1617 John F Kennedy Blvd
Suite 510
Philadelphia, PA 19103

T 215.563.2122
TRCcompanies.com

October 15, 2024

Bureau of Case Assignment & Initial Notice
NJDEP Site Remediation and Waste Management Program
Mail code 401-05H
PO Box 420
Trenton, NJ 08625-0420
Submitted online (only) via nj.gov/dep/online

Re: Remedial Action Workplan
Camden Redevelopment Agency
Robert B. Johnson Park
Block 520, Lot 26; Block 522, Lot 9 (partial); Block 523, Lot 13
City of Camden, Camden County, New Jersey
SRP PI #1006561
Activity #LSR220001

To Whom It May Concern:

TRC Environmental Corporation (TRC) has prepared the enclosed Remedial Action Workplan for the above-referenced site. This report will be uploaded via the NJDEP Online and is applicable to AOC 1 (Historic Fill).

If you have any questions concerning this report, please contact me at (908) 510-7767 or pkunkle@trccompanies.com.

Sincerely,

TRC Environmental Corporation

Philip W. Kunkle, LSRP
Senior Project Manager

cc: (electronic, all)

Ms. Olivette Simpson, Interim Executive Director (Camden Redevelopment Agency)
Ms. Alicia Flammia (BRS, Inc.)

State of New Jersey

PHILIP D. MURPHY
Governor

TAHESHA L. WAY
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Contaminated Site Remediation & Redevelopment
Bureau of Inspection and Review
401 E. State Street
P.O.Box 420
Mail Code 401-05P
Trenton, NJ 08625-0420
Phone: (609) 633-1337 Fax: (609) 984-6514

SHAWN M. LATOURETTE
Commissioner

LSRP: Philip Kunkle
PKunkle@trccompanies.com

October 30, 2024

Olivetter Simpson
Interim Executive Director
CAMDEN REDEVELOPMENT AGENCY
520 Market St, #1300
Camden, NJ 08102
Phone: (865) 757-7170
Email: olsimpso@ci.camden.nj.us

Olivette Simpson
Interim Executive Director
CAMDEN REDEVELOPMENT AGENCY
520 Market Street
#1300
Camden, NJ 08102
Phone: (856) 757-7170
Email: olsimpso@ci.camden.nj.us

Re: JUDGE ROBERT JOHNSON PARK
CARL MILLER BLVD & S 8TH ST
Camden City, Camden
Case Tracking #: 209617
SRP PI: 1006561
Activity Number Reference: LSD240001

Dear Philip Kunkle,

This letter serves to advise you that a Remedial Action Workplan form has been received by the New Jersey Department of Environmental Protection (NJDEP) for JUDGE ROBERT JOHNSON PARK**.**

On May 7, 2009, the Site Remediation Reform Act (SRRA) was enacted. SRRA establishes criteria for the licensing of site remediation professionals who will assure that contaminated sites are remediated in accordance with the Technical Requirements for site Remediation, N.J.A.C. 7:26E. SRRA authorizes the NJDEP to establish mandatory timeframes for the completion of each phase of remediation. These timeframes, as well as other requirements of the act, have been codified in regulations that became effective November 4, 2009. The complete rule can be found at www.state.nj.us/dep/srp/regs/arrcs/arrcs_rule.pdf. N.J.A.C. 7:26C-2.4 identifies the requirements with which you must comply.

Per the NJDEP records, the following depicts the Areas of Concern associated with your case:

In Submission	NJDEP ID	AOC ID	AOC TYPE	DESCRIPTION	Confirmed Contamination	STATUS	DATE
X	1941909	1	Discharge and disposal area – Historic fill material area/other fill area	AOC 1 - Historic Fill Material	Yes	RAW	10/01/2024
	1941910	2	Discharge and disposal area – Historic fill material area/other fill area	AOC 2 - Suspected Historic Dumping	No	SI	08/01/2022
	1941911	3	Other areas of concern – Any area suspected of containing contaminants	AOC 3 - Former Junk Yard	No	SI	08/01/2022
	1941912	4	Other areas of concern – Any area suspected of containing contaminants	AOC 4 - Potential for Residential Heating Oil USTs	No	SI	08/01/2022
	1941913	5	Other areas of concern – Electrical transformer and capacitor	AOC 5 - Pole-mounted Transformers	No Sampling Trigger	PA	09/03/2021
	1941914	6	Other areas of concern – Any area suspected of containing contaminants	AOC 6 - Baseball Infield Soil/Sand Pile	No Sampling Trigger	PA	09/03/2021

Note: NJDEP recommends that you keep the NJDEP ID recorded in your Master Case Inventory Document Spreadsheet.

Per the NJDEP records, the following attachments have been associated with your submission are:

ATTACHMENT TYPE	DESCRIPTION	FILE NAME	RECEIVED	DUE
Remedial Action Workplan (RAW)	Remedial Action Workplan (RAW)	2024-10-15 CRA Johnson Park PI 1006561 RAW.pdf	YES	
Signed Affidavit	Authorization to Submit through NJDEP Online	2024-10-15 CRA Johnson Park PI 1006561 Report Submittal Authorization.pdf	YES	

The table above displays attachments associated with your submittal. The NJDEP will proceed with its inspection of your submission at this time. You may view the status of your submission via the NJDEP DataMiner service, at https://www13.state.nj.us/DataMiner.

Sincerely,

Atwood Davis, Bureau Chief
BUREAU OF INSPECTION AND REVIEW

LSRP - RAW (Area of Concern)

There are no additional hard copy submissions required at this time

REMEDIAL ACTION WORKPLAN

CAMDEN REDEVELOPMENT AGENCY
ROBERT B. JOHNSON PARK
BLOCK 520, LOT 26; BLOCK 522 LOT 9 (PARTIAL); BLOCK 523, LOT 13
CARL MILLER BOULEVARD & SOUTH 8TH STREET
CAMDEN, NJ 08104

CSRRP PROGRAM INTEREST NO. 1006561
ACTIVITY CODE: LSR220001

OCTOBER 2024

PREPARED FOR:
CAMDEN REDEVELOPMENT AGENCY
520 MARKET STREET #1300
CAMDEN CITY, NJ 08102

PREPARED BY:
TRC ENVIRONMENTAL CORPORATION
1617 JOHN F. KENNEDY BLVD, SUITE 510
PHILADELPHIA, PA 19103

TABLE OF CONTENTS

FIGURES

APPENDICES

1.0 SRRA FORMS

- Authorization to Submit a Report or Form Online
- Case Inventory Document (CID)

New Jersey Department of Environmental Protection
Site Remediation and Waste Management Program

AUTHORIZATION TO SUBMIT A REPORT / FORM THROUGH NJDEP ONLINE

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Robert B. Johnson Park

Street Address: NW corner of Carl Miller Boulevard & South 8th Street

Municipality: City of Camden (Township, Borough or City)

County: Camden Zip Code: 08104

Program Interest (PI) Number(s): 1006561

SECTION B. STATEMENT OF AUTHORIZATION TO SUBMIT A REPORT / FORM

I authorize the Licensed Site Remediation Professional, retained for this site pursuant to the Brownfield and Contaminated Site Remediation Act at N.J.S.A. 58:10B-1.3b, and named below to submit the report/form listed below for the Program Interest Number noted above. I understand that I am assuming full responsibility that the information provided in the remedial phase report is true, accurate, and complete.

Type of Report / Form submitted: (*check one box only*)

☐ PA ☐ PA/SI ☐ SI ☐ RI ☒ RAW ☐ RAR ☐ RAO

Name and Date of Report: October 2024 RAW

☐ Public Notice Form

Authorized Licensed Site Remediation Professional (LSRP)

First Name: Philip Last Name: Kunkle

LSRP License #: 668396

SECTION C. CERTIFICATION BY THE PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION

Full Name of Person Responsible for Conducting the Remediation: Camden Redevelopment Agency

Representative First Name: Olivette Representative Last Name: Simpson

Mailing Address: 520 Market Street, #1300

Municipality: Camden State: NJ Zip Code: 08102

Telephone Number: (856) 757-7170 Ext.: Fax:

Email Address: olsimpso@ci.camden.nj.us

This certification shall be signed by the person responsible for conducting the remediation who is submitting this Authorization and Report in accordance with the Administrative Requirements for the Remediation of Contaminated Sites at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: Date: 10/28/2024

Name/Title: Ms. Olivette Simpson / Interim Executive Director

Case Nam Robert Johnson Park
PI #: 1006561
Activity #: LSR220001

IMPORTANT: *1) The CID must be **FINALIZED** prior to upload. After the CID has been populated, click the Validate for Upload button and follow the instructions.*
*2) You **MUST SAVE** after finalizing, and before upload. Click the Enable for Editing button after uploading to edit again.*

Case Inventory Document Version 1.5.1 02/04/21

AOC ID	AOC Type	AOC Description	Confirmed Contamination	Exclude AOC from Billing	AOC Status Achieved	Status Achieved Date	Incident Communication Center #s Managed in Case	NJDEP ID	Contaminated Media	Contaminants of Concern	Additional Contaminants of Concern	Additional Contaminants of Concern	Applicable Remediation Standard	Exposure Route	Additional Exposure Route	RA Type	Additional RA Type	Was an Order of Magnitude Evaluation Conducted?	Activity
1	Discharge and disposal area - Historic fill material area/other fill area	AOC 1 - Historic Fill Material	Yes		RAW	10/01/2024			Soil	BN + Metals			Remediation Standards	Ingestion/Dermal	Inhalation	Capping		N/A	According to a review of the NJDEP GeoWeb Mapping Tool, historic aerial photographs and historic topographic maps, the Subject Property appears to have experienced filling to raise the elevation. The filling that occurred at the Subject Property appears to be part of regional historic filling activities that occurred in this area of Camden in the late 1800's and early 1900's. Soil borings were advanced throughout the area and soil samples were collected. Soil sample analytical results reported concentrations of SVOCs, metals, and PCBs above the applicable most stringent SRS. The SI and RI for Historic Fill Material are complete and corresponding reports were submitted to NJDEP in January and February of 2022. This CID corresponds to the October 2024 RAW for AOC 1, in which capping is proposed.
2	Discharge and disposal area - Historic fill material area/other fill area	AOC 2 - Suspected Historic Dumping	No	Yes	SI	08/01/2022							Remediation Standards					N/A	As part of this PA Report, FPA reviewed historic aerial photographs which show potential dumping activities that occurred in the center of the Site from at least 1940 to some time prior to 1951, when the Site is shown level and graded. Specifically, the 1944 aerial photograph shows the former 7th Avenue Street was utilized as an access road to the center of the Subject Property where significant mounding and dumping occurred. Further, during the Site inspection, FPA observed that the rear two-thirds of the property (where the dumping is shown to have occurred) is situated at an elevation approximately 10 feet higher compared to the front portion of the property. Soil borings were advanced throughout the area and soil samples were collected. Non-native material observed in these soil borings consisted exclusively of material associated with Historic Fill (AOC #1). There was no visual evidence of importation and placement of food scraps, household or municipal waste, etc. The SI for AOC #2 is complete and an unrestricted use closure is appropriate.
3	Other areas of concern - Any area suspected of containing contaminants	AOC 3 - Former Junk Yard	No	Yes	SI	08/01/2022				VO + EPH	Metals + PCBs	BN	Remediation Standards					N/A	According to a review of the Sanborn® Fire Insurance Maps included with the EDR Report, a junk yard is listed as operating in the southwest corner of the Subject Property, fronting Carl Miller Boulevard from approximately 1950 to 1960. Junk yards routinely accepted drums or metal containers that were historically utilized to store petroleum or hazardous substances. During the scrapping process, any residual liquids in the drums or containers would end up on the ground surface. Soil borings were advanced throughout the area and soil samples were collected. Non-native material observed in these soil borings consisted exclusively of material associated with Historic Fill (AOC #1). There was no visual evidence of the operation of a former junkyward or impacts to the subsurface from the former operation. Soil analytical results for samples collected from AOC #3 were consistent with the results for the Historic Fill AOC. The SI for AOC #3 is complete and an unrestricted use closure is appropriate.
4	Other areas of concern - Any area suspected of containing contaminants	AOC 4 - Potential for Residential Heating Oil USTs	No	Yes	SI	08/01/2022				EPH + BN			Remediation Standards					N/A	According to a review of the Sanborn® Fire Insurance Maps included with the EDR Report, numerous residential dwellings were formerly located at the south end of the Subject Property fronting Carl Miller Boulevard from at least 1906 to approximately 1965 when all Site structures were razed to support the development of the existing park. Additionally, from 1926 to sometime prior to 1950, additional residential dwellings were located along the former 7th Avenue roadway and present day asphalt paved parking area. It was common for residential units of this era to use heating oil, stored in onsite USTs/AST. A Ground Penetrating Radar (GPR) Scan was completed in the areas where residences were formerly located, specifically along the north side of Carl Miller Boulevard, to determine the presence / absence of any USTs. The GPR scan did not identify any suspected USTs. The SI for AOC #4 is complete and an unrestricted use closure is appropriate.
5	Other areas of concern - Electrical transformer and capacitor	AOC 5 - Pole-mounted Transformers	No Sampling Trigger	Yes	PA	09/03/2021												N/A	During the Site inspection, FPA observed a utility pole with a bank of three 50 kVa transformers located at the south end of the site in a grass area. The transformers were observed to be in good condition with no sign of staining or spills on the grass below. Additionally, the transformers contained "non-PCB" placards. FPA also observed several pole mounted transformers at the southern property boundary along Carl Miller Boulevard. All pole mounted transformers along Carl Miller Boulevard were observed to be in relatively new condition and no evidence of staining on the ground below was observed. Further, no documentation of past spills from any of the transformers was identified in the records search. No further investigation of AOC-5 is warranted or proposed.
6	Other areas of concern - Any area suspected of containing contaminants	AOC 6 - Baseball Infield Soil/Sand Pile	No Sampling Trigger	Yes	PA	09/03/2021												N/A	During the Site Inspection, FPA observed a pile of soil located adjacent to the baseball diamond. The soil appeared to be well graded sand possibly used to repair areas within the park. The sand was free of debris, staining or any evidence of environmental impacts. No further investigation of AOC-6 is warranted or proposed.

2.0 INTRODUCTION

TRC Environmental Corporation (TRC) has prepared this *Remedial Action Workplan* (RAW) for Robert B. Johnson Park, which consists of Block 520 / Lot 26, Block 523 / Lot 13, and a portion of Block 522 / Lot 9 in the City of Camden, New Jersey. This RAW has been prepared in general conformance with the New Jersey Department of Environmental Protection (NJDEP) Technical Requirements for Site Remediation (N.J.A.C. 7:26E), the Administrative Requirements for the Remediation of Contaminated Sites (N.J.A.C. 7:26C) and applicable NJDEP Technical Guidance documents. TRC has been retained by the Camden Redevelopment Agency (CRA) to provide environmental consulting and Licensed Site Remediation Professional (LSRP) services for Robert B. Johnson Park (hereinafter referred to as "the Site"). The Site is shown on **Figure 1** (Site Location Map). The Areas of Concern (AOCs) that have been investigated prior, including the AOC that is the subject of this RAW, are shown on **Figure 2** (Site Plan / AOC Map).

The Site is located in the Centerville neighborhood of Camden and has historically been a public park with sports fields and basketball courts. In advance of proposed park improvements, a Preliminary Assessment (PA) was performed by French and Parrello Associates (FPA) in 2021. Subsurface soil investigations were completed by FPA in December 2021 and July 2022. Impacted soil was identified during the 2021 and 2022 investigations.

A Case Creation Request Form was submitted to NJDEP in December 2022. Initial administrative tasks were completed in December 2022 (LSRP retention and annual remediation fee reporting) and January 2023 (Spill Act Exemption Affidavit). The Site was assigned NJDEP Contaminated Site Remediation and Redevelopment Program (CSRRP) Preferred Identification (PI) #1006561.

The LSRP of Record reviewed the PA Report, concurred with the methodology and findings, and submitted the PA Report to NJDEP in January 2023 (LSD230001). The LSRP of Record reviewed the FPA reports that summarized the 2021 and 2022 soil investigations, concurred with the methodology and findings, and submitted these two reports (separately) to NJDEP as a Site Investigation (SI) Report, in January 2023 (LSD230002), and a Remedial Investigation (RI) Report, in February 2023 (LSD230004).

One AOC at the Site (AOC 1, Historic Fill) requires Remedial Action (RA). This RAW is applicable to AOC 1. RA is necessary due to multiple compounds in soil, at a variety of depths, detected at concentrations above the respective, applicable NJ Soil Remediation Standards (SRS). Based on the planned future Site use as a playground, a Presumptive Remedy is not required.

3.0 AREAS OF CONCERN

Details regarding the Site AOCs are provided on the Case Inventory Document (CID) in the Forms section of the report. Limited details are provided in the inset table below.

Area of Concern	Investigation Status
AOC 1 – Historic Fill	The SI and RI are complete; RA is required and discussed in this report.
AOC 2 – Suspected Historic Dumping	The SI is complete, and no RI or RA work is required.
AOC 3 – Former Junk Yard	The SI is complete, and no RI or RA work is required.
AOC 4 – Potential for Residential Heating Oil USTs	The SI is complete, and no RI or RA work is required.
AOC 5 – Pole-mounted Transformers	Identified in PA; No investigation is warranted or proposed.
AOC 6 – Baseball Infield Soil / Sand Pile	Identified in PA; No investigation is warranted or proposed.

