and demolition debris, including 'Supersoil' wastes. These materials were documented to contain PCBs up to 11.7 mg/kg, with an average of 6.1 mg/kg of PCBs. NJDEP issued multiple Notice of Violations to Cardell for ongoing releases, documenting runoff of PCB-containing soils into the Crows Mill Creek Wetland. Gredel's LSRP issued an RAO for their portion of the Crows Mill Creek Wetland (the middle portion) in 2013 that included a deed notice for up to 11.7 mg/kg PCBs. Similar levels of PCBs migrated from the Gredel property into the northern portion of the wetland owned by EPEC that were not addressed by Gredel's RAO.

4. **Hatco Site**: Sampling of sediment in both Crows Mill Creek and Channel D (which received wastewater flows from Hatco) show only relatively low concentrations of PCBs that decrease rapidly to the south. This is consistent with the conceptual model of how wastewater was formerly pretreated at Hatco to collect LNAPL and remove sediment and the relatively short duration of discharge. Profile graphs of PCBs and BEHP show a similar pattern of steadily decreasing concentrations until impacts from the NAPL dumping area in the northwest corner of the wetlands at the railroad berm (EPEC AOC4) are encountered. The confirmed extent of Hatco impacts above the most stringent NJDEP ecological screening criteria for soil and sediment is depicted as Hatco AOC 25 in **Figure 1** and extends only about 320 feet south of the Conrail railroad tracks (see **Figure 4**). As evident from a review of **Figures 3a**, **3b**, and **4**, contamination attributable to the Hatco Facility represents only a small portion of the overall impact to the Crows Mill Creek Wetland.

The attached **Figure 4** shows the location of the known sources of contamination to the Crows Mill Creek Wetland and illustrates the pathways by which contamination entered the wetland.

Regulatory Interaction

Weston met with the agencies (EPA and NJDEP) on July 27, 2021, and presented in detail the multiple lines of evidence, along with supporting documentation, proving that the extent of the Hatco contamination in the Crows Mill Creek Wetland is limited to an approximately 1-acre area at the northern end (Hatco AOC 25). Weston is ready and willing to remediate the 1-acre portion of the wetland that was impacted by the Hatco Site, although Weston reserves all rights against adjacent property owners who may have contributed to contamination of Hatco AOC 25. Since previous discussions with the other parties to develop a comprehensive remedial approach have failed, Weston stated its intention in the July 27, 2021 meeting to submit a Remedial Action Work Plan Addendum (RAWPA) to address the minimal Hatco Site contamination in the Crows Mill Creek Wetland.

Shortly after the July meeting, on September 28, 2021, EPA sent a letter to Weston requiring that it submit a RAWPA "for PCB remediation in the entire Crows Mill Creek/Channel D project area." While EPA acknowledges in their letter that there are PCBs in the wetland that were released from the EPEC and Cardell/Gredel properties, EPA is seeking to require Weston to develop a comprehensive remediation approach. Weston previously has requested that both Gredel and EPEC participate in a collaborative and equitable effort to develop and implement a comprehensive remediation approach for the entire Crows Mill Creek Wetland. These requests have been declined.

Summary

At this point, Weston has reached an impasse. The cost to remediate the entire 26 acres of the Crows Mill Creek Wetland is prohibitively large in comparison to the portion that was impacted by the Hatco Facility. Further, neither Lanxess nor Weston owns any of the wetland property, and neither are responsible for environmental impacts to the property by others. Our research has conclusively shown that the Hatco portion of the contamination is very small (approximately 1 acre or less) in comparison to the other three contributors. Weston is willing to work with the other parties to develop a comprehensive solution, but our attempts to do this have failed. The other parties need to understand and acknowledge that they are owners and contributors to the documented impacts within the entirety of the Crows Mill Creek Wetland, and therefore, have a responsibility under state and federal regulations to remediate the wetland.

Weston requests that NJDEP notify EPEC, Ashland, and Gredel of their responsibility for discharging and remediating PCBs, BEHP, and other contamination in the Crows Mill Creek Wetland. We remain hopeful that a comprehensive remedial approach for the entire wetland can be developed by all parties working collaboratively. A collaborative approach would provide the most effective solution for restoring the Crows Mill Creek Wetland and would benefit all stakeholders. We have attached a list of the other responsible parties along with the applicable Preferred ID# and the LSRP for your use.