AOC 1 is addressed in this RAW. Following RA, a deed notice and Restricted Use Response Action Outcome (RAO) will be appropriate for AOC 1.

AOC 2, 3, and 4 will be closed with an Unrestricted Use RAO.

AOC 5 and AOC 6 did not require investigation beyond their identification in the PA (no RAO will be issued).

4.0 SITE DESCRIPTION

The Site consists of Robert B. Johnson Park (Block 520 / Lot 26, Block 523 / Lot 13, and a portion of Block 522 / Lot 9) in the Centerville neighborhood of Camden, New Jersey. The Site is owned by the City of Camden, is comprised of approximately 15 acres, and is a public park. One building is located on the property, as well as an asphalt paved parking lot, grass fields, and recreational features including basketball courts, walking paths, and a playground. The Park is currently closed, pending soil remediation and comprehensive park improvements.

The Site location is depicted on **Figure 1** and pertinent site features are depicted on **Figure 2**.

5.0 SITE HISTORY

The following site history information is based upon the review of Sanborn Fire Insurance Maps, historical aerials photographs, and historical topographic maps in the PA Report.

The Site was predominantly marsh, swamp, and/or wetlands prior to 1894. Low-lying areas of the Site were filled in between 1894 and 1901. Between 1901 and 1906, residential structures were built along the southern and southwest edges of the Site, on the north side of Carl Miller Boulevard. The central portion of the Site shows indications of activity and use after the initial filling activity (1894-1901), with aerial imagery showing scarified land and mounding (suspected filling activity), specifically in the 1940s. A junk yard reportedly operated in the southwestern corner of the Site in the 1950s. During the 1960s, there are indications that finished concrete and masonry products were stored / staged in the southern-central area of the Site, north of the residential dwellings that fronted Carl Miller Boulevard. There is no record or indication of structures, at any time, in the northern and central portions of the Site.

By 1971, all structures had been removed from the Site and by 1974 the initial park layout was complete. Various park improvements were completed between the 1970s and 2022 (when the park was closed and secured based on the identification of impacted soil).

6.0 GEOLOGIC AND HYDROGEOLOGIC CONDITIONS

6.1 Topography and Regional Drainage

Site elevations range between 7 and 17 feet above mean sea level. The Site's topographic gradient is generally sloping downward from north to south. The elevation of the Site is similar to the surrounding properties. The Delaware River is located approximately 3,500 feet to the west of the Site and empties into the Delaware Bay.

6.2 Regional Site Geology and Hydrogeology

Native soils at the Site are identified as a mixture of sand, silt, and clay from the late Cretaceous Period, Sangamon Age (interglacial deposition). Surficial geology in the northern half of the site is Salt-Marsh and Estuarine Deposits, which includes silt, sand, peat, clay, minor pebble gravel, generally 100 feet in this area. Surficial geology in the southern half of the site is the Cape May Formation, Unit 2, which includes sand, pebble gravel, minor silt, clay, peat, and cobble gravel, generally less than 50 feet in this area of New Jersey. Historic Fill is mapped in the central and northern sections of the Site, however it has been identified overlying native surficial geology, covering the entire Site. Bedrock geology at the site is the Magothy Formation, which is quartz sand, fine-to coarse- grained, interbedded with thin-bedded clay or clay-silt. The bedrock aquifer at the site is the Potomac-Raritan-Magothy aquifer system.

According to the United States Department of Agriculture's (USDA) Web Soil Survey, soils within the Site vicinity are classified as Urban Land. Site soil lithology, as noted during TRC field investigations, generally consists of topsoil within the first 6 inches, followed by fill material (including sandy silt, crushed brick and gravel) from 0.5-3.0 feet below ground surface (bgs), then varying thickness and color of silts, sands, and clays to approximately 15.0 feet bgs. The material that has been observed and characterized is primarily non-native.

Groundwater depth fluctuated across the Site. Generally, groundwater was present at approximately 15 to 18 feet bgs in the center and northern half of the Site and between 12 to 15 feet bgs in the southern half of the Site. Groundwater flow directions and gradients in the shallow aquifer in-and-near the City of Camden are frequently influenced by municipal supply wells which draw from the deeper PMC aquifer (*Effects of Pumping on Ground-Water Flow Near Water-Supply Wells in the Lower PRM Aquifer, Pennsauken Township, New Jersey*, USGS/NJDEP 2001)

6.3 Surface Water and Wetlands

The nearest surface water body is the Delaware River, located approximately 3,500 feet west of the site. According to the NJDEP NJ-GeoWeb database, the nearest wetlands are located approximately 4,000 feet northeast of the site, along the Cooper River.

7.0 REMEDIAL ACTION WORKPLAN

7.1 Remedial Investigation Methodology

In advance of proposed park improvements, a PA was performed by FPA in 2021. Based on the identification of AOCs during the PA, an initial subsurface soil investigation was completed by FPA in December 2021. Soil sampling was completed to investigate four AOCs (AOC 1 through AOC 4). Details regarding these four AOCs, as well as the two AOCs that did not warrant sampling, are provided in report Section 3.0 and below.

Soil analytical results for the initial investigation (referred to as "SI activity") identified target compound concentrations above the most stringent SRS in samples collected throughout the Site. Historic Fill-related materials (brick, glass, wood, ash) were visually identified in borings/samples that reported elevated target compound concentrations. Soil samples collected to investigate AOC 2, AOC 3, and AOC 4 reported all target compound concentrations below the most stringent SRS, with the exception of Historic Fill-related compounds that were detected throughout the Site. The compliant analytical results (for non-Historic Fill compounds) for AOC 2, 3, and 4 indicate that there is no impact associated with these AOCs and no further investigation or remediation is proposed or warranted.

The conclusions and recommendations of the PA Report, as well as the methodology and results of the initial subsurface soil investigation (both of which were prepared/completed by FPA) have been reviewed by the LSRP of Record and determined to be consistent with PA and SI remedial phase requirements.

Based on the impacted soil identified at a variety of depths in AOC 1, FPA completed an evaluation of surficial and near-surficial soil conditions, to determine if in-situ shallow soil would be an appropriate clean fill cap. Soil analytical results for this investigation of shallow soil (referred to as "RI activity") identified target compound concentrations above the most stringent SRS. In general, soil impacts related to the prior placement of Historic Fill were identified both a depth (SI) and at/near the ground surface (RI).

The methodology and results of the investigation of in-situ shallow soil have been reviewed by the LSRP of Record and determined to be consistent with RI remedial phase requirements.

The LSRP of Record reviewed the PA Report, concurred with the methodology and findings, and submitted the PA Report to NJDEP in January 2023. The LSRP of Record reviewed the FPA reports that summarized the 2021 and 2022 soil investigations, concurred with the methodology and findings, and submitted these two reports (separately) to NJDEP as an SI Report, in January 2023, and an RI Report, in February 2023.

7.2 Applicable Remediation Standards

On May 17, 2021, the NJDEP adopted amended Remediation Standards rules at N.J.A.C. 7:26D which included amended SRS for the ingestion-dermal and inhalation exposure pathways. The May 17, 2021 SRS are (and will be) applicable for all AOCs associated with Activity Code LSR220001, including those AOCs identified thus far during the preparation and completion of PA, SI, and RI in 2021 and 2022. A copy of the applicable SRS is included in **Appendix A**.

Application of the Remediation Standards for the investigation of site AOCs will adhere to NJDEP regulation and/or guidance and a discussion of Remediation Standards will be included in subsequent deliverables (RAR).

Soil samples collected in the unsaturated zone, above the groundwater table, were compared to the NJDEP Migration to Ground Water (MGW) SRS to assess the potential for impact to groundwater. All soil samples collected for the purpose of the SI and RI were compared to the applicable NJDEP Residential and Non-Residential Ingestion-Dermal Pathway SRS and the Residential and Non-Residential Inhalation Pathway SRS. Please note, this RAW is being submitted prior to the end of the phase-in period (November 6, 2024) for the updated NJDEP Residential Ingestion-Dermal Pathway SRS for lead, therefore the 400 milligrams per kilogram (mg/kg) value applies for lead for all AOCs. A groundwater investigation at the Site is neither required nor proposed, based on the investigative results to date.

7.3 AOC 1 Historic Fill Material

7.3.1 Remedial Investigation Findings

Analytical results for the 2021 and 2022 soil samples reported the following classifications of compounds above a Non-Residential (ingestion-dermal or inhalation pathway) SRS in multiple samples: semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals. These classes of compounds were detected throughout the Site, including in samples collected to investigate non-Historic Fill AOCs (AOC 2, 3, and 4).

Impacted soil was identified at depths ranging from 0.0-0.5 feet bgs to 19.5-20.0 feet bgs. 16 of the 26 samples collected in the top 1.0 foot of soil reported at least one compound concentration above a Non-Residential SRS. 11 of the 29 samples collected deeper than 1.0-foot bgs reported at least one compound concentration above a Non-Residential SRS. The distribution of the compounds of concern, including detections in samples collected to investigate other AOCs, is reflective of the presence of Historic Fill throughout the Site.

Soil sample locations are shown on the Existing Conditions / Historical Soil Sample Location Map (**Figure 3**). Sample locations are color-coded to denote samples that are driving the need for remediation (elevated concentrations or elevated method detection limits) versus samples with compliant analytical results. Tabulated soil analytical data is provided in **Appendix B**.

7.3.2 Proposed Remedial Action

While not every soil sample reported compound concentrations that require RA, impacted soil is present covering the entire Site. Therefore, all current pervious ground surface at the Site is proposed to be remediated via capping. Between 2022 and 2024, various stakeholder groups provided input to the team designing the park improvements. In the Summer of 2024, the proposed park design (specifically the conceptual understanding of where certain park improvements would be located) was finalized.

The most significant park improvement, as it relates to the required remediation, will be an artificial turf football field in the southern portion of the Site, near Carl Miller Boulevard. The artificial turf field and subgrade engineered fill will serve as a cap in this area of the Site. In general, the proposed remediation for the rest of the Site will include installation of a geotextile demarcation barrier and 12 inches of clean fill.

Soil sampling was not performed in 2021 / 2022 below any of the current impervious surfaces at the park, which include (but are not limited to) parking lots, basketball courts, walking paths, and spectator bleachers. It is presumed that soil conditions / concentrations below the impervious surfaces are consistent with the pervious areas where samples were collected. The majority of current impervious surfaces at the Site will remain unchanged (impervious) in the new park design. The current impervious surfaces that remain post-construction will serve as a cap. Limited areas of the site that have current impervious cover but are proposed to have different cover in the final design will be remediated in the same manner as the current grass area, i.e. a geotextile demarcation barrier and 12 inches of clean fill.

While soil is not proposed to be removed from the site for proper disposal during the RA, the park design does include regrading for a variety of purposes, including raising the ground elevation in the southern area where the artificial turf football field will be located and lowering the elevation in the northern area (baseball) so the import of 12 inches of clean fill does not significantly change the outfield grade. Other parts of the central and northern area of the Site will be regraded, so that the final ground elevation (following the import and placement of 12 inches of clean fill) meets / matches the elevations for unchanged impervious surfaces (i.e. paths). If soil excavation and removal become preferred or necessary, for environmental or other reasons during construction, characterization and disposal details will be provided in the subsequent RAR.

The Proposed Soil Remedial Action Workplan Map (**Figure 4**) depicts proposed park improvement areas, parcel and Site boundaries, and provides general designations between different areas of the site, based on proposed cap type and cut/fill area:

- Area 1 – Cut area, to be filled with clean fill to approximate existing grade; net soil movement from Area 1 to Area 2, final cover will be 12 inches of clean fill/topsoil.
- Area 2 – Fill area, grade to be raised with soil from Area 1, final cover will be artificial turf football field.
- Area 3 – Fill area and regrading area; soil to be moved within Area 3 and grade to be raised with soil from Area 4, final cover will be 12 inches of clean fill/topsoil.
- Area 4 – Cut area, to be filled with clean fill, necessary for grading and slope adjustment for new park design; net soil movement from Area 4 to Area 3, final cover will be 12 inches of clean fill/topsoil.

7.4 Additional Remedial Action Details

7.4.1 Proposed Remediation Schedule

October 2024 – Submit RAW (TRC)
October 2024 – Submit Application to NJDEP Division of Land Use Regulation (DLUR; completed by others)
February 2025 – NJDEP DLUR Approval and (potential, TBD) City Planning Board Approval
March 2025 – Remediation Plan Finalized
April 2025 – Community Meeting and Invitation for Bid for Remediation Issued
Summer 2025 – Remediation
Fall 2025 – Park Construction

7.4.2 Required Permits

- NJDEP DLUR Flood Hazard Area
- Camden County Soil Conservation District – Soil Erosions and Sediment Control Plan
- City of Camden Planning Board Approval

7.4.3 Variance from Regulation

A Perimeter Air Monitoring (PAM) Plan will be required for the proposed remediation. At the time of the preparation of this RAW (October 2024), important information that will be the basis for the PAM Plan is not yet available. This information includes construction sequencing and contractual assignment for PAM responsibilities among various project stakeholders, including the remediation contractor (scheduled to go out to bid in Spring 2025). A PAM Plan will be developed and reviewed / approved by the LSRP prior to construction. Deferring the preparation of the PAM Plan (not including the PAM Plan alongside this RAW) constitutes a variance from regulation (7:26E-5.5(b)7).

7.4.4 RA Effectiveness

The intent of the remediation is to prevent direct contact and/or exposure between aboveground human and ecological receptors and the confirmed impacted Historic Fill underlying the Site. After the remediation is complete, an RAR will be prepared and submitted to NJDEP; a deed notice with institutional and engineering controls will be filed with the County; a Soil Remedial Action Permit (SRAP) Application will be submitted to NJDEP; and the LSRP will issue a Restricted Use RAO for AOC 1 (Historic Fill) after NJDEP approval of the SRAP.

The effectiveness of the RA will be monitored via regular cap inspections, on a schedule to be proposed in the SRAP Application and approved by NJDEP. Biennial certifications ("effectiveness evaluations") will be submitted to NJDEP in accordance with the SRAP approval.

8.0 REFERENCES

- Remediation Standards (N.J.A.C. 7:26D; May 2021)
- Site Remediation Reform Act (SRRA) New Jersey Statutes Annotated (NJSA), 58:10C-1 et seq
- NJDEP Technical Requirements for Site Remediation, N.J.A.C. 7:26E
- Administrative Requirements for the Remediation of Contaminated Sites, N.J.A.C. 7:26C

FIGURES

REFERENCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP CAMDEN, NJ-PA 2023

0 2000 4000

SCALE IN FEET

TRC
1617 JFK Boulevard
Suite 510
Philadelphia, PA 19103
Phone: 215.563.2122
www.trccompanies.com

PROJECT:

CAMDEN REDEVELOPMENT AGENCY
JOHNSON PARK

TITLE:

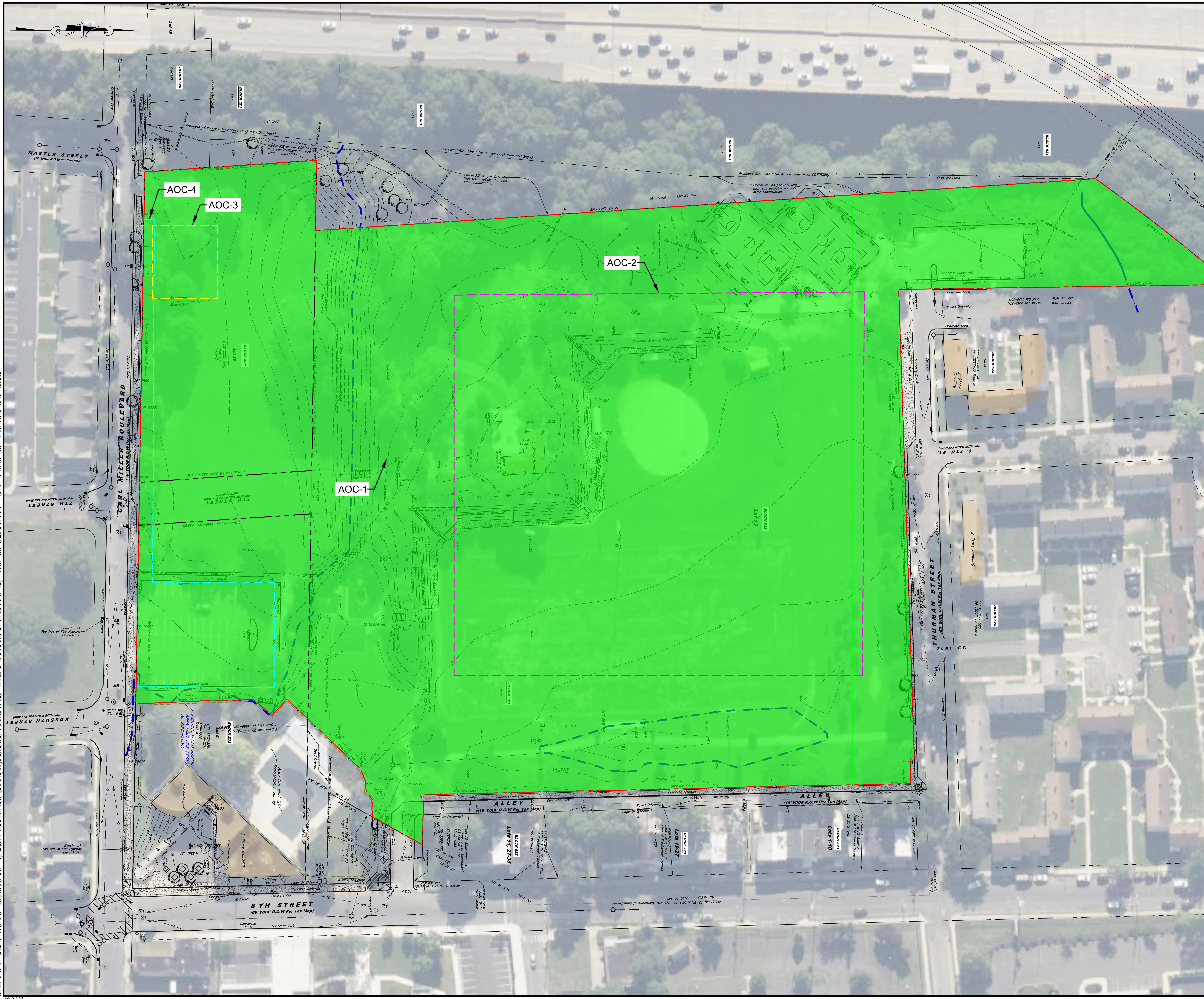
SITE LOCATION MAP

DRAWN BY:	T. FIEBRANZ
CHECKED BY:	T. LAPOLLA
APPROVED BY:	
DATE:	OCTOBER 2024
PROJ. NO.:	593156.0000.0000
FILE:	593196.0000.01 SL.dwg