Please feel free to contact us via email or at the phone numbers below if you have any questions regarding this request.

Sincerely,

THE ELM GROUP, INC.

Mark D. Fisher, LSRP, CHMM
Managing Partner
(609) 683-4848

WESTON SOLUTIONS, INC.

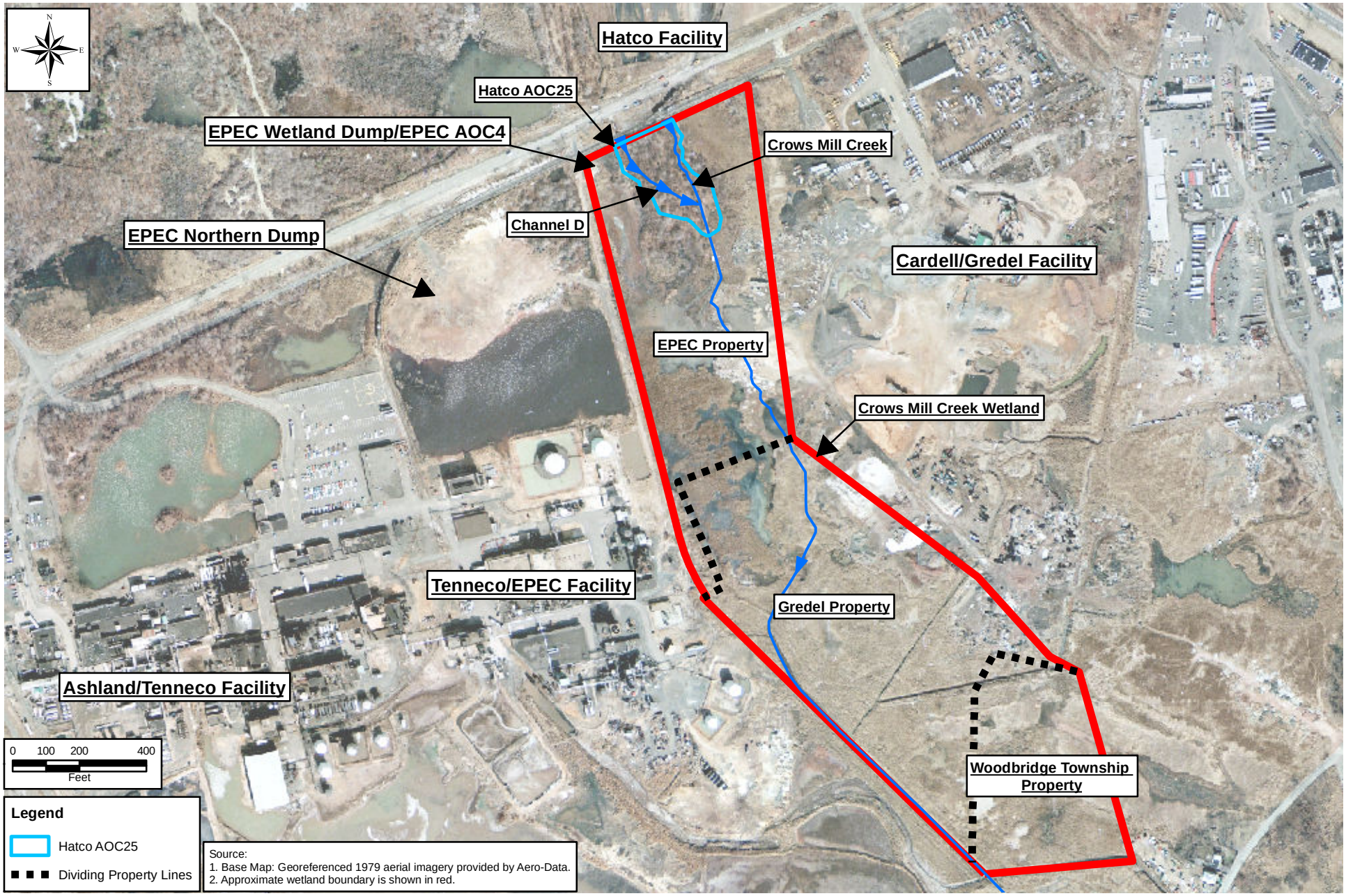
John Sontag, Jr. P.E.
Client Account Manager
(610) 701-3679