FIGURE 1

8.5x11 -- USER: TDougan -- ATTACHED XREFS: -- ATTACHED IMAGES:
DRAWING NAME: \\EMPLOYEES.ROOT.local\ENVIECEPHL\Projects\CRA - Camden Redevelopment Agency\593156 Robert Johnson Park\CAD\Remedial Action Figures\ 593196.0000.01 SL.dwg -- PLOT DATE: October 14, 2024 - 10:46AM -- LAYOUT: SITE LOCATION

Version: 2017-10-21



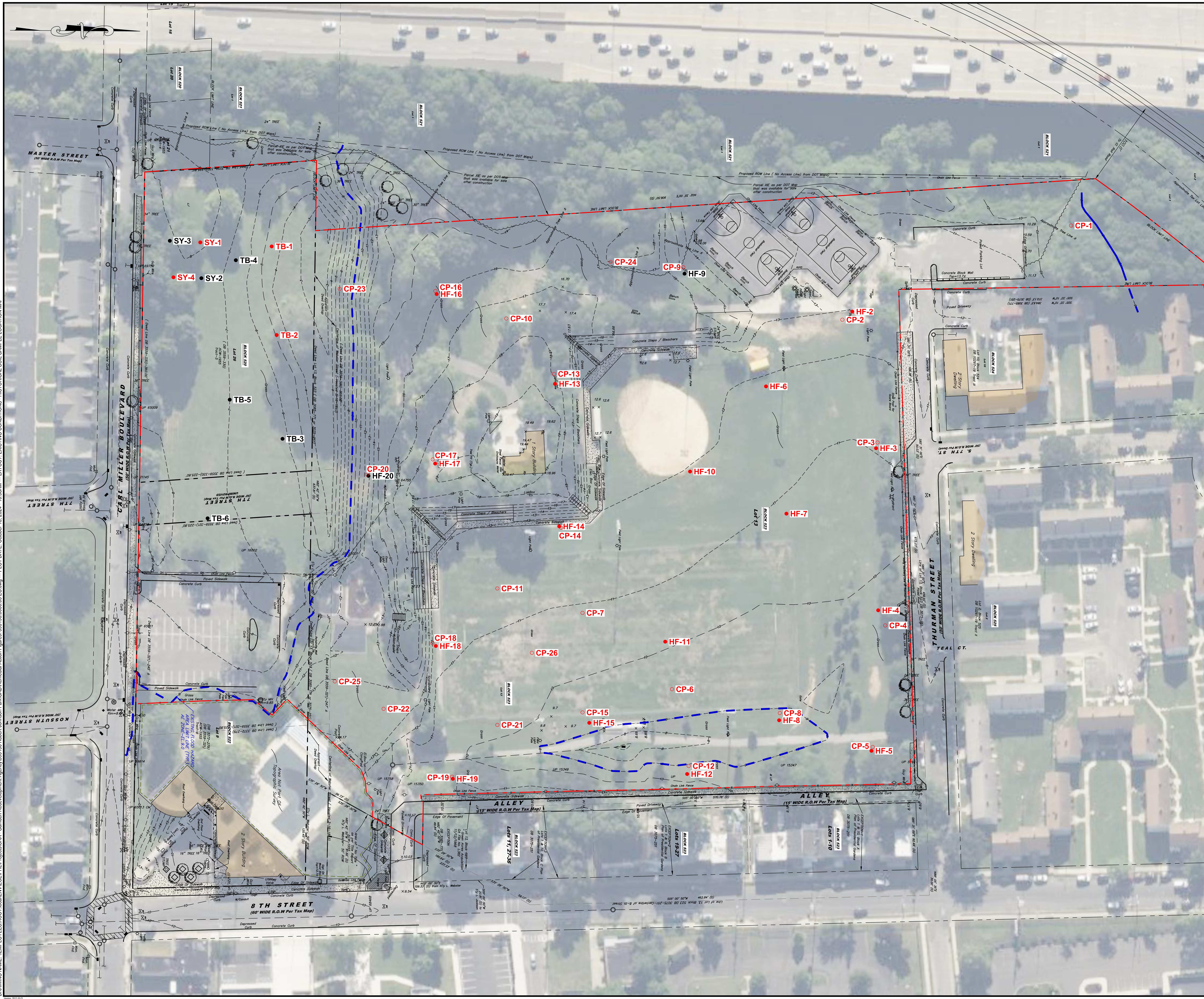
LEGEND

- AOC-1: HISTORIC FILL
- AOC-2: HISTORIC DUMPING
- AOC-3: FORMER SCRAP YARD
- AOC-4: POTENTIAL RESIDENTIAL USTs
- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE SITE BOUNDARY

0 40 80 120 160
SCALE IN FEET

PROJECT:	CAMDEN REDEVELOPMENT AGENCY JOHNSON PARK
TITLE:	SITE PLAN AREA OF CONCERN MAP
DRAWN BY: T. FIEBRANZ	PROJ. NO.: 593156.0000.0000
CHECKED BY: T. LAPOLLA	FIGURE 2
APPROVED BY:	
DATE: OCTOBER 2024	
TRC	1617 JFK Boulevard Suite 510 Philadelphia, PA 19103 Phone: 215.563.2122 www.trccompanies.com
FILE NO.:	593196.0000.02 SP.dwg

30x42 --- USER: TDougan --- ATTACHED XREF'S: 17087.007 - XBASE1: AOC areas --- ATTACHED IMAGES:
DRAWING NAME: \\EMPLOYEES.ROOT.local\ENV\ECE\PHL\Projects\CRA - Camden Redevelopment Agency\593156 Robert Johnson Park\CAD\Remedial Action Figures\ 593196.0000.02 SP.dwg --- PLOT DATE: October 18, 2024 - 11:02AM --- LAYOUT: SITE PLAN AREA OF CONCERN MAP
Version: 2017-10-21



LEGEND

- ● DECEMBER 2021 SOIL SAMPLE LOCATIONS
- ● DECEMBER 2021 SOIL SAMPLE LOCATIONS RESULTS ABOVE RES/NON-RES SRS (TO BE REMEDIATED)
- ○ JULY 2022 SOIL SAMPLE LOCATIONS RESULTS ABOVE RES/NON-RES SRS (TO BE REMEDIATED)
- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE SITE BOUNDARY

0 40 80 120 160
SCALE IN FEET

PROJECT:
CAMDEN REDEVELOPMENT AGENCY
JOHNSON PARK

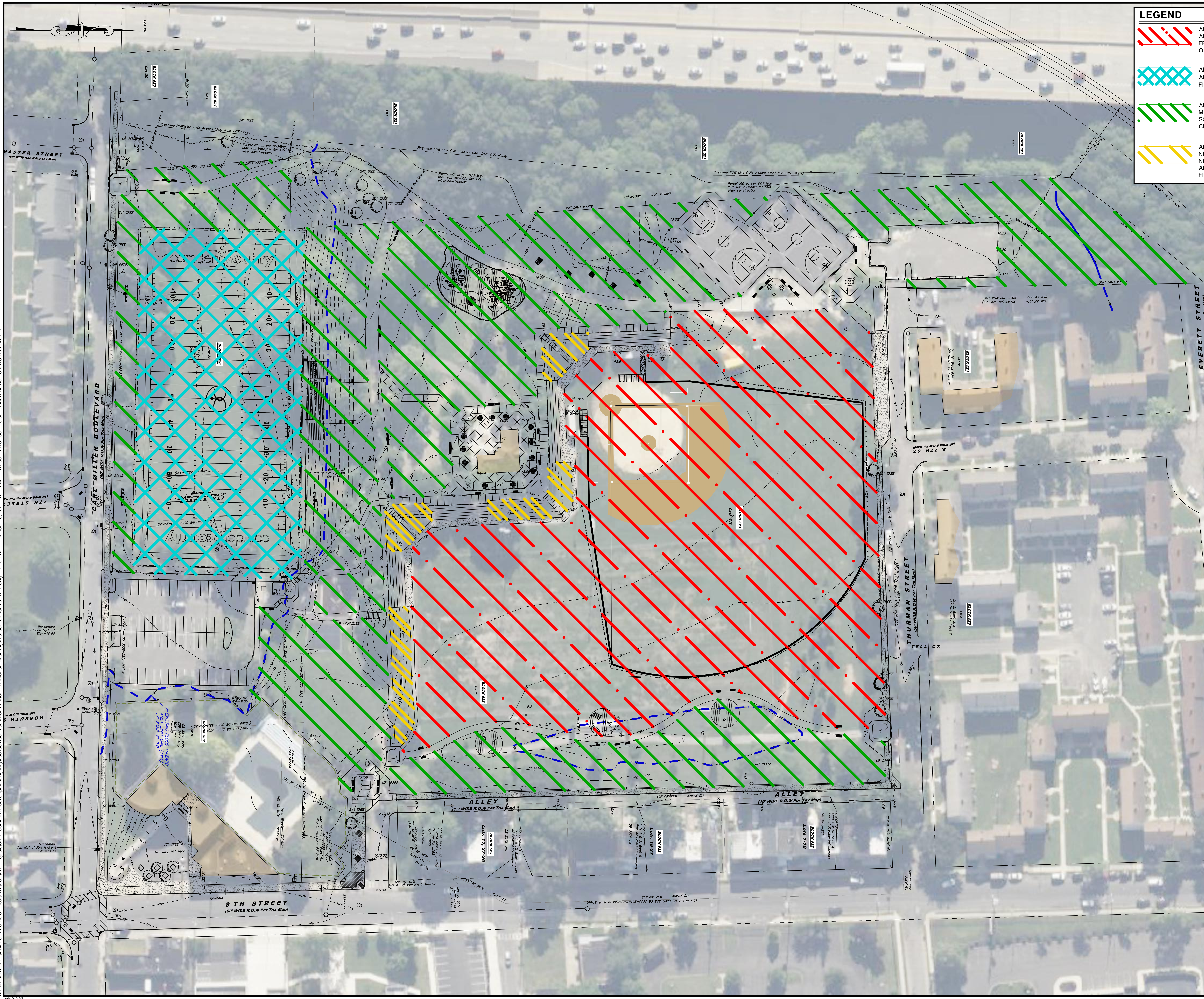
TITLE:
EXISTING CONDITIONS
HISTORICAL SOIL SAMPLE LOCATION MAP

DRAWN BY:	T. FIEBRANZ	PROJ. NO.:	593156.0000.0000
CHECKED BY:	T. LAPOLLA	**FIGURE 3**	
APPROVED BY:			
DATE:	OCTOBER 2024		

TRC
1617 JFK Boulevard
Suite 510
Philadelphia, PA 19103
Phone: 215.563.2122
www.trccompanies.com

FILE NO.: 593196.0000.03 EC.dwg

30x42 --- USER: TDougan --- ATTACHED XREF'S: 17087.007 - XBASE1: Soil Sample Loctions --- ATTACHED IMAGES:
DRAWING NAME: \\EMPLOYEES.ROOT.local\ENVIECE\PHL\Projects\CRA - Camden Redevelopment Agency\593156 Robert Johnson Park\CAD\Remedial Action Figures\ 593196.0000.03 EC.dwg --- PLOT DATE: October 18, 2024 - 10:58AM --- LAYOUT: EXISTING CONDITIONS - HISTORICAL SOIL SAMPLE LOCATION MAP
Version: 2017-10-21



PROJECT:

CAMDEN REDEVELOPMENT AGENCY
JOHNSON PARK

TITLE:

PROPOSED SOIL REMEDIAL ACTION WORKPLAN MAP

DRAWN BY:	T. FIEBRANZ	PROJ. NO.:	593156.0000.0000
CHECKED BY:	T. LAPOLLA		**FIGURE 4**
APPROVED BY:			
DATE:	OCTOBER 2024		

TRC
1617 JFK Boulevard
Suite 510
Philadelphia, PA 19103
Phone: 215.563.2122
www.trccompanies.com

FILE NO.: 593196.0000.04 RAP.dwg

30x42 --- USER: TDougan --- ATTACHED XREF'S: 17087.007 - XBASE1: 593196.0000.02 SP --- ATTACHED IMAGES:
DRAWING NAME: \\EMPLOYEES.ROOT.local\ENV\ECE\PHL\Projects\CRA - Camden Redevelopment Agency\593156 Robert Johnson Park\CAD\Remedial Action Figures\ 593196.0000.04 RAP.dwg --- PLOT DATE: October 18, 2024 - 12:12PM --- LAYOUT: PROPOSED SOIL REMEDIAL ACTION WORKPLAN MAP
Version: 2017-10-21

APPENDIX A

May 2021 Soil Remediation Standards (Values Tables)

N.J.A.C. 7:26D

REMEDIATION STANDARDS

Statutory authority:

N.J.S.A. 13:1D-1 et seq., 58:10-23.11a et seq., 58:10A-1 et seq. and 58:10B-1 et seq.

Date last amended:

May 17, 2021

For regulatory history and effective dates, see the New Jersey Administrative Code.

Table of Contents

approval by the Department

(a) When the person responsible for conducting the remediation is not required to obtain prior approval from the Department for the implementation of an alternative remediation standard developed pursuant to this subchapter, the person responsible shall:

1. For each proposed alternative remediation standard, collect the information indicated for each applicable exposure pathway as described at N.J.A.C. 7:26D Appendices 6, 7, 8, and 9, incorporated herein by reference; and

2. Submit to the Department the information described in (a)1 above with the applicable remedial phase report or workplan pursuant to the Technical Requirements for Site Remediation, N.J.A.C. 7:26E.