Enclosures

c: A. Everett - EPA
S. Ferreira - EPA
G. Zervas – NJDEP

Table 1: List of Sites and Contact Information for Licensed Site Remediation Professionals

Site Name	PI#	PI Name	Activity	Description	LSRP of Record	Phone	License #	Employer	Address
Ashland/PMC Site	G000002706	PMC Specialties	LSR120001	SRP Case	Caryn L Barnes (4/22/2021)	215-845-8911	575011	Langan Engineering & Environmental Services, Inc.	1818 Market St., Suite 3300, Philadelphia, PA
					Brian Blum - Retained by Scannell Properties #139(12/22/2012)	973-560-4985	573990	Langan Engineering & Environmental Services, Inc.	300 Kimball Dr, 4th Floor, Parsippany, NJ
EPEC	G000001659	Nuodex, Inc.	LSR120002	SRP Case	Stephen Kessel	201-574-4720	573594	Brown & Caldwell	500 N. Franklin Tpke Suite 306, Ramsey, NJ
Cardell/Gredel Site	G000041281	Twin Bridge Inc.	LSR120001	SRP Case	Kenneth Hart	609-683-4848	594639	The ELM Group, Inc.	345 Wall St., Princeton, NJ



WESTON SOLUTIONS

DATE: April 2022

FIGURE #: 1

PROJECT: Hatco AOC 25

CLIENT NAME: Hatco Corporation

TITLE: Hatco AOC 25 and Crows Mill Creek Wetland Location Map

P:\Hatco\GIS\MXD\2021_05_RAWPA6_ChD_CMC\27609_AOC25_Wetland_Location.mxd

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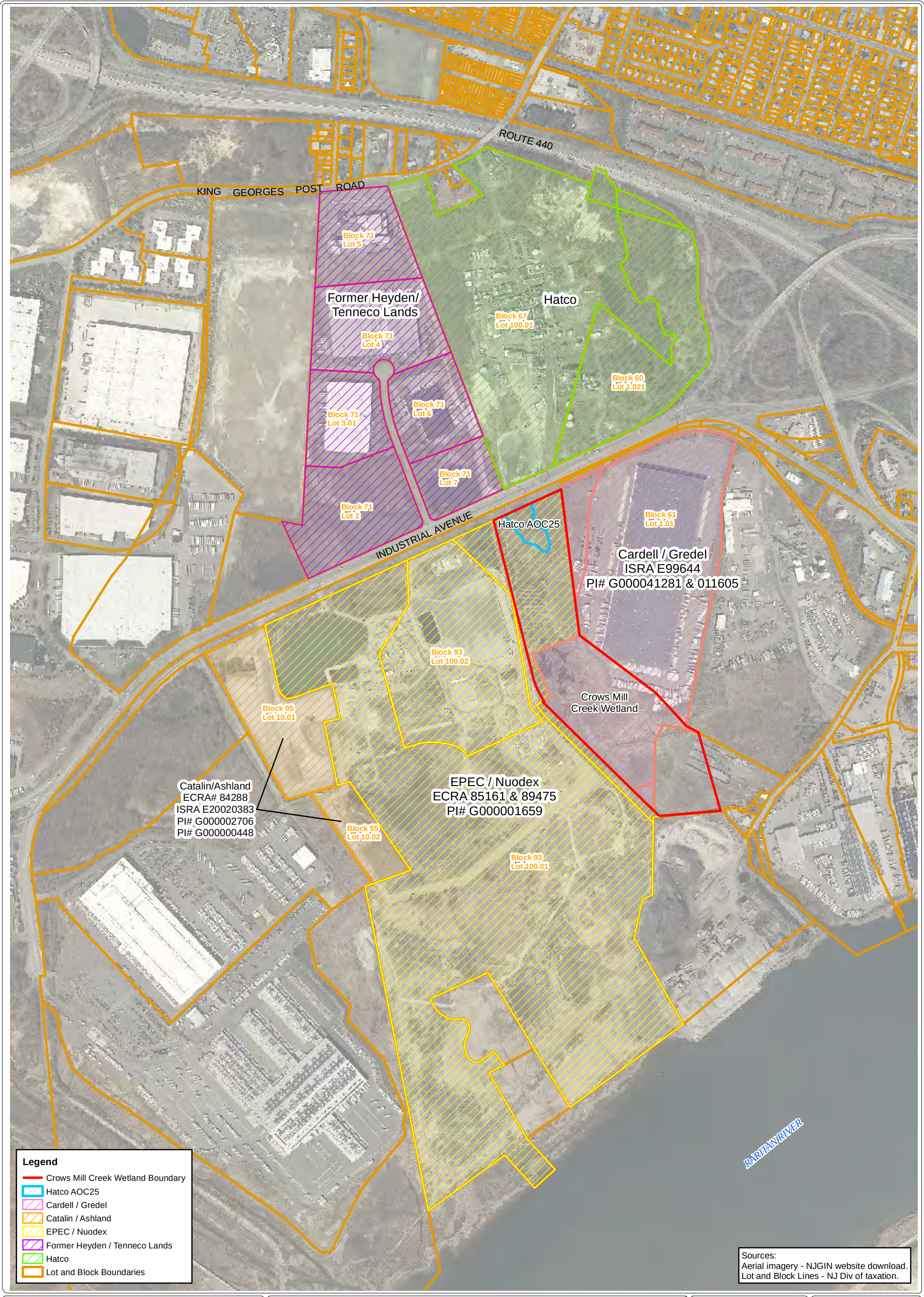