APPENDIX 1

REMEDIATION STANDARDS TABLES

Table 1 – Soil Remediation Standards for the Ingestion-Dermal Exposure Pathway - Residential (mg/kg) (All numeric values are rounded to two significant figures)

Contaminant	CAS No.	Residential Carcinogenic Ingestion-Dermal Human Health-based Criterion	Residential Noncarcinogenic Ingestion-Dermal Human Health-based Criterion	Reporting Limit	Soil Remediation Standard Ingestion-Dermal Residential
Acenaphthene	83-32-9	NA	3,600	0.17	3,600
Acetone (2-Propanone)	67-64-1	NA	70,000	0.010	70,000
Acetophenone	98-86-2	NA	7,800	0.33	7,800
Aldrin	309-00-2	0.041	2.3	0.0017	0.041
Aluminum (total)	7429-90-5	NA	78,000	20	78,000
Anthracene	120-12-7	NA	18,000	0.17	18,000
Antimony (total)	7440-36-0	NA	31	1.0	31

Arsenic (total)	7440-38-2	0.43	22	0.50	19[1]
Atrazine	1912-24-9	NA	220	0.33	220
Barium (total)	7440-39-3	NA	16,000	5.0	16,000
Benzaldehyde	100-52-7	170	7,800	0.33	170
Benzene	71-43-2	3.0	310	0.0050	3.0
Benzo(a)anthracene (1,2-Benzanthracene)	56-55-3	5.1	NA	0.17	5.1
Benzo(a)pyrene	50-32-8	0.51	18	0.17	0.51
Benzo(b)fluoranthene (3,4-Benzofluoranthene)	205-99-2	5.1	NA	0.17	5.1
Benzo(k)fluoranthene	207-08-9	51	NA	0.17	51
Beryllium	7440-41-7	NA	160	0.50	160
1,1'-Biphenyl	92-52-4	87	39,000	0.17	87
Bis(2-chloroethoxy)methane	111-91-1	NA	190	0.17	190
Bis(2-chloroethyl)ether	111-44-4	0.63	NA	0.33	0.63
Bis(2-ethylhexyl)phthalate	117-81-7	39	1,300	0.17	39
Bromodichloromethane (Dichlorobromomethane)	75-27-4	11	1,600	0.0050	11
Bromoform	75-25-2	88	1,600	0.0050	88
Bromomethane (Methyl bromide)	74-83-9	NA	110	0.0050	110
2-Butanone (Methyl ethyl ketone) (MEK)	78-93-3	NA	47,000	0.010	47,000
Butylbenzyl phthalate	85-68-7	290	13,000	0.17	290
Cadmium	7440-43-9	NA	71	0.50	71
Caprolactam	105-60-2	NA	32,000	0.33	32,000
Carbon disulfide	75-15-0	NA	NA	0.0050	NA
Carbon tetrachloride	56-23-5	7.6	310	0.0050	7.6
Chlordane (alpha and gamma forms summed)	57-74-9	0.27	36	0.0017	0.27
4-Chloroaniline	106-47-8	2.7	250	0.17	2.7
Chlorobenzene	108-90-7	NA	510	0.0050	510
Chloroethane (Ethyl chloride)	75-00-3	NA	NA	0.0050	NA
Chloroform	67-66-3	NA	780	0.0050	780
Chloromethane (Methyl chloride)	74-87-3	NA	NA	0.0050	NA
2-Chloronaphthalene	91-58-7	NA	4,800	0.17	4,800
2-Chlorophenol (o-Chlorophenol)	95-57-8	NA	390	0.17	390
Chrysene	218-01-9	510	NA	0.17	510
Cobalt (total)	7440-48-4	NA	23	0.50	23

Copper (total)	7440-50-8	NA	3,100	1.0	3,100
Cyanide	57-12-5	NA	47	0.50	47
Cyclohexane	110-82-7	NA	NA	0.0050	NA
4,4'-DDD (p,p'-TDE)	72-54-8	2.3	NA	0.0033	2.3
4,4'-DDE (p,p'-DDX)	72-55-9	2.0	NA	0.0033	2.0
4,4'-DDT	50-29-3	1.9	37	0.0033	1.9
Dibenz(a,h)anthracene	53-70-3	0.51	NA	0.17	0.51
Dibromochloromethane (Chlorodibromomethane)	124-48-1	8.3	1,600	0.0050	8.3
1,2-Dibromo-3-chloropropane	96-12-8	0.87	16	0.0050	0.87
1,2-Dibromoethane (Ethylene dibromide)	106-93-4	0.35	700	0.0050	0.35
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	NA	6,700	0.0050	6,700
1,3-Dichlorobenzene (m-Dichlorobenzene)	541-73-1	NA	6,700	0.0050	6,700
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	NA	780	0.0050	780
3,3'-Dichlorobenzidine	91-94-1	1.2	NA	0.33	1.2
Dichlorodifluoromethane (Freon 12)	75-71-8	NA	16,000	0.0050	16,000
1,1-Dichloroethane	75-34-3	120	16,000	0.0050	120
1,2-Dichloroethane	107-06-2	5.8	NA	0.0050	5.8
1,1-Dichloroethene (1,1-Dichloroethylene)	75-35-4	NA	11	0.0050	11
1,2-Dichloroethene (cis) (c-1,2-Dichloroethylene)	156-59-2	NA	780	0.0050	780
1,2-Dichloroethene (trans) (t-1,2-Dichloroethylene)	156-60-5	NA	1,300	0.0050	1,300
2,4-Dichlorophenol	120-83-2	NA	190	0.17	190
1,2-Dichloropropane	78-87-5	19	3,100	0.0050	19
1,3-Dichloropropene (total)	542-75-6	7.0	2,300	0.0050	7.0
Dieldrin	60-57-1	0.034	3.2	0.0033	0.034
Diethylphthalate	84-66-2	NA	51,000	0.17	51,000
2,4-Dimethylphenol	105-67-9	NA	1,300	0.17	1,300
Di-n-butyl phthalate	84-74-2	NA	6,300	0.17	6,300
2,4-Dinitrophenol	51-28-5	NA	130	0.33	130
2,4-Dinitrotoluene/2,6-Dinitrotoluene (mixture)	25321-14-6	0.80	NA	0.17	0.80
Di-n-octyl phthalate	117-84-0	NA	630	0.33	630
1,4-Dioxane	123-91-1	7.0	2,300	0.067	7.0

Endosulfan I and Endosulfan II (alpha and beta) (summed)	115-29-7	NA	470	0.0033	470
Endrin	72-20-8	NA	19	0.0033	19
Ethylbenzene	100-41-4	NA	7,800	0.0050	7,800
Extractable Petroleum Hydrocarbons (Category 1)	various	NA	5,300[3]	80	5,300[3]
Extractable Petroleum Hydrocarbons (Category 2)	various	NA	Sample-specific[4]	80	Sample-specific[4]
Fluoranthene	206-44-0	NA	2,400	0.33	2,400
Fluorene	86-73-7	NA	2,400	0.17	2,400
alpha-HCH (alpha-BHC)	319-84-6	0.086	510	0.0017	0.086
beta-HCH (beta-BHC)	319-85-7	0.30	NA	0.0017	0.30
Heptachlor	76-44-8	0.15	39	0.0017	0.15
Heptachlor epoxide	1024-57-3	0.076	1.0	0.0017	0.076
Hexachlorobenzene	118-74-1	0.43	63	0.17	0.43
Hexachloro-1,3-butadiene	87-68-3	8.9	78	0.17	8.9
Hexachlorocyclopentadiene	77-47-4	NA	470	0.33	470
Hexachloroethane	67-72-1	17	55	0.17	17
n-Hexane	110-54-3	NA	NA	-[7]	NA
2-Hexanone	591-78-6	NA	390	0.010	390
Indeno(1,2,3-cd)pyrene	193-39-5	5.1	NA	0.17	5.1
Isophorone	78-59-1	570	13,000	0.17	570
Isopropylbenzene	98-82-8	NA	7,800	0.0050	7,800
Lead (total)	7439-92-1	NA	NA	0.50	400[5]
Lindane (gamma-HCH)(gamma-BHC)	58-89-9	0.57	21	0.0017	0.57
Manganese (total)	7439-96-5	NA	1,900	0.50	1,900
Mercury (total)	7439-97-6	NA	23	0.10	23
Methoxychlor	72-43-5	NA	320	0.017	320
Methyl acetate	79-20-9	NA	78,000	0.0050	78,000
Methylene chloride (Dichloromethane)	75-09-2	50	470	0.0050	50
2-Methylnaphthalene	91-57-6	NA	240	0.17	240
4-Methyl-2-pentanone (MIBK)	108-10-1	NA	NA	0.010	NA
2-Methylphenol (o-cresol)	95-48-7	NA	320	0.33	320
4-Methylphenol (p-cresol)	106-44-5	NA	630	0.33	630
Methyl tert-butyl ether (MTBE)	1634-04-4	NA	780	0.0050	780
Naphthalene	91-20-3	NA	2,500	0.17	2,500
Nickel (total)	7440-02-0	NA	1,600	0.50	1,600
4-Nitroaniline	100-01-6	27	250	0.33	27
Nitrobenzene	98-95-3	NA	160	0.17	160
N-Nitrosodi-n-propylamine	621-64-7	0.078	NA	0.17	0.17[2]

N-Nitrosodiphenylamine	86-30-6	110	NA	0.17	110
2,2'-oxybis (1-chloropropane)	108-60-1	NA	3,100	0.33	3,100
Pentachlorophenol	87-86-5	1.0	250	0.33	1.0
Phenol	108-95-2	NA	19,000	0.33	19,000
Polychlorinated biphenyls (PCBs)	1336-36-3	0.25	NA	0.030	0.25
Pyrene	129-00-0	NA	1,800	0.17	1,800
Selenium (total)	7782-49-2	NA	390	2.5	390
Silver (total)	7440-22-4	NA	390	0.50	390
Styrene	100-42-5	NA	16,000	0.0050	16,000
Tertiary butyl alcohol (TBA)	75-65-0	NA	1,400	0.10	1,400
1,2,4,5-Tetrachlorobenzene	95-94-3	NA	23	0.17	23
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	NA	0.000051	0.0000010	0.000051[6]
1,1,2,2-Tetrachloroethane	79-34-5	3.5	1,600	0.0050	3.5
Tetrachloroethene (PCE) (Tetrachloroethylene)	127-18-4	330	470	0.0050	330
2,3,4,6-Tetrachlorophenol	58-90-2	NA	1,900	0.17	1,900
Toluene	108-88-3	NA	6,300	0.0050	6,300
Toxaphene	8001-35-2	0.49	NA	0.17	0.49
1,2,4-Trichlorobenzene	120-82-1	NA	780	0.0050	780
1,1,1-Trichloroethane	71-55-6	NA	160,000	0.0050	160,000
1,1,2-Trichloroethane	79-00-5	12	310	0.0050	12
Trichloroethene (TCE) (Trichloroethylene)	79-01-6	15	39	0.0050	15
Trichlorofluoromethane (Freon 11)	75-69-4	NA	23,000	0.0050	23,000
2,4,5-Trichlorophenol	95-95-4	NA	6,300	0.20	6,300
2,4,6-Trichlorophenol	88-06-2	49	63	0.20	49
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	NA	NA	0.0050	NA
1,2,4-Trimethylbenzene	95-63-6	NA	780	0.076	780
Vanadium (total)	7440-62-2	NA	390	2.5	390
Vinyl chloride	75-01-4	0.97	230	0.0050	0.97
Xylenes (total)	1330-20-7	NA	12,000	0.0050	12,000
Zinc (total)	7440-66-6	NA	23,000	1.0	23,000

NA – Not applicable because appropriate toxicological information is not available

[1] Standard is based on natural background

[2] Standard set at reporting limit

[3] Special calculation for EPH – see at N.J.A.C. 7:26D Appendix 2

[4] Sample-specific calculation using EPH calculator – see at N.J.A.C. 7:26D Appendix 2

[5] Standard based on the Integrated Exposure Uptake Biokinetic (IEUBK) model for lead in children

[6] This standard is used for comparison to site soil data that have been converted to sample-specific TCDD-TEQ values through application of the Toxicity Equivalence Factor Methodology (USEPA 2010) and using the WHO 2005 Mammalian Toxic Equivalency Factors (TEFs)

[7] Although n-Hexane does not have a specific reporting limit, quantification is required to be less than the applicable remediation standard

Table 2 – Soil Remediation Standards for the Ingestion-Dermal Exposure Pathway - Nonresidential (mg/kg) (All numeric values are rounded to two significant figures)

Contaminant	CAS No.	Nonresidential Carcinogenic Ingestion-Dermal Human Health-based Criterion	Nonresidential Noncarcinogenic Ingestion-Dermal Human Health-based Criterion	Reporting Limit	Soil Remediation Standard Ingestion-Dermal Nonresidential
Acenaphthene	83-32-9	NA	50,000	0.17	50,000
Acetone (2-Propanone)	67-64-1	NA	1,200,000	0.010	NA[1]
Acetophenone	98-86-2	NA	130,000	0.33	130,000
Aldrin	309-00-2	0.21	39	0.0017	0.21
Aluminum (total)	7429-90-5	NA	1,300,000	20	NA[1]
Anthracene	120-12-7	NA	250,000	0.17	250,000
Antimony (total)	7440-36-0	NA	520	1.0	520
Arsenic (total)	7440-38-2	2.1	350	0.50	19[2]
Atrazine	1912-24-9	NA	3,200	0.33	3,200
Barium (total)	7440-39-3	NA	260,000	5.0	260,000
Benzaldehyde	100-52-7	910	130,000	0.33	910
Benzene	71-43-2	16	5,200	0.0050	16
Benzo(a)anthracene (1,2-Benzanthracene)	56-55-3	23	250	0.17	23

Benzo(a)pyrene	50-32-8	2.3	250	0.17	2.3
Benzo(b)fluoranthene (3,4-Benzofluoranthene)	205-99-2	23	NA	0.17	23
Benzo(k)fluoranthene	207-08-9	230	NA	0.17	230
Beryllium	7440-41-7	NA	2,600	0.50	2,600
1,1'-Biphenyl	92-52-4	450	650,000	0.17	450
Bis(2-chloroethoxy)methane	111-91-1	NA	2,700	0.17	2,700
Bis(2-chloroethyl)ether	111-44-4	3.3	NA	0.33	3.3
Bis(2-ethylhexyl)phthalate	117-81-7	180	18,000	0.17	180
Bromodichloromethane (Dichlorobromomethane)	75-27-4	59	26,000	0.0050	59
Bromoform	75-25-2	460	26,000	0.0050	460
Bromomethane (Methyl bromide)	74-83-9	NA	1,800	0.0050	1,800
2-Butanone (Methyl ethyl ketone) (MEK)	78-93-3	NA	780,000	0.010	780,000
Butylbenzyl phthalate	85-68-7	1,300	180,000	0.17	1,300
Cadmium	7440-43-9	NA	1,100	0.50	1,100
Caprolactam	105-60-2	NA	460,000	0.33	460,000
Carbon disulfide	75-15-0	NA	NA	0.0050	NA
Carbon tetrachloride	56-23-5	40	5,200	0.0050	40
Chlordane (alpha and gamma forms summed)	57-74-9	1.4	550	0.0017	1.4
4-Chloroaniline	106-47-8	13	3,600	0.17	13
Chlorobenzene	108-90-7	NA	8,400	0.0050	8,400
Chloroethane (Ethyl chloride)	75-00-3	NA	NA	0.0050	NA
Chloroform	67-66-3	NA	13,000	0.0050	13,000
Chloromethane (Methyl chloride)	74-87-3	NA	NA	0.0050	NA
2-Chloronaphthalene	91-58-7	NA	67,000	0.17	67,000
2-Chlorophenol (o-Chlorophenol)	95-57-8	NA	6,500	0.17	6,500
Chrysene	218-01-9	2,300	NA	0.17	2,300
Cobalt (total)	7440-48-4	NA	390	0.50	390
Copper (total)	7440-50-8	NA	52,000	1.0	52,000
Cyanide	57-12-5	NA	780	0.50	780
Cyclohexane	110-82-7	NA	NA	0.0050	NA
4,4'-DDD (p,p'-TDE)	72-54-8	11	NA	0.0033	11
4,4'-DDE (p,p'-DDX)	72-55-9	11	NA	0.0033	11
4,4'-DDT	50-29-3	9.5	580	0.0033	9.5
Dibenz(a,h)anthracene	53-70-3	2.3	NA	0.17	2.3

Dibromochloromethane (Chlorodibromomethane)	124-48-1	43	26,000	0.0050	43
1,2-Dibromo-3-chloropropane	96-12-8	4.5	260	0.0050	4.5
1,2-Dibromoethane (Ethylene dibromide)	106-93-4	1.8	12,000	0.0050	1.8
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	NA	110,000	0.0050	110,000
1,3-Dichlorobenzene (m-Dichlorobenzene)	541-73-1	NA	110,000	0.0050	110,000
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	NA	13,000	0.0050	13,000
3,3'-Dichlorobenzidine	91-94-1	5.7	NA	0.33	5.7
Dichlorodifluoromethane (Freon 12)	75-71-8	NA	260,000	0.0050	260,000
1,1-Dichloroethane	75-34-3	640	260,000	0.0050	640
1,2-Dichloroethane	107-06-2	30	NA	0.0050	30
1,1-Dichloroethene (1,1-Dichloroethylene)	75-35-4	NA	180	0.0050	180
1,2-Dichloroethene (cis) (c-1,2-Dichloroethylene)	156-59-2	NA	13,000	0.0050	13,000
1,2-Dichloroethene (trans) (t-1,2-Dichloroethylene)	156-60-5	NA	22,000	0.0050	22,000
2,4-Dichlorophenol	120-83-2	NA	2,700	0.17	2,700
1,2-Dichloropropane	78-87-5	98	52,000	0.0050	98
1,3-Dichloropropene (total)	542-75-6	36	39,000	0.0050	36
Dieldrin	60-57-1	0.16	46	0.0033	0.16
Diethylphthalate	84-66-2	NA	730,000	0.17	730,000
2,4-Dimethylphenol	105-67-9	NA	18,000	0.17	18,000
Di-n-butyl phthalate	84-74-2	NA	91,000	0.17	91,000
2,4-Dinitrophenol	51-28-5	NA	1,800	0.33	1,800
2,4-Dinitrotoluene/2,6-Dinitrotoluene (mixture)	25321-14-6	3.8	NA	0.17	3.8
Di-n-octyl phthalate	117-84-0	NA	9,100	0.33	9,100
1,4-Dioxane	123-91-1	36	39,000	0.067	36
Endosulfan I and Endosulfan II (alpha and beta) (summed)	115-29-7	NA	7,800	0.0033	7,800
Endrin	72-20-8	NA	270	0.0033	270
Ethylbenzene	100-41-4	NA	130,000	0.0050	130,000
Extractable Petroleum Hydrocarbons (Category 1)	various	NA	75,000[3]	80	75,000[3]
Extractable Petroleum Hydrocarbons (Category 2)	various	NA	Sample-specific[4]	80	Sample-specific[4]
Fluoranthene	206-44-0	NA	33,000	0.33	33,000