LEGEND:

660 330 0 660 Feet

PROJECT: HATCO REMEDIATION

CLIENT NAME: HATCO CORPORATION

TITLE: INDUSTRIAL PROPERTIES MAP

WESTON SOLUTIONS

DRAWING NUMBER: 28116

FIGURE #: 2

DRAWN BY: H. Bravo-Ruiz

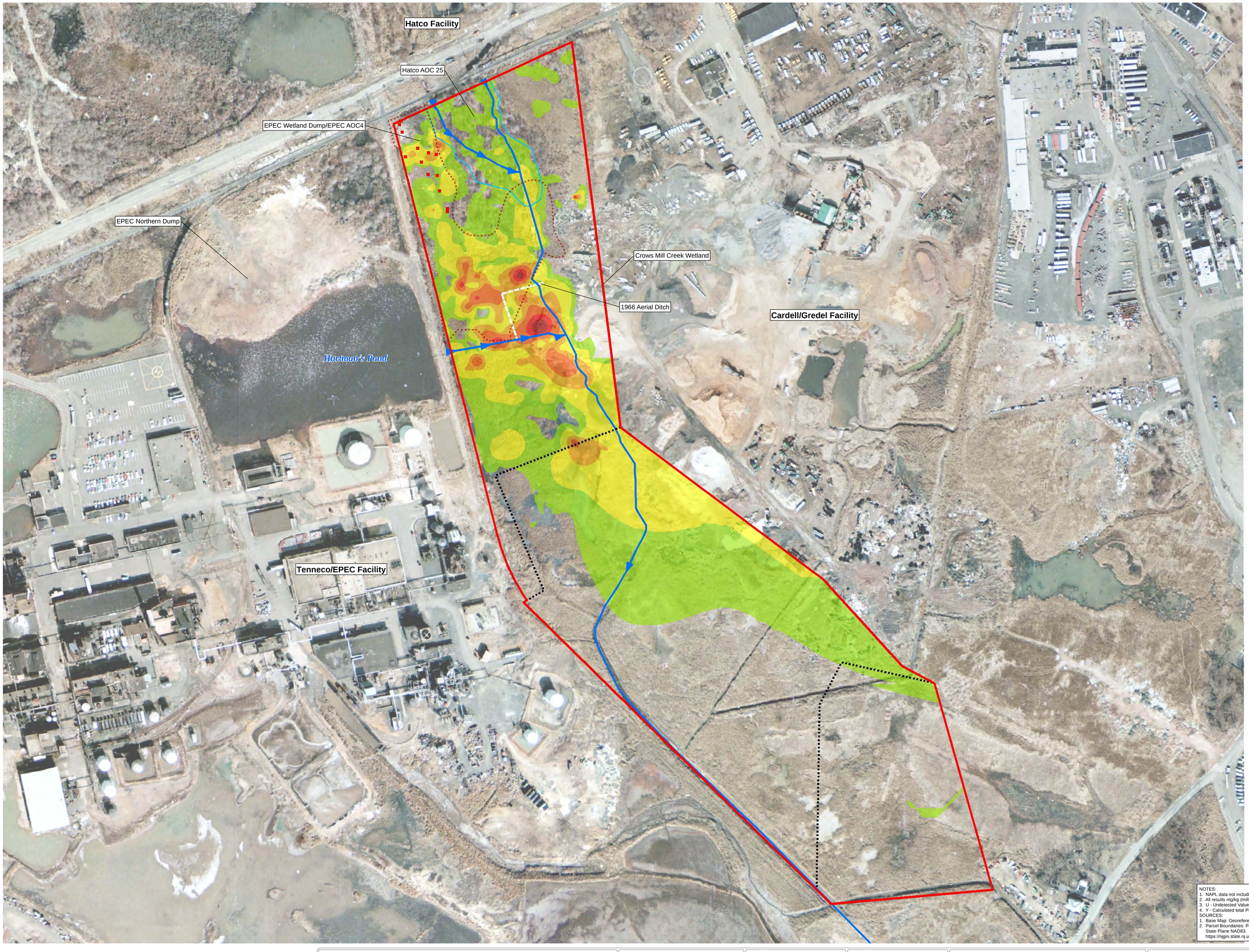
REVIEWED BY: A. McGahan

PROJECT MANAGER: J. Sontag

SCALE: 1" = 660'

DATE: April 2022

N W E S



NOTES:
1. NAPL data not included in kriging interpolation.
2. All results mg/kg (milligram per kilogram).
3. U - Undetected Value.
4. Y - Calculated total PBCs.

SOURCES:
1. Base Map: Georeferenced 1979 aerial imagery provided by Aero-Data.