Fluorene	86-73-7	NA	33,000	0.17	33,000
alpha-HCH (alpha-BHC)	319-84-6	0.41	7,300	0.0017	0.41
beta-HCH (beta-BHC)	319-85-7	1.4	NA	0.0017	1.4
Heptachlor	76-44-8	0.81	650	0.0017	0.81
Heptachlor epoxide	1024-57-3	0.40	17	0.0017	0.40
Hexachlorobenzene	118-74-1	2.3	1,000	0.17	2.3
Hexachloro-1,3-butadiene	87-68-3	47	1,300	0.17	47
Hexachlorocyclopentadiene	77-47-4	NA	7,800	0.33	7,800
Hexachloroethane	67-72-1	91	910	0.17	91
n-Hexane	110-54-3	NA	NA	-[7]	NA
2-Hexanone	591-78-6	NA	6,500	0.010	6,500
Indeno(1,2,3-cd)pyrene	193-39-5	23	NA	0.17	23
Isophorone	78-59-1	2,700	180,000	0.17	2,700
Isopropylbenzene	98-82-8	NA	130,000	0.0050	130,000
Lead (total)	7439-92-1	NA	NA	0.5	800[5]
Lindane (gamma-HCH)(gamma-BHC)	58-89-9	2.8	330	0.0017	2.8
Manganese (total)	7439-96-5	NA	31,000	0.50	31,000
Mercury (total)	7439-97-6	NA	390	0.10	390
Methoxychlor	72-43-5	NA	4,600	0.017	4,600
Methyl acetate	79-20-9	NA	1,300,000	0.0050	NA[1]
Methylene chloride (Dichloromethane)	75-09-2	260	7,800	0.0050	260
2-Methylnaphthalene	91-57-6	NA	3,300	0.17	3,300
4-Methyl-2-pentanone (MIBK)	108-10-1	NA	NA	0.010	NA
2-Methylphenol (o-cresol)	95-48-7	NA	4,600	0.33	4,600
4-Methylphenol (p-cresol)	106-44-5	NA	9,100	0.33	9,100
Methyl tert-butyl ether (MTBE)	1634-04-4	NA	13,000	0.0050	13,000
Naphthalene	91-20-3	NA	34,000	0.17	34,000
Nickel (total)	7440-02-0	NA	26,000	0.50	26,000
4-Nitroaniline	100-01-6	130	3,600	0.33	130
Nitrobenzene	98-95-3	NA	2,600	0.17	2,600
N-Nitrosodi-n-propylamine	621-64-7	0.36	NA	0.17	0.36
N-Nitrosodiphenylamine	86-30-6	520	NA	0.17	520
2,2'-oxybis(1-chloropropane)	108-60-1	NA	52,000	0.33	52,000
Pentachlorophenol	87-86-5	4.4	3,200	0.33	4.4
Phenol	108-95-2	NA	270,000	0.33	270,000
Polychlorinated biphenyls (PCBs)	1336-36-3	1.1	NA	0.030	1.1
Pyrene	129-00-0	NA	25,000	0.17	25,000
Selenium (total)	7782-49-2	NA	6,500	2.5	6,500
Silver (total)	7440-22-4	NA	6,500	0.50	6,500

Styrene	100-42-5	NA	260,000	0.0050	260,000
Tertiary butyl alcohol (TBA)	75-65-0	NA	23,000	0.10	23,000
1,2,4,5-Tetrachlorobenzene	95-94-3	NA	390	0.17	390
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	NA	0.00081	0.0000010	0.00081[6]
1,1,2,2-Tetrachloroethane	79-34-5	18	26,000	0.0050	18
Tetrachloroethene (PCE) (Tetrachloroethylene)	127-18-4	1,700	7,800	0.0050	1,700
2,3,4,6-Tetrachlorophenol	58-90-2	NA	27,000	0.17	27,000
Toluene	108-88-3	NA	100,000	0.0050	100,000
Toxaphene	8001-35-2	2.3	NA	0.17	2.3
1,2,4-Trichlorobenzene	120-82-1	NA	13,000	0.0050	13,000
1,1,1-Trichloroethane	71-55-6	NA	2,600,000	0.0050	NA[1]
1,1,2-Trichloroethane	79-00-5	64	5,200	0.0050	64
Trichloroethene (TCE) (Trichloroethylene)	79-01-6	79	650	0.0050	79
Trichlorofluoromethane (Freon 11)	75-69-4	NA	390,000	0.0050	390,000
2,4,5-Trichlorophenol	95-95-4	NA	91,000	0.20	91,000
2,4,6-Trichlorophenol	88-06-2	230	910	0.20	230
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	NA	NA	0.0050	NA
1,2,4-Trimethylbenzene	95-63-6	NA	13,000	0.076	13,000
Vanadium (total)	7440-62-2	NA	6,500	2.5	6,500
Vinyl chloride	75-01-4	5.0	3,900	0.0050	5.0
Xylenes (total)	1330-20-7	NA	190,000	0.0050	190,000
Zinc (total)	7440-66-6	NA	390,000	1.0	390,000

NA – Not applicable because appropriate toxicological information is not available

[1] Standard not applicable because calculated health-based criterion exceeds one million mg/kg

[2] Standard is based on natural background

[3] Special calculation for EPH– see N.J.A.C. 7:26D Appendix 2

[4] Sample-specific calculation using EPH calculator – see N.J.A.C. 7:26D Appendix 2

[5] Standard based on the Adult Lead Model (ALM)

[6] This standard is used for comparison to site soil data that have been converted to sample-specific TCDD-TEQ values through application of the Toxicity Equivalence Factor Methodology (USEPA 2010) and using the WHO 2005 Mammalian Toxic Equivalency Factors (TEFs)

[7] Although n-Hexane does not have a specific reporting limit, quantification is required to be less than the applicable remediation standard

Table 3 – Soil Remediation Standards for the Inhalation Exposure Pathway – Residential (mg/kg) (All numeric values are rounded to two significant figures)

Contaminant	CAS No.	Carcinogenic Inhalation Human Health-based Criterion	Noncarcinogenic Inhalation Human Health-based Criterion	Soil Saturation Limit	Reporting Limit	Soil Remediation Standard Inhalation Residential
Acenaphthene	83-32-9	NA[1]	NA[1]	40	0.17	NA[1]
Acetone (2-Propanone)	67-64-1	NA[1]	NA[1]	160,000	0.010	NA[1]
Acetophenone	98-86-2	NA[1]	NA[1]	1,600	0.33	NA[1]
Aldrin	309-00-2	NA[1]	NA[1]	2.8	0.0017	NA[1]
Aluminum (total)	7429-90-5	NA[1]	NA[2]	NA	20	NA[2]
Anthracene	120-12-7	NA[1]	NA[1]	1.4	0.17	NA[1]
Antimony (total)	7440-36-0	NA[1]	NA[1]	NA	1.0	NA[1]
Arsenic (total)	7440-38-2	1,100	NA[1]	NA	0.50	1,100
Atrazine	1912-24-9	NA[1]	NA[1]	21	0.33	NA[1]
Barium (total)	7440-39-3	NA[1]	870,000	NA	5.0	870,000
Benzaldehyde	100-52-7	NA[1]	NA[1]	1,200	0.33	NA[1]
Benzene	71-43-2	2.2	190	850	0.0050	2.2
Benzo(a)anthracene (1,2-Benzanthracene)	56-55-3	78,000[4]	NA[1]	3.3	0.17	78,000[4]
Benzo(a)pyrene	50-32-8	7,800[4]	3,500[4]	1.9	0.17	3,500[4]
Benzo(b)fluoranthene (3,4-Benzofluoranthene)	205-99-2	78,000[4]	NA[1]	1.8	0.17	78,000[4]
Benzo(k)fluoranthene	207-08-9	780,000[4]	NA[1]	0.94	0.17	780,000[4]
Beryllium	7440-41-7	2,000	35,000	NA	0.50	2,000
1,1'-Biphenyl	92-52-4	NA[1]	NA[1]	78	0.17	NA[1]
Bis(2-chloroethoxy)methane	111-91-1	NA[1]	NA[1]	1,400	0.17	NA[1]

Bis(2-chloroethyl)ether	111-44-4	NA[1]	NA[1]	3,700	0.33	NA[1]
Bis(2-ethylhexyl)phthalate	117-81-7	NA[1]	NA[1]	65	0.17	NA[1]
Bromodichloromethane (Dichlorobromomethane)	75-27-4	NA[1]	NA[1]	690	0.0050	NA[1]
Bromoform	75-25-2	NA[1]	NA[1]	680	0.0050	NA[1]
Bromomethane (Methyl bromide)	74-83-9	NA[1]	18	3,300	0.0050	18
2-Butanone (Methyl ethyl ketone) (MEK)	78-93-3	NA[1]	NA[2,3]	36,000	0.010	NA[2,3]
Butylbenzyl phthalate	85-68-7	NA[1]	NA[1]	39	0.17	NA[1]
Cadmium	7440-43-9	2,600	17,000	NA	0.50	2,600
Caprolactam	105-60-2	NA[1]	290	160,000	0.33	290
Carbon disulfide	75-15-0	NA[1]	NA[2,3]	580	0.0050	NA[2,3]
Carbon tetrachloride	56-23-5	1.4	NA[2,3]	300	0.0050	1.4
Chlordane (alpha and gamma forms summed)	57-74-9	NA[1]	NA[2,3]	7.6	0.0017	NA[2,3]
4-Chloroaniline	106-47-8	NA[1]	NA[1]	1,500	0.17	NA[1]
Chlorobenzene	108-90-7	NA[1]	NA[2,3]	320	0.0050	NA[2,3]
Chloroethane (Ethyl chloride)	75-00-3	NA[1]	NA[2,3]	1,700	0.0050	NA[2,3]
Chloroform	67-66-3	NA[1]	590	1,900	0.0050	590
Chloromethane (Methyl chloride)	74-87-3	NA[1]	270	1,200	0.0050	270
2-Chloronaphthalene	91-58-7	NA[1]	NA[1]	60	0.17	NA[1]
2-Chlorophenol (o-Chlorophenol)	95-57-8	NA[1]	NA[1]	11,000	0.17	NA[1]
Chrysene	218-01-9	NA[2,3]	NA[1]	0.72	0.17	NA[2,3]
Cobalt (total)	7440-48-4	520	10,000	NA	0.50	520
Copper (total)	7440-50-8	NA[1]	NA[1]	NA	1.0	NA[1]
Cyanide	57-12-5	NA[1]	NA[2]	NA	0.50	NA[2]
Cyclohexane	110-82-7	NA[1]	NA[2,3]	65	0.0050	NA[2,3]
4,4'-DDD (p,p'-TDE)	72-54-8	NA[1]	NA[1]	21	0.0033	NA[1]
4,4'-DDE (p,p'-DDX)	72-55-9	NA[1]	NA[1]	9.4	0.0033	NA[1]
4,4'-DDT	50-29-3	NA[1]	NA[1]	1.9	0.0033	NA[1]
Dibenz(a,h)anthracene	53-70-3	7,800[4]	NA[1]	9.5	0.17	7,800[4]
Dibromochloromethane (Chlorodibromomethane)	124-48-1	NA[1]	NA[1]	600	0.0050	NA[1]
1,2-Dibromo-3-chloropropane	96-12-8	0.026	11	470	0.0050	0.026
1,2-Dibromoethane (Ethylene dibromide)	106-93-4	0.085	170	920	0.0050	0.085
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	NA[1]	NA[2,3]	140	0.0050	NA[2,3]
1,3-Dichlorobenzene (m-Dichlorobenzene)	541-73-1	NA[1]	NA[1]	110	0.0050	NA[1]
1,4-Dichlorobenzene	106-46-7	NA[1]	NA[2,3]	74	0.0050	NA[2,3]

(p-Dichlorobenzene)						
3,3'-Dichlorobenzidine	91-94-1	NA[1]	NA[1]	20	0.33	NA[1]
Dichlorodifluoromethane (Freon 12)	75-71-8	NA[1]	NA[1]	540	0.0050	NA[1]
1,1-Dichloroethane	75-34-3	NA[1]	NA[1]	1,200	0.0050	NA[1]
1,2-Dichloroethane	107-06-2	NA[1]	71	2,000	0.0050	71
1,1-Dichloroethene (1,1-Dichloroethylene)	75-35-4	NA[1]	52	830	0.0050	52
1,2-Dichloroethene (cis) (c-1,2-Dichloroethylene)	156-59-2	NA[1]	NA[1]	1,600	0.0050	NA[1]
1,2-Dichloroethene (trans) (t-1,2-Dichloroethylene)	156-60-5	NA[1]	NA[1]	1,300	0.0050	NA[1]
2,4-Dichlorophenol	120-83-2	NA[1]	NA[1]	2,600	0.17	NA[1]
1,2-Dichloropropane	78-87-5	5.7	31	810	0.0050	5.7
1,3-Dichloropropene (total)	542-75-6	4.8	140	880	0.0050	4.8
Dieldrin	60-57-1	NA[1]	NA[1]	7.9	0.0033	NA[1]
Diethylphthalate	84-66-2	NA[1]	NA[1]	390	0.17	NA[1]
2,4-Dimethylphenol	105-67-9	NA[1]	NA[1]	8,900	0.17	NA[1]
Di-n-butyl phthalate	84-74-2	NA[1]	NA[1]	28	0.17	NA[1]
2,4-Dinitrophenol	51-28-5	NA[1]	NA[1]	430	0.33	NA[1]
2,4-Dinitrotoluene/2,6-Dinitrotoluene (mixture)	25321-14-6	NA[1]	NA[1]	360	0.17	NA[1]
Di-n-octyl phthalate	117-84-0	NA[1]	NA[1]	6.2	0.33	NA[1]
1,4-Dioxane	123-91-1	45	2,500	160,000	0.067	45
Endosulfan I and Endosulfan II (alpha and beta) (summed)	115-29-7	NA[1]	NA[1]	4.4	0.0033	NA[1]
Endrin	72-20-8	NA[1]	NA[1]	10	0.0033	NA[1]
Ethylbenzene	100-41-4	10	NA[2,3]	180	0.0050	10
Extractable Petroleum Hydrocarbons (Category 1)	various	NA[1]	NA[1]	NA	80	NA[1]
Extractable Petroleum Hydrocarbons (Category 2)	various	NA[1]	NA[1]	NA	80	NA[1]
Fluoranthene	206-44-0	NA[1]	NA[1]	29	0.33	NA[1]
Fluorene	86-73-7	NA[1]	NA[1]	31	0.17	NA
alpha-HCH (alpha-BHC)	319-84-6	NA[1]	NA[1]	12	0.0017	NA[1]
beta-HCH (beta-BHC)	319-85-7	NA[1]	NA[1]	1.4	0.0017	NA[1]
Heptachlor	76-44-8	NA[1]	NA[1]	15	0.0017	NA[1]
Heptachlor epoxide	1024-57-3	NA[1]	NA[1]	4.1	0.0017	NA[1]
Hexachlorobenzene	118-74-1	NA[1]	NA[1]	0.078	0.17	NA[1]
Hexachloro-1,3-butadiene	87-68-3	NA[1]	NA[1]	6.1	0.17	NA[1]
Hexachlorocyclopentadiene	77-47-4	NA[1]	2.7	5.6	0.33	2.7
Hexachloroethane	67-72-1	NA[1]	NA[2,3]	28	0.17	NA[2,3]
n-Hexane	110-54-3	NA[1]	NA[2,3]	88	NA	NA[2,3]
2-Hexanone	591-78-6	NA[1]	1,000	3,200	0.010	1,000