2. Parcel Boundaries: Parcels of Woodbridge Township, Middlesex County, New Jersey State Plane NAD83. Woodbridge Township Information Services. October 2009. https://njgin.state.nj.us/NJ_NJGINExplorer/DataDownloads.jsp

Legend

- NAPL Sample Location (NAPL data not included in kriging analysis)
- Approximate Area of Liquid Flow per 1977 Aerial
- Crows Mill Creek Wetland
- Dividing Property Lines
- Historic Drainage
- Hatco AOC25

Total PCBs Concentration Areas

- 1-10 mg/kg
- 10-50 mg/kg
- 50-100 mg/kg
- 100-200 mg/kg
- 200-300 mg/kg
- >300 mg/kg

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205 Campus Drive Edison, New Jersey 08837-3939
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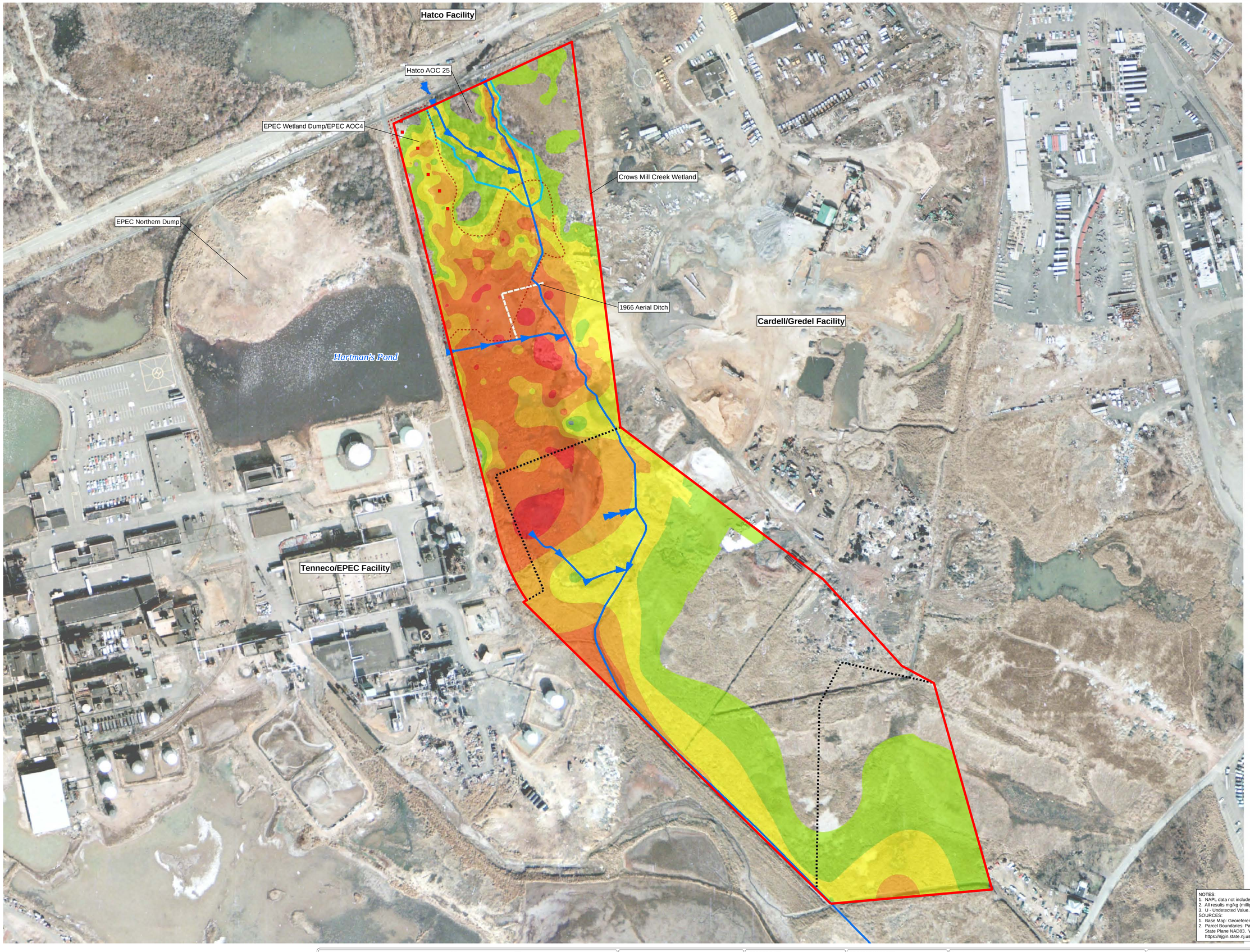
N W E S