Indeno(1,2,3-cd)pyrene	193-39-5	78,000[4]	NA[1]	0.74	0.17	78,000[4]
Isophorone	78-59-1	NA[1]	NA[2,3]	3,400	0.17	NA[2,3]
Isopropylbenzene	98-82-8	NA[1]	NA[2,3]	98	0.0050	NA[2,3]
Lead (total)	7439-92-1	NA[1]	NA[1]	NA	0.50	NA[1]
Lindane (gamma-HCH) (gamma-BHC)	58-89-9	NA[1]	NA[1]	42	0.0017	NA[1]
Manganese (total)	7439-96-5	NA[1]	87,000	NA	0.50	87,000
Mercury (total)	7439-97-6	NA[1]	520,000[4]	3.1[5]	0.10	520,000[4]
Methoxychlor	72-43-5	NA[1]	NA[1]	5.4	0.017	NA[1]
Methyl acetate	79-20-9	NA[1]	NA[1]	39,000	0.0050	NA[1]
Methylene chloride (Dichloromethane)	75-09-2	1,400	NA[2,3]	2,800	0.0050	1,400
2-Methylnaphthalene	91-57-6	NA[1]	NA[1]	130	0.17	NA[1]
4-Methyl-2-pentanone (MIBK)	108-10-1	NA[1]	NA[2,3]	3,400	0.010	NA[2,3]
2-Methylphenol (o-cresol)	95-48-7	NA[1]	NA[1]	20,000	0.33	NA[1]
4-Methylphenol (p-cresol)	106-44-5	NA[1]	NA[1]	16,000	0.33	NA[1]
Methyl tert-butyl ether (MTBE)	1634-04-4	140	NA[2,3]	9,100	0.0050	140
Naphthalene	91-20-3	5.7	NA[2,3]	100	0.17	5.7
Nickel (total)	7440-02-0	20,000	24,000	NA	0.50	20,000
4-Nitroaniline	100-01-6	NA[1]	NA[2,3]	270	0.33	NA[2,3]
Nitrobenzene	98-95-3	7.5	1,000	1,300	0.17	7.5
N-Nitrosodi-n-propylamine	621-64-7	NA[1]	NA[1]	9,200	0.17	NA[1]
N-Nitrosodiphenylamine	86-30-6	NA[1]	NA[1]	190	0.17	NA[1]
2,2'-oxybis(1-chloropropane)	108-60-1	NA[1]	NA[1]	540	0.33	NA[1]
Pentachlorophenol	87-86-5	NA[1]	NA[1]	140	0.33	NA[1]
Phenol	108-95-2	NA[1]	39,000	44,000	0.33	39,000
Polychlorinated biphenyls (PCBs)	1336-36-3	NA[1]	NA[1]	110	0.030	NA[1]
Pyrene	129-00-0	NA[1]	NA[1]	15	0.17	NA[1]
Selenium (total)	7782-49-2	NA[1]	NA[1]	NA	2.5	NA[1]
Silver (total)	7440-22-4	NA[1]	NA[1]	NA	0.50	NA[1]
Styrene	100-42-5	NA[1]	NA[2,3]	330	0.0050	NA[2,3]
Tertiary butyl alcohol (TBA)	75-65-0	NA[1]	NA[1]	160,000	0.10	NA[1]
1,2,4,5-Tetrachlorobenzene	95-94-3	NA[1]	NA[1]	2.7	0.17	NA[1]
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	NA[1]	NA[1]	0.10	0.0000010	NA[1]
1,1,2,2-Tetrachloroethane	79-34-5	NA[1]	NA[1]	980	0.0050	NA[1]
Tetrachloroethene (PCE) (Tetrachloroethylene)	127-18-4	47	NA[2,3]	89	0.0050	47
2,3,4,6-Tetrachlorophenol	58-90-2	NA[1]	NA[1]	150	0.17	NA[1]
Toluene	108-88-3	NA[1]	NA[2,3]	340	0.0050	NA[2,3]
Toxaphene	8001-35-2	NA[1]	NA[1]	85	0.17	NA[1]

1,2,4-Trichlorobenzene	120-82-1	NA[1]	94	140	0.0050	94
1,1,1-Trichloroethane	71-55-6	NA[1]	NA[2,3]	420	0.0050	NA[2,3]
1,1,2-Trichloroethane	79-00-5	NA[1]	NA[1]	1,300	0.0050	NA[1]
Trichloroethene (TCE) (Trichloroethylene)	79-01-6	3.0	9.1	410	0.0050	3.0
Trichlorofluoromethane (Freon 11)	75-69-4	NA[1]	NA[1]	790	0.0050	NA[1]
2,4,5-Trichlorophenol	95-95-4	NA[1]	NA[1]	5,800	0.20	NA[1]
2,4,6-Trichlorophenol	88-06-2	NA[1]	NA[1]	1,700	0.20	NA[1]
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	NA[1]	NA[2,3]	530	0.0050	NA[2,3]
1,2,4-Trimethylbenzene	95-63-6	NA[1]	NA[2,3]	80	0.076	NA[2,3]
Vanadium (total)	7440-62-2	NA[1]	170,000	NA	2.5	170,000
Vinyl chloride	75-01-4	1.4	220	2,900	0.0050	1.4
Xylenes (total)	1330-20-7	NA[1]	NA[2,3]	100	0.0050	NA[2,3]
Zinc (total)	7440-66-6	NA[1]	NA[1]	NA	1.0	NA[1]

NA – Not applicable because soil saturation limit does not apply to this contaminant

NA[1] – Not applicable because appropriate toxicological information is not available

NA[2] – Standard not applicable because the calculated health-based criterion exceeds one million mg/kg

NA[3] – Standard not applicable because the calculated health-based criterion exceeds the soil saturation limit

[4] Exceeds soil saturation limit; however, health-based criterion based on particulate portion of the equation

[5] Value is for elemental mercury

Table 4 – Soil Remediation Standards for the Inhalation Exposure Pathway – Nonresidential (mg/kg) (All numeric values are rounded to two significant figures)

Contaminant	CAS No.	Carcinogenic Inhalation Human Health-based Criterion	Noncarcinogenic Inhalation Human Health-based Criterion	Soil Saturation Concentration	Reporting Limit	Soil Remediation Standard Inhalation Nonresidential

Acenaphthene	83-32-9	NA[1]	NA[1]	40	0.17	NA[1]
Acetone (2-Propanone)	67-64-1	NA[1]	NA[1]	160,000	0.010	NA[1]
Acetophenone	98-86-2	NA[1]	NA[1]	1,600	0.33	NA[1]
Aldrin	309-00-2	NA[1]	NA[1]	2.8	0.0017	NA[1]
Aluminum (total)	7429-90-5	NA[1]	NA[2]	NA	20	NA[2]
Anthracene	120-12-7	NA[1]	NA[1]	1.4	0.17	NA[1]
Antimony (total)	7440-36-0	NA[1]	NA[1]	NA	1.0	NA[1]
Arsenic (total)	7440-38-2	5,200	NA[1]	NA	0.50	5,200
Atrazine	1912-24-9	NA[1]	NA[1]	21	0.33	NA[1]
Barium (total)	7440-39-3	NA[1]	NA[2]	NA	5.0	NA[2]
Benzaldehyde	100-52-7	NA[1]	NA[1]	1,200	0.33	NA[1]
Benzene	71-43-2	11	NA[2,3]	850	0.0050	11
Benzo(a)anthracene (1,2-Benzanthracene)	56-55-3	370,000[4]	NA[1]	3.3	0.17	370,000[4]
Benzo(a)pyrene	50-32-8	37,000[4]	16,000[4]	1.9	0.17	16,000[4]
Benzo(b)fluoranthene (3,4-Benzofluoranthene)	205-99-2	370,000[4]	NA[1]	1.8	0.17	370,000[4]
Benzo(k)fluoranthene	207-08-9	NA[2,3]	NA[1]	0.94	0.17	NA[2,3]
Beryllium	7440-41-7	9,300	160,000	NA	0.50	9,300
1,1'-Biphenyl	92-52-4	NA[1]	NA[1]	78	0.17	NA[1]
Bis(2-chloroethoxy)methane	111-91-1	NA[1]	NA[1]	1,400	0.17	NA[1]
Bis(2-chloroethyl)ether	111-44-4	NA[1]	NA[1]	3,700	0.33	NA[1]
Bis(2-ethylhexyl)phthalate	117-81-7	NA[1]	NA[1]	65	0.17	NA[1]
Bromodichloromethane (Dichlorobromomethane)	75-27-4	NA[1]	NA[1]	690	0.0050	NA[1]
Bromoform	75-25-2	NA[1]	NA[1]	680	0.0050	NA[1]
Bromomethane (Methyl bromide)	74-83-9	NA[1]	82	3,300	0.0050	82
2-Butanone (Methyl ethyl ketone) (MEK)	78-93-3	NA[1]	NA[2,3]	36,000	0.010	NA[2,3]
Butylbenzyl phthalate	85-68-7	NA[1]	NA[1]	39	0.17	NA[1]
Cadmium	7440-43-9	12,000	80,000	NA	0.50	12,000
Caprolactam	105-60-2	NA[1]	1,300	160,000	0.33	1,300
Carbon disulfide	75-15-0	NA[1]	NA[2,3]	580	0.0050	NA[2,3]
Carbon tetrachloride	56-23-5	6.9	NA[2,3]	300	0.0050	6.9
Chlordane (alpha and gamma forms summed)	57-74-9	NA[1]	NA[2,3]	7.6	0.0017	NA[2,3]
4-Chloroaniline	106-47-8	NA[1]	NA[1]	1,500	0.17	NA[1]
Chlorobenzene	108-90-7	NA[1]	NA[2,3]	320	0.0050	NA[2,3]
Chloroethane (Ethyl chloride)	75-00-3	NA[1]	NA[2,3]	1,700	0.0050	NA[2,3]
Chloroform	67-66-3	NA[1]	NA[2,3]	1,900	0.0050	NA[2,3]
Chloromethane (Methyl chloride)	74-87-3	NA[1]	1,200	1,200	0.0050	1,200
2-Chloronaphthalene	91-58-7	NA[1]	NA[1]	60	0.17	NA[1]

2-Chlorophenol (o-Chlorophenol)	95-57-8	NA[1]	NA[1]	11,000	0.17	NA[1]
Chrysene	218-01-9	NA[2,3]	NA[1]	0.72	0.17	NA[2,3]
Cobalt (total)	7440-48-4	2,500	48,000	NA	0.50	2,500
Copper (total)	7440-50-8	NA[1]	NA[1]	NA	1.0	NA[1]
Cyanide	57-12-5	NA[1]	NA[2]	NA	0.50	NA[2]
Cyclohexane	110-82-7	NA[1]	NA[2,3]	65	0.0050	NA[2,3]
4,4'-DDD (p,p'-TDE)	72-54-8	NA[1]	NA[1]	21	0.0033	NA[1]
4,4'-DDE (p,p'-DDX)	72-55-9	NA[1]	NA[1]	9.4	0.0033	NA[1]
4,4'-DDT	50-29-3	NA[1]	NA[1]	1.9	0.0033	NA[1]
Dibenz(a,h)anthracene	53-70-3	37,000[4]	NA[1]	9.5	0.17	37,000[4]
Dibromochloromethane (Chlorodibromomethane)	124-48-1	NA[1]	NA[1]	600	0.0050	NA[1]
1,2-Dibromo-3-chloropropane	96-12-8	0.12	52	470	0.0050	0.12
1,2-Dibromoethane (Ethylene dibromide)	106-93-4	0.41	780	920	0.0050	0.41
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	NA[1]	NA[2,3]	140	0.0050	NA[2,3]
1,3-Dichlorobenzene (m-Dichlorobenzene)	541-73-1	NA[1]	NA[1]	110	0.0050	NA[1]
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	NA[1]	NA[2,3]	74	0.0050	NA[2,3]
3,3'-Dichlorobenzidine	91-94-1	NA[1]	NA[1]	20	0.33	NA[1]
Dichlorodifluoromethane (Freon 12)	75-71-8	NA[1]	NA[1]	540	0.0050	NA[1]
1,1-Dichloroethane	75-34-3	NA[1]	NA[1]	1,200	0.0050	NA[1]
1,2-Dichloroethane	107-06-2	NA[1]	320	2,000	0.0050	320
1,1-Dichloroethene (1,1-Dichloroethylene)	75-35-4	NA[1]	240	830	0.0050	240
1,2-Dichloroethene (cis) (c-1,2-Dichloroethylene)	156-59-2	NA[1]	NA[1]	1,600	0.0050	NA[1]
1,2-Dichloroethene (trans) (t-1,2-Dichloroethylene)	156-60-5	NA[1]	NA[1]	1,300	0.0050	NA[1]
2,4-Dichlorophenol	120-83-2	NA[1]	NA[1]	2,600	0.17	NA[1]
1,2-Dichloropropane	78-87-5	27	140	810	0.0050	27
1,3-Dichloropropene (total)	542-75-6	23	650	880	0.0050	23
Dieldrin	60-57-1	NA[1]	NA[1]	7.9	0.0033	NA[1]
Diethylphthalate	84-66-2	NA[1]	NA[1]	390	0.17	NA[1]
2,4-Dimethylphenol	105-67-9	NA[1]	NA[1]	8,900	0.17	NA[1]
Di-n-butyl phthalate	84-74-2	NA[1]	NA[1]	28	0.17	NA[1]
2,4-Dinitrophenol	51-28-5	NA[1]	NA[1]	430	0.33	NA[1]
2,4-Dinitrotoluene/2,6-Dinitrotoluene (mixture)	25321-14-6	NA[1]	NA[1]	360	0.17	NA[1]
Di-n-octyl phthalate	117-84-0	NA[1]	NA[1]	6.2	0.33	NA[1]
1,4-Dioxane	123-91-1	210	11,000	160,000	0.067	210

Endosulfan I and Endosulfan II (alpha and beta) (summed)	115-29-7	NA[1]	NA[1]	4.4	0.0033	NA[1]
Endrin	72-20-8	NA[1]	NA[1]	10	0.0033	NA[1]
Ethylbenzene	100-41-4	48	NA[2,3]	180	0.0050	48
Extractable Petroleum Hydrocarbons (Category 1)	various	NA[1]	NA[1]	NA	80	NA[1]
Extractable Petroleum Hydrocarbons (Category 2)	various	NA[1]	NA[1]	NA	80	NA[1]
Fluoranthene	206-44-0	NA[1]	NA[1]	29	0.33	NA[1]
Fluorene	86-73-7	NA[1]	NA[1]	31	0.17	NA[1]
alpha-HCH (alpha-BHC)	319-84-6	NA[1]	NA[1]	12	0.0017	NA[1]
beta-HCH (beta-BHC)	319-85-7	NA[1]	NA[1]	1.4	0.0017	NA[1]
Heptachlor	76-44-8	NA[1]	NA[1]	15	0.0017	NA[1]
Heptachlor epoxide	1024-57-3	NA[1]	NA[1]	4.1	0.0017	NA[1]
Hexachlorobenzene	118-74-1	NA[1]	NA[1]	0.078	0.17	NA[1]
Hexachloro-1,3-butadiene	87-68-3	NA[1]	NA[1]	6.1	0.17	NA[1]
Hexachlorocyclopentadiene	77-47-4	NA[1]	NA[2,3]	5.6	0.33	NA[2,3]
Hexachloroethane	67-72-1	NA[1]	NA[2,3]	28	0.17	NA[2,3]
n-Hexane	110-54-3	NA[1]	NA[2,3]	88	NA	NA[2,3]
2-Hexanone	591-78-6	NA[1]	NA[2,3]	3,200	0.010	NA[2,3]
Indeno(1,2,3-cd)pyrene	193-39-5	370,000[4]	NA[1]	0.74	0.17	370,000[4]
Isophorone	78-59-1	NA[1]	NA[2,3]	3,400	0.17	NA[2,3]
Isopropylbenzene	98-82-8	NA[1]	NA[2,3]	98	0.0050	NA[2,3]
Lead (total)	7439-92-1	NA[1]	NA[1]	NA	0.50	NA[1]
Lindane (gamma-HCH) (gamma-BHC)	58-89-9	NA[1]	NA[1]	42	0.0017	NA[1]
Manganese (total)	7439-96-5	NA[1]	400,000	NA	0.50	400,000
Mercury (total)	7439-97-6	NA[1]	NA[2,3]	3.1[5]	0.10	NA[2,3]
Methoxychlor	72-43-5	NA[1]	NA[1]	5.4	0.017	NA[1]
Methyl acetate	79-20-9	NA[1]	NA[1]	39,000	0.0050	NA[1]
Methylene chloride (Dichloromethane)	75-09-2	NA[2,3]	NA[2,3]	2,800	0.0050	NA[2,3]
2-Methylnaphthalene	91-57-6	NA[1]	NA[1]	130	0.17	NA[1]
4-Methyl-2-pentanone (MIBK)	108-10-1	NA[1]	NA[2,3]	3,400	0.010	NA[2,3]
2-Methylphenol (o-cresol)	95-48-7	NA[1]	NA[1]	20,000	0.33	NA[1]
4-Methylphenol (p-cresol)	106-44-5	NA[1]	NA[1]	16,000	0.33	NA[1]
Methyl tert-butyl ether (MTBE)	1634-04-4	650	NA[2,3]	9,100	0.0050	650
Naphthalene	91-20-3	27	NA[2,3]	100	0.17	27
Nickel (total)	7440-02-0	93,000	110,000	NA	0.50	93,000
4-Nitroaniline	100-01-6	NA[1]	NA[2,3]	270	0.33	NA[2,3]
Nitrobenzene	98-95-3	36	NA[2,3]	1,300	0.17	36
N-Nitrosodi-n-propylamine	621-64-7	NA[1]	NA[1]	9,200	0.17	NA[1]

N-Nitrosodiphenylamine	86-30-6	NA[1]	NA[1]	190	0.17	NA[1]
2,2'-oxybis(1-chloropropane)	108-60-1	NA[1]	NA[1]	540	0.33	NA[1]
Pentachlorophenol	87-86-5	NA[1]	NA[1]	140	0.33	NA[1]
Phenol	108-95-2	NA[1]	NA[2,3]	44,000	0.33	NA[2,3]
Polychlorinated biphenyls (PCBs)	1336-36-3	NA[1]	NA[1]	110	0.030	NA[1]
Pyrene	129-00-0	NA[1]	NA[1]	15	0.17	NA[1]
Selenium (total)	7782-49-2	NA[1]	NA[1]	NA	2.5	NA[1]
Silver (total)	7440-22-4	NA[1]	NA[1]	NA	0.50	NA[1]
Styrene	100-42-5	NA[1]	NA[2,3]	330	0.0050	NA[2,3]
Tertiary butyl alcohol (TBA)	75-65-0	NA[1]	NA[1]	160,000	0.10	NA[1]
1,2,4,5-Tetrachlorobenzene	95-94-3	NA[1]	NA[1]	2.7	0.17	NA[1]
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	NA[1]	NA[1]	0.10	0.0000010	NA[1]
1,1,2,2-Tetrachloroethane	79-34-5	NA[1]	NA[1]	980	0.0050	NA[1]
Tetrachloroethene (PCE) (Tetrachloroethylene)	127-18-4	NA[2,3]	NA[2,3]	89	0.0050	NA[2,3]
2,3,4,6-Tetrachlorophenol	58-90-2	NA[1]	NA[1]	150	0.17	NA[1]
Toluene	108-88-3	NA[1]	NA[2,3]	340	0.0050	NA[2,3]
Toxaphene	8001-35-2	NA[1]	NA[1]	85	0.17	NA[1]
1,2,4-Trichlorobenzene	120-82-1	NA[1]	NA[2,3]	140	0.0050	NA[2,3]
1,1,1-Trichloroethane	71-55-6	NA[1]	NA[2,3]	420	0.0050	NA[2,3]
1,1,2-Trichloroethane	79-00-5	NA[1]	NA[1]	1,300	0.0050	NA[1]
Trichloroethene (TCE) (Trichloroethylene)	79-01-6	14	42	410	0.0050	14
Trichlorofluoromethane (Freon 11)	75-69-4	NA[1]	NA[1]	790	0.0050	NA[1]
2,4,5-Trichlorophenol	95-95-4	NA[1]	NA[1]	5,800	0.20	NA[1]
2,4,6-Trichlorophenol	88-06-2	NA[1]	NA[1]	1,700	0.20	NA[1]
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	NA[1]	NA[2,3]	530	0.0050	NA[2,3]
1,2,4-Trimethylbenzene	95-63-6	NA[1]	NA[2,3]	80	0.076	NA[2,3]
Vanadium (total)	7440-62-2	NA[1]	800,000	NA	2.5	800,000
Vinyl chloride	75-01-4	6.4	1,000	2,900	0.0050	6.4
Xylenes (total)	1330-20-7	NA[1]	NA[2,3]	100	0.0050	NA[2,3]
Zinc (total)	7440-66-6	NA[1]	NA[1]	NA	1.0	NA[1]

NA – Not applicable because soil saturation limit does not apply to this contaminant

NA[1] Not applicable because appropriate toxicological information is not available

NA[2] Standard not applicable because the calculated health-based criterion exceeds one million mg/kg

NA[3] Standard not applicable because the calculated health-based criterion exceeds the soil saturation limit

[4] Exceeds soil saturation limit; however, health-based criterion based on particulate portion of the equation

[5] Value is for elemental mercury

Table 5 – Soil Remediation Standards for the Migration to Ground Water Exposure Pathway (mg/kg) (All ground water remediation standards are rounded to one significant figure[A]; all other numeric values are rounded to two significant figures)

Contaminant	CAS No.	Ground Water Remediation Standard (µg/L)	Migration to Ground Water Soil Criterion (mg/kg)	Soil Saturation Limit (mg/kg)	Reporting Limit (mg/kg)	Soil Remediation Standard Migration to Ground Water (mg/kg)
Acenaphthene	83-32-9	400	82	40	0.17	NA[1]
Acetone (2-Propanone)	67-64-1	6,000	19	160,000	0.010	19
Acetophenone	98-86-2	700	3.6	1,600	0.33	3.6
Aldrin	309-00-2	0.04	0.13	2.8	0.0017	0.13
Aluminum (total)	7429-90-5	NA[2]	NA[2]	NA[3]	20	NA[2]
Anthracene	120-12-7	2,000	1,300	1.4	0.17	NA[1]
Antimony (total)	7440-36-0	6	5.4	NA[3]	1.0	5.4
Arsenic (total)	7440-38-2	3	1.6	NA[3]	0.50	19[4]
Atrazine	1912-24-9	3	0.036	21	0.33	0.33[5]
Barium (total)	7440-39-3	6,000	2,100	NA[3]	5.0	2,100
Benzaldehyde	100-52-7	NA[6]	NA[6]	1,200	0.33	NA[6]
Benzene	71-43-2	1	0.0094	850	0.0050	0.0094
Benzo(a)anthracene (1,2-Benzanthracene)	56-55-3	0.1	0.71	3.3	0.17	0.71
Benzo(a)pyrene	50-32-8	0.1	2.3	1.9	0.17	NA[1]
Benzo(b)fluoranthene (3,4-Benzofluoranthene)	205-99-2	0.2	4.8	1.8	0.17	NA[1]

Benzo(k)fluoranthene	207-08-9	0.5	12	0.94	0.17	NA[1]
Beryllium	7440-41-7	1	0.70	NA[3]	0.50	0.70
1,1'-Biphenyl	92-52-4	400	83	78	0.17	NA[1]
Bis(2-chloroethoxy)methane	111-91-1	NA[6]	NA[6]	1,400	0.17	NA[6]
Bis(2-chloroethyl)ether	111-44-4	7	0.030	3,700	0.33	0.33[5]
Bis(2-ethylhexyl)phthalate	117-81-7	3	14	65	0.17	14
Bromodichloromethane (Dichlorobromomethane)	75-27-4	1	0.0045	690	0.0050	0.0050[5]
Bromoform	75-25-2	4	0.018	680	0.0050	0.018
Bromomethane (Methyl bromide)	74-83-9	10	0.043	3,300	0.0050	0.043
2-Butanone (Methyl ethyl ketone) (MEK)	78-93-3	300	0.98	36,000	0.010	0.98
Butylbenzyl phthalate	85-68-7	100	29	39	0.17	29
Cadmium	7440-43-9	4	1.9	NA[3]	0.50	1.9
Caprolactam	105-60-2	4,000	16	160,000	0.33	16
Carbon disulfide	75-15-0	700	3.7	580	0.0050	3.7
Carbon tetrachloride	56-23-5	1	0.0075	300	0.0050	0.0075
Chlordane (alpha and gamma forms summed)	57-74-9	0.5	1.4	7.6	0.0017	1.4
4-Chloroaniline	106-47-8	30	0.23	1,500	0.17	0.23
Chlorobenzene	108-90-7	50	0.64	320	0.0050	0.64
Chloroethane (Ethyl chloride)	75-00-3	NA[6]	NA[6]	1,700	0.0050	NA[6]
Chloroform	67-66-3	70	0.33	1,900	0.0050	0.33
Chloromethane (Methyl chloride)	74-87-3	NA[6]	NA[6]	1,200	0.0050	NA[6]
2-Chloronaphthalene	91-58-7	600	61	60	0.17	NA[1]
2-Chlorophenol (o-Chlorophenol)	95-57-8	40	0.76	11,000	0.17	0.76
Chrysene	218-01-9	5	36	0.72	0.17	NA[1]
Cobalt (total)	7440-48-4	100	90	NA[3]	0.50	90
Copper (total)	7440-50-8	1,300	910	NA[3]	1.0	910
Cyanide	57-12-5	100	20	NA[3]	0.50	20
Cyclohexane	110-82-7	NA[6]	NA[6]	65	0.0050	NA[6]
4,4'-DDD (p,p'-TDE)	72-54-8	0.1	0.47	21	0.0033	0.47
4,4'-DDE (p,p'-DDX)	72-55-9	0.1	0.47	9.4	0.0033	0.47
4,4'-DDT	50-29-3	0.1	0.67	1.9	0.0033	0.67
Dibenz(a,h)anthracene	53-70-3	0.3	23	9.5	0.17	NA[1]
Dibromochloromethane (Chlorodibromomethane)	124-48-1	1	0.0044	600	0.0050	0.0050[5]
1,2-Dibromo-3-chloropropane	96-12-8	0.02	0.00015	470	0.0050	0.0050[5]

1,2-Dibromoethane (Ethylene dibromide)	106-93-4	0.03	0.00014	920	0.0050	0.0050[5]
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	600	11	140	0.0050	11
1,3-Dichlorobenzene (m-Dichlorobenzene)	541-73-1	600	11	110	0.0050	11
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	75	1.4	74	0.0050	1.4
3,3'-Dichlorobenzidine	91-94-1	30	3.9	20	0.33	3.9
Dichlorodifluoromethane (Freon 12)	75-71-8	1,000	38	540	0.0050	38
1,1-Dichloroethane	75-34-3	50	0.24	1,200	0.0050	0.24
1,2-Dichloroethane	107-06-2	2	0.0095	2,000	0.0050	0.0095
1,1-Dichloroethene (1,1-Dichloroethylene)	75-35-4	1	0.0069	830	0.0050	0.0069
1,2-Dichloroethene (cis) (c-1,2-Dichloroethylene)	156-59-2	70	0.35	1,600	0.0050	0.35
1,2-Dichloroethene (trans) (t-1,2-Dichloroethylene)	156-60-5	100	0.56	1,300	0.0050	0.56
2,4-Dichlorophenol	120-83-2	20	0.19	2,600	0.17	0.19
1,2-Dichloropropane	78-87-5	1	0.0058	810	0.0050	0.0058
1,3-Dichloropropene (total)	542-75-6	1	0.0063	880	0.0050	0.0063
Dieldrin	60-57-1	0.03	0.024	7.9	0.0033	0.024
Diethylphthalate	84-66-2	6,000	44	390	0.17	44
2,4-Dimethylphenol	105-67-9	100	2.3	8,900	0.17	2.3
Di-n-butyl phthalate	84-74-2	700	35	28	0.17	NA[1]
2,4-Dinitrophenol	51-28-5	40	0.12	430	0.33	0.33[5]
2,4-Dinitrotoluene/2,6-Dinitrotoluene (mixture)	25321-14-6	10	0.27	360	0.17	0.27
Di-n-octyl phthalate	117-84-0	100	560	6.2	0.33	NA[1]
1,4-Dioxane	123-91-1	0.4	0.0013	160,000	0.067	0.067[5]
Endosulfan I and Endosulfan II (alpha and beta) (summed)	115-29-7	40	11	4.4	0.0033	NA[1]
Endrin	72-20-8	2	1.6	10	0.0033	1.6
Ethylbenzene	100-41-4	700	15	180	0.0050	15
Extractable Petroleum Hydrocarbons (Category 1)	various	NA[6]	NA[6]	NA[3]	80	NA[6]
Extractable Petroleum Hydrocarbons (Category 2)	various	NA[6]	NA[6]	NA[3]	80	NA[6]
Fluoranthene	206-44-0	300	670	29	0.33	NA[1]
Fluorene	86-73-7	300	110	31	0.17	NA[1]
alpha-HCH (alpha-BHC)	319-84-6	0.02	0.0023	12	0.0017	0.0023
beta-HCH (beta-BHC)	319-85-7	0.04	0.0046	1.4	0.0017	0.0046

Heptachlor	76-44-8	0.05	0.083	15	0.0017	0.083
Heptachlor epoxide	1024-57-3	0.2	0.081	4.1	0.0017	0.081
Hexachlorobenzene	118-74-1	0.02	0.0050	0.078	0.17	0.17[5]
Hexachloro-1,3-butadiene	87-68-3	1	0.038	6.1	0.17	0.17[5]
Hexachlorocyclopentadiene	77-47-4	40	2.5	5.6	0.33	2.5
Hexachloroethane	67-72-1	7	0.079	28	0.17	0.17[5]
n-Hexane	110-54-3	30	5.5	88	-	5.5
2-Hexanone	591-78-6	40	0.15	3,200	0.010	0.15
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	16	0.74	0.17	NA[1]
Isophorone	78-59-1	40	0.23	3,400	0.17	0.23
Isopropylbenzene	98-82-8	700	22	98	0.0050	22
Lead (total)	7439-92-1	5	90	NA[3]	0.50	90
Lindane (gamma-HCH) (gamma-BHC)	58-89-9	0.03	0.0035	42	0.0017	0.0035
Manganese (total)	7439-96-5	NA[2]	NA[2]	NA[3]	0.50	NA[2]
Mercury (total)	7439-97-6	2	0.014	NA[3]	0.10	0.10[5]
Methoxychlor	72-43-5	40	43	5.4	0.017	NA[1]
Methyl acetate	79-20-9	7,000	22	39,000	0.0050	22
Methylene chloride (Dichloromethane)	75-09-2	3	0.013	2,800	0.0050	0.013
2-Methylnaphthalene	91-57-6	30	3.1	130	0.17	3.1
4-Methyl-2-pentanone (MIBK)	108-10-1	NA[6]	NA[6]	3,400	0.010	NA[6]
2-Methylphenol (o-cresol)	95-48-7	50	0.77	20,000	0.33	0.77
4-Methylphenol (p-cresol)	106-44-5	50	0.75	16,000	0.33	0.75
Methyl tert-butyl ether (MTBE)	1634-04-4	70	0.25	9,100	0.0050	0.25
Naphthalene	91-20-3	300	19	100	0.17	19
Nickel (total)	7440-02-0	100	48	NA[3]	0.50	48
4-Nitroaniline	100-01-6	NA[6]	NA[6]	270	0.33	NA[6]
Nitrobenzene	98-95-3	6	0.073	1,300	0.17	0.17[5]
N-Nitrosodi-n-propylamine	621-64-7	10	0.14	9,200	0.17	0.17[5]
N-Nitrosodiphenylamine	86-30-6	10	1.1	190	0.17	1.1
2,2'-oxybis(1-chloropropane)	108-60-1	300	1.9	540	0.33	1.9
Pentachlorophenol	87-86-5	0.3	0.062	140	0.33	0.33[5]
Phenol	108-95-2	2,000	21	44,000	0.33	21
Polychlorinated biphenyls (PCBs)	1336-36-3	0.5	1.6	110	0.030	1.6
Pyrene	129-00-0	200	440	15	0.17	NA[1]
Selenium (total)	7782-49-2	40	11	NA[3]	2.5	11
Silver (total)	7440-22-4	40	0.33	NA[3]	0.50	0.50[5]
Styrene	100-42-5	100	2.1	330	0.0050	2.1

Tertiary butyl alcohol (TBA)	75-65-0	100	0.32	160,000	0.10	0.32
1,2,4,5-Tetrachlorobenzene	95-94-3	NA[6]	NA[6]	2.7	0.17	NA[6]
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	0.00001	0.00010	0.10	0.0000010	0.00010[7]
1,1,2,2-Tetrachloroethane	79-34-5	1	0.0069	980	0.0050	0.0069
Tetrachloroethene (PCE) (Tetrachloroethylene)	127-18-4	1	0.0086	89	0.0050	0.0086
2,3,4,6-Tetrachlorophenol	58-90-2	200	26	150	0.17	26
Toluene	108-88-3	600	7.8	340	0.0050	7.8
Toxaphene	8001-35-2	2	6.2	85	0.17	6.2
1,2,4-Trichlorobenzene	120-82-1	9	0.52	140	0.0050	0.52
1,1,1-Trichloroethane	71-55-6	30	0.20	420	0.0050	0.20
1,1,2-Trichloroethane	79-00-5	3	0.017	1,300	0.0050	0.017
Trichloroethene (TCE) (Trichloroethylene)	79-01-6	1	0.0065	410	0.0050	0.0065
Trichlorofluoromethane (Freon 11)	75-69-4	2,000	29	790	0.0050	29
2,4,5-Trichlorophenol	95-95-4	700	68	5,800	0.20	68
2,4,6-Trichlorophenol	88-06-2	20	0.86	1,700	0.20	0.86
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	20,000	1,300	530	0.0050	NA[1]
1,2,4-Trimethylbenzene	95-63-6	NA[6]	NA[6]	80	0.076	NA[6]
Vanadium (total)	7440-62-2	NA[6]	NA[6]	NA[3]	2.5	NA[6]
Vinyl chloride	75-01-4	1	0.0067	2,900	0.0050	0.0067
Xylenes (total)	1330-20-7	1,000	19	100	0.0050	19
Zinc (total)	7440-66-6	2,000	930	NA[3]	1.0	930

[A] The ground water remediation standards are listed using one significant figure to be consistent with the Ground Water Quality Standards, N.J.A.C. 7:9C

NA – Not applicable

[1] Standard not applicable because the calculated health-based criterion exceeds the soil saturation limit

[2] Standard not applicable because ground water remediation standard is a secondary standard

[3] Not applicable because soil saturation limit does not apply to this contaminant

[4] Standard is based on natural background

[5] Standard set to reporting limit

[6] Standard not applicable because a ground water remediation standard does not exist

[7] This standard is used for comparison to site soil data that have been converted to sample-specific TCDD-TEQ values through application of the Toxicity Equivalence Factor Methodology (USEPA 2010) and using the WHO 2005 Mammalian Toxic Equivalency Factors (TEFs)