REPORT DATE: April 2022	PROJECT MANAGER: J. Soukup	CLIENT NAME: Hatco Corporation	DRAWING TITLE: Crows Mill Creek PCB Distribution Map
DRAWING: 28107_CMC_ChD_PCBs_Isocontours_Horizontal.mxd PATH: P:\Hatco\GIS\MXD\2021_01_ChD_CMC_Sampling_Results\	CHECKED BY: A. McGahan		
REVISION No. 1	CONTRACT No. DELIVERY ORDER NO.	PROJECT NAME: Hatco AOC 25	
WORK ORDER No. 13067.001.003.4002	DRAWN/MODIFIED BY: H. Bravo-Ruiz DATE CREATED: 4/13/2022		FIGURE: 3a SCALE: 1 " = 90 ' DATE: 4/29/2022



NOTES:
1. NAPL data not included in kriging interpolation.
2. All results mg/kg (milligram per kilogram).
3. U - Undetected Value.

SOURCES:
1. Base Map: Georeferenced 1979 aerial imagery provided by Aero-Data.
2. Parcel Boundaries: Parcels of Woodbridge Township, Middlesex County, New Jersey State Plane NAD83. Woodbridge Township Information Services. October 2009. https://njgin.state.nj.us/NJ_NJGINExplorer/DataDownloads.jsp

Legend

- NAPL Sample Location (NAPL data not included in kriging analysis)
- Approximate Area of Liquid Flow per 1977 Aerial
- Crows Mill Creek Wetland
- Dividing Property Lines
- Historic Drainage
- Hatco AOC25

BEHP Concentration Areas

- 1-10 mg/kg
- 10-100 mg/kg
- 100-1,000 mg/kg
- 1,000-10,000 mg/kg
- >10,000 mg/kg

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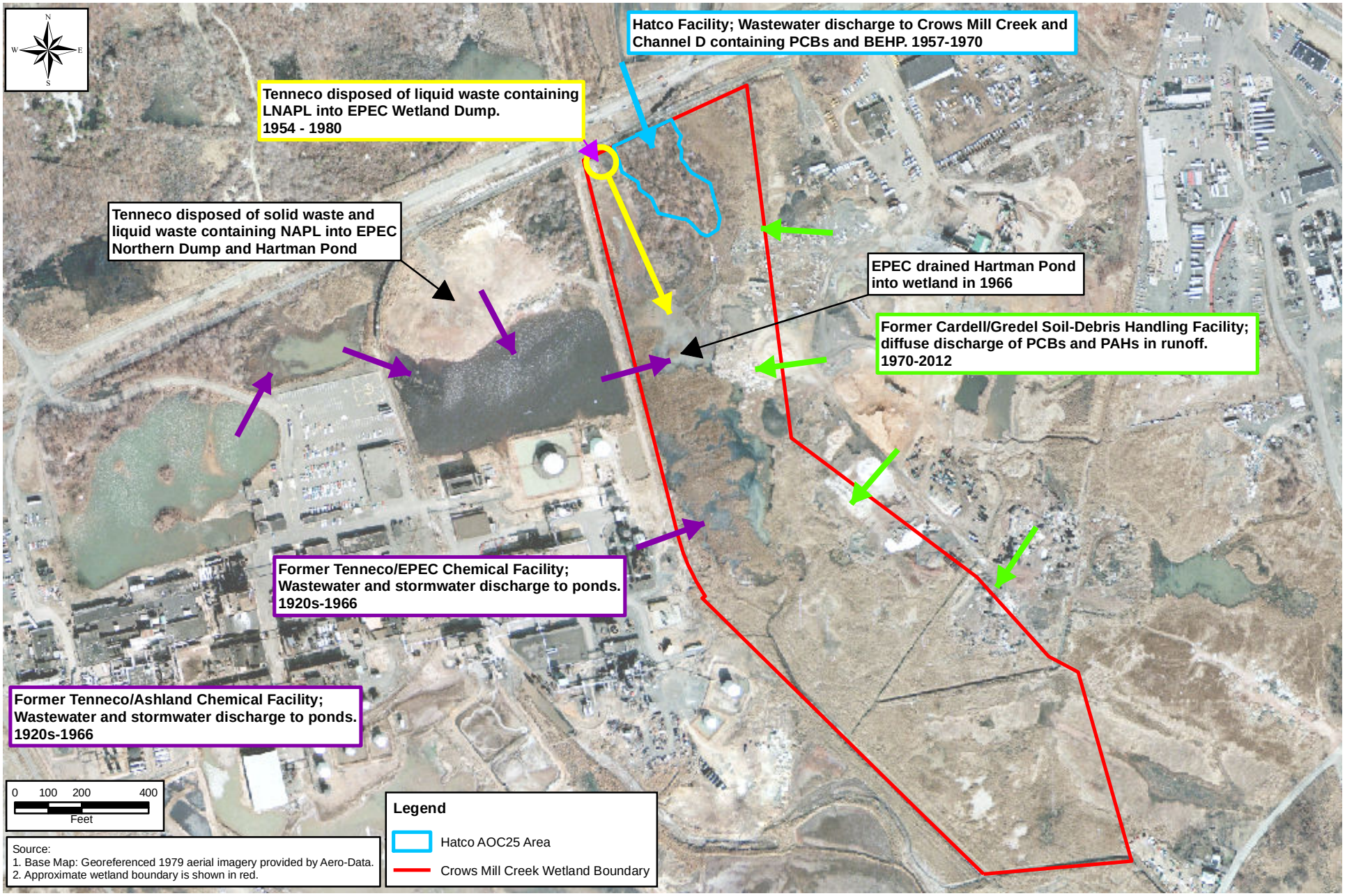
N W E S

REPORT DATE: April 2022	PROJECT MANAGER: J. Soukup	CLIENT NAME: Hatco Corporation	DRAWING TITLE: Crows Mill Creek BEHP Distribution Map
DRAWING: 28108_CMC_ChD_BEHP_Isocontours_Horizontal.mxd PATH: P:\Hatco\GIS\MXD\2021_01_ChD_CMC_Sampling_Results\	CHECKED BY: A. McGahan		
REVISION No. 1	CONTRACT No. DELIVERY ORDER NO.	PROJECT NAME: Hatco AOC 25	FIGURE: 3b / SCALE: 1 " = 90 ' / DATE: 4/29/2022
WORK ORDER No. 13067.001.003.4002	DRAWN/MODIFIED BY: H. Bravo-Ruiz DATE CREATED: 4/13/2022		



Source:
1. Base Map: Georeferenced 1979 aerial imagery provided by Aero-Data.
2. Approximate wetland boundary is shown in red.

WESTON SOLUTIONS

DATE: April 2022

FIGURE #: 4

PROJECT: Hatco AOC 25

CLIENT NAME: Hatco Corporation

TITLE: Crows Mill Creek Wetland Sources and Pathways

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