Table 6 – Soil Leachate Remediation Standards for the Migration to Ground Water Exposure Pathway (µg/L) (All ground water remediation standards are rounded to one significant figure[A]; all other numeric values are rounded to two significant figures)

Contaminant	CAS No.	Ground Water Remediation Standard	Soil Leachate Remediation Standard - Migration to Ground Water
Acenaphthene	83-32-9	400	NA[1]
Acetone (2-Propanone)	67-64-1	6,000	120,000
Acetophenone	98-86-2	700	14,000
Aldrin	309-00-2	0.04	0.80
Aluminum (total)	7429-90-5	NA[2]	NA[2]
Anthracene	120-12-7	2,000	NA[1]
Antimony (total)	7440-36-0	6	120
Arsenic (total)	7440-38-2	3	60
Atrazine	1912-24-9	3	60
Barium (total)	7440-39-3	6,000	120,000
Benzaldehyde	100-52-7	NA[3]	NA[3]
Benzene	71-43-2	1	20
Benzo(a)anthracene (1,2-Benzanthracene)	56-55-3	0.1	2.0
Benzo(a)pyrene	50-32-8	0.1	NA[1]
Benzo(b)fluoranthene (3,4-Benzofluoranthene)	205-99-2	0.2	NA[1]
Benzo(k)fluoranthene	207-08-9	0.5	NA[1]
Beryllium	7440-41-7	1	20
1,1'-Biphenyl	92-52-4	400	NA[1]
Bis(2-chloroethoxy)methane	111-91-1	NA[3]	NA[3]
Bis(2-chloroethyl)ether	111-44-4	7	140

Bis(2-ethylhexyl)phthalate	117-81-7	3	60
Bromodichloromethane (Dichlorobromomethane)	75-27-4	1	20
Bromoform	75-25-2	4	80
Bromomethane (Methyl bromide)	74-83-9	10	200
2-Butanone (Methyl ethyl ketone) (MEK)	78-93-3	300	6,000
Butylbenzyl phthalate	85-68-7	100	2,000
Cadmium	7440-43-9	4	80
Caprolactam	105-60-2	4,000	80,000
Carbon disulfide	75-15-0	700	14,000
Carbon tetrachloride	56-23-5	1	20
Chlordane (alpha and gamma forms summed)	57-74-9	0.5	10
4-Chloroaniline	106-47-8	30	600
Chlorobenzene	108-90-7	50	1,000
Chloroethane (Ethyl chloride)	75-00-3	NA[3]	NA[3]
Chloroform	67-66-3	70	1,400
Chloromethane (Methyl chloride)	74-87-3	NA[3]	NA[3]
2-Chloronaphthalene	91-58-7	600	NA[1]
2-Chlorophenol (o-Chlorophenol)	95-57-8	40	800
Chrysene	218-01-9	5	NA[1]
Cobalt (total)	7440-48-4	100	2,000
Copper (total)	7440-50-8	1,300	26,000
Cyanide	57-12-5	100	2,000
Cyclohexane	110-82-7	NA[3]	NA[3]
4,4'-DDD (p,p'-TDE)	72-54-8	0.1	2.0
4,4'-DDE (p,p'-DDX)	72-55-9	0.1	2.0
4,4'-DDT	50-29-3	0.1	2.0
Dibenz(a,h)anthracene	53-70-3	0.3	NA[1]
Dibromochloromethane (Chlorodibromomethane)	124-48-1	1	20
1,2-Dibromo-3-chloropropane	96-12-8	0.02	0.40
1,2-Dibromoethane (Ethylene dibromide)	106-93-4	0.03	0.60
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	600	12,000
1,3-Dichlorobenzene (m-Dichlorobenzene)	541-73-1	600	12,000
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	75	1,500
3,3'-Dichlorobenzidine	91-94-1	30	600
Dichlorodifluoromethane (Freon 12)	75-71-8	1,000	20,000
1,1-Dichloroethane	75-34-3	50	1,000
1,2-Dichloroethane	107-06-2	2	40
1,1-Dichloroethene (1,1-Dichloroethylene)	75-35-4	1	20

1,2-Dichloroethene (cis) (c-1,2-Dichloroethylene)	156-59-2	70	1,400
1,2-Dichloroethene (trans) (t-1,2-Dichloroethylene)	156-60-5	100	2,000
2,4-Dichlorophenol	120-83-2	20	400
1,2-Dichloropropane	78-87-5	1	20
1,3-Dichloropropene (total)	542-75-6	1	20
Dieldrin	60-57-1	0.03	0.60
Diethylphthalate	84-66-2	6,000	120,000
2,4-Dimethylphenol	105-67-9	100	2,000
Di-n-butyl phthalate	84-74-2	700	NA[1]
2,4-Dinitrophenol	51-28-5	40	800
2,4-Dinitrotoluene/2,6-Dinitrotoluene (mixture)	25321-14-6	10	200
Di-n-octyl phthalate	117-84-0	100	NA[1]
1,4-Dioxane	123-91-1	0.4	8.0
Endosulfan I and Endosulfan II (alpha and beta) (summed)	115-29-7	40	NA[1]
Endrin	72-20-8	2	40
Ethylbenzene	100-41-4	700	14,000
Extractable Petroleum Hydrocarbons (Category 1)	various	NA[3]	NA[3]
Extractable Petroleum Hydrocarbons (Category 2)	various	NA[3]	NA[3]
Fluoranthene	206-44-0	300	NA[1]
Fluorene	86-73-7	300	NA[1]
alpha-HCH (alpha-BHC)	319-84-6	0.02	0.40
beta-HCH (beta-BHC)	319-85-7	0.04	0.80
Heptachlor	76-44-8	0.05	1.0
Heptachlor epoxide	1024-57-3	0.2	4.0
Hexachlorobenzene	118-74-1	0.02	0.40
Hexachloro-1,3-butadiene	87-68-3	1	20
Hexachlorocyclopentadiene	77-47-4	40	800
Hexachloroethane	67-72-1	7	140
n-Hexane	110-54-3	30	600
2-Hexanone	591-78-6	40	800
Indeno(1,2,3-cd)pyrene	193-39-5	0.2	NA[1]
Isophorone	78-59-1	40	800
Isopropylbenzene	98-82-8	700	14,000
Lead (total)	7439-92-1	5	100
Lindane (gamma-HCH)(gamma-BHC)	58-89-9	0.03	0.60
Manganese (total)	7439-96-5	NA[2]	NA[2]
Mercury (total)	7439-97-6	2	40

Methoxychlor	72-43-5	40	NA[1]
Methyl acetate	79-20-9	7,000	140,000
Methylene chloride (Dichloromethane)	75-09-2	3	60
2-Methylnaphthalene	91-57-6	30	600
4-Methyl-2-pentanone (MIBK)	108-10-1	NA[3]	NA[3]
2-Methylphenol (o-cresol)	95-48-7	50	1,000
4-Methylphenol (p-cresol)	106-44-5	50	1,000
Methyl tert-butyl ether (MTBE)	1634-04-4	70	1,400
Naphthalene	91-20-3	300	6,000
Nickel (total)	7440-02-0	100	2,000
4-Nitroaniline	100-01-6	NA[3]	NA[3]
Nitrobenzene	98-95-3	6	120
N-Nitrosodi-n-propylamine	621-64-7	10	200
N-Nitrosodiphenylamine	86-30-6	10	200
2,2'-oxybis(1-chloropropane)	108-60-1	300	6,000
Pentachlorophenol	87-86-5	0.3	6.0
Phenol	108-95-2	2,000	40,000
Polychlorinated biphenyls (PCBs)	1336-36-3	0.5	10
Pyrene	129-00-0	200	NA[1]
Selenium (total)	7782-49-2	40	800
Silver (total)	7440-22-4	40	800
Styrene	100-42-5	100	2,000
Tertiary butyl alcohol (TBA)	75-65-0	100	2,000
1,2,4,5-Tetrachlorobenzene	95-94-3	NA[3]	NA[3]
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	0.00001	0.00020[4]
1,1,2,2-Tetrachloroethane	79-34-5	1	20
Tetrachloroethene (PCE) (Tetrachloroethylene)	127-18-4	1	20
2,3,4,6-Tetrachlorophenol	58-90-2	200	4,000
Toluene	108-88-3	600	12,000
Toxaphene	8001-35-2	2	40
1,2,4-Trichlorobenzene	120-82-1	9	180
1,1,1-Trichloroethane	71-55-6	30	600
1,1,2-Trichloroethane	79-00-5	3	60
Trichloroethene (TCE) (Trichloroethylene)	79-01-6	1	20
Trichlorofluoromethane (Freon 11)	75-69-4	2,000	40,000
2,4,5-Trichlorophenol	95-95-4	700	14,000
2,4,6-Trichlorophenol	88-06-2	20	400
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	20,000	NA[1]
1,2,4-Trimethylbenzene	95-63-6	NA[3]	NA[3]
Vanadium (total)	7440-62-2	NA[3]	NA[3]
Vinyl chloride	75-01-4	1	20

Xylenes (total)	1330-20-7	1,000	20,000
Zinc (total)	7440-66-6	2,000	40,000

[A] The ground water remediation standards are listed using one significant figure to be consistent with the Ground Water Quality Standards, N.J.A.C. 7:9C

NA – Not applicable

[1] Standard not applicable because the calculated health-based soil criterion exceeds the soil saturation limit

[2] Not applicable because ground water remediation standard is a secondary standard

[3] Not applicable because a ground water remediation standard does not exist

[4] This standard is used for comparison to site soil leachate data that have been converted to sample-specific TCDD-TEQ values through application of the Toxicity Equivalence Factor Methodology (USEPA 2010) and using the WHO 2005 Mammalian Toxic Equivalency Factors (TEFs)

Table 7 – Indoor Air Remediation Standards for the Vapor Intrusion Exposure Pathway - Residential (µg/m^3) (All numeric values are rounded to two significant figures)

Contaminant	CAS No.	Carcinogenic Indoor Air Human Health-based Criterion	Noncarcinogenic Indoor Air Human Health-based Criterion	Reporting Limit	Indoor Air Remediation Standard Residential
Acetone	67-64-1	NA	NA	12	NA
Benzene	71-43-2	0.36	31	0.64	0.64[1]
Bromodichloromethane	75-27-4	NA	NA	1.3	NA
Bromoform	75-25-2	NA	NA	2.1	NA
Bromomethane (Methyl bromide)	74-83-9	NA	5.2	0.78	5.2
2-Butanone (Methyl ethyl ketone) (MEK)	78-93-3	NA	5,200	1.5	5,200
Carbon disulfide	75-15-0	NA	730	1.6	730

Carbon tetrachloride	56-23-5	0.47	100	1.3	1.3[1]
Chlorobenzene	108-90-7	NA	52	0.92	52
Chloroethane (Ethyl chloride)	75-00-3	NA	10,000	1.3	10,000
Chloroform	67-66-3	NA	100	0.98	100
Chloromethane (Methyl chloride)	74-87-3	NA	94	1.0	94
Cyclohexane	110-82-7	NA	6,300	0.69	6,300
Dibromochloromethane	124-48-1	NA	NA	1.7	NA
1,2-Dibromoethane (Ethylene dibromide)	106-93-4	0.0047	9.4	1.5	1.5[1]
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	NA	210	1.2	210
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	NA	830	1.2	830
Dichlorodifluoromethane (Freon 12)	75-71-8	NA	NA	2.5	NA
1,1-Dichloroethane	75-34-3	NA	NA	0.81	NA
1,2-Dichloroethane	107-06-2	NA	7.3	0.81	7.3
1,1-Dichloroethene (1,1-Dichloroethylene)	75-35-4	NA	21	0.79	21
1,2-Dichloroethene (cis) (c-1,2-Dichloroethylene)	156-59-2	NA	NA	0.79	NA
1,2-Dichloroethene (trans) (t-1,2-Dichloroethylene)	156-60-5	NA	NA	0.79	NA
1,2-Dichloropropane	78-87-5	0.76	4.2	0.92	0.92[1]
1,3-Dichloropropene (total)	542-75-6	0.70	21	0.91	0.91[1]
1,4-Dioxane	123-91-1	0.56	31	0.72	0.72[1]
Ethylbenzene	100-41-4	1.1	1,000	0.87	1.1
Hexachlorobutadiene	87-68-3	NA	NA	2.1	NA
n-Hexane	110-54-3	NA	730	0.70	730
Mercury (elemental)	7439-97-6	NA	0.31	1.0	1.0[1]
Methylene chloride (Dichloromethane)	75-09-2	280	630	1.7	280
4-Methyl-2-pentanone (MIBK)	108-10-1	NA	3,100	2.0	3,100
Methyl tert-butyl ether (MTBE)	1634-04-4	11	3,100	0.72	11
Naphthalene	91-20-3	0.083	3.1	2.6	2.6[1]
Styrene	100-42-5	NA	1,000	0.85	1,000
1,1,2,2-Tetrachloroethane	79-34-5	NA	NA	1.4	NA
Tetrachloroethene (PCE) (Tetrachloroethylene)	127-18-4	11	42	1.4	11

Toluene	108-88-3	NA	5,200	0.75	5,200
1,2,4-Trichlorobenzene	120-82-1	NA	2.1	3.7	3.7[1]
1,1,1-Trichloroethane	71-55-6	NA	5,200	1.1	5,200
1,1,2-Trichloroethane	79-00-5	NA	NA	1.1	NA
Trichloroethene (TCE) (Trichloroethylene)	79-01-6	0.68	2.1	1.1	1.1[1]
Trichlorofluoromethane	75-69-4	NA	NA	1.1	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	NA	5,200	1.5	5,200
1,2,4-Trimethylbenzene	95-63-6	NA	63	0.98	63
Vinyl chloride	75-01-4	0.64	100	0.51	0.64
Xylenes (total)	1330-20-7	NA	100	0.87	100

NA – Not applicable because appropriate toxicological information is not available

[1] Standard set at reporting limit

Table 8 – Indoor Air Remediation Standards for the Vapor Intrusion Exposure Pathway - Nonresidential ($\mu g/m^3$) (All numeric values are rounded to two significant figures)

Contaminant	CAS No.	Carcinogenic Indoor Air Human Health-based Criterion	Noncarcinogenic Indoor Air Human Health-based Criterion	Reporting Limit	Indoor Air Remediation Standard Nonresidential
Acetone	67-64-1	NA	NA	12	NA
Benzene	71-43-2	1.6	130	0.64	1.6
Bromodichloromethane	75-27-4	NA	NA	1.3	NA
Bromoform	75-25-2	NA	NA	2.1	NA
Bromomethane (Methyl bromide)	74-83-9	NA	22	0.78	22
2-Butanone (Methyl ethyl ketone) (MEK)	78-93-3	NA	22,000	1.5	22,000
Carbon disulfide	75-15-0	NA	3,100	1.6	3,100
Carbon tetrachloride	56-23-5	2.0	440	1.3	2.0
Chlorobenzene	108-90-7	NA	220	0.92	220
Chloroethane (Ethyl chloride)	75-00-3	NA	44,000	1.3	44,000
Chloroform	67-66-3	NA	430	0.98	430
Chloromethane (Methyl chloride)	74-87-3	NA	390	1.0	390
Cyclohexane	110-82-7	NA	26,000	0.69	26,000

Dibromochloromethane	124-48-1	NA	NA	1.7	NA
1,2-Dibromoethane (Ethylene dibromide)	106-93-4	0.020	39	1.5	1.5[1]
1,2-Dichlorobenzene (o-Dichlorobenzene)	95-50-1	NA	880	1.2	880
1,4-Dichlorobenzene (p-Dichlorobenzene)	106-46-7	NA	3,500	1.2	3,500
Dichlorodifluoromethane (Freon 12)	75-71-8	NA	NA	2.5	NA
1,1-Dichloroethane	75-34-3	NA	NA	0.81	NA
1,2-Dichloroethane	107-06-2	NA	31	0.81	31
1,1-Dichloroethene (1,1-Dichloroethylene)	75-35-4	NA	88	0.79	88
1,2-Dichloroethene (cis) (c-1,2-Dichloroethylene)	156-59-2	NA	NA	0.79	NA
1,2-Dichloroethene (trans) (t-1,2-Dichloroethylene)	156-60-5	NA	NA	0.79	NA
1,2-Dichloropropane	78-87-5	3.3	18	0.92	3.3
1,3-Dichloropropene (total)	542-75-6	3.1	88	0.91	3.1
1,4-Dioxane	123-91-1	2.5	130	0.72	2.5
Ethylbenzene	100-41-4	4.9	4,400	0.87	4.9
Hexachlorobutadiene	87-68-3	NA	NA	2.1	NA
n-Hexane	110-54-3	NA	3,100	0.70	3,100
Mercury (elemental)	7439-97-6	NA	1.3	1.0	1.3
Methylene chloride (Dichloromethane)	75-09-2	1,200	2,600	1.7	1,200
4-Methyl-2-pentanone (MIBK)	108-10-1	NA	13,000	2.0	13,000
Methyl tert-butyl ether (MTBE)	1634-04-4	47	13,000	0.72	47
Naphthalene	91-20-3	0.36	13	2.6	2.6[1]
Styrene	100-42-5	NA	4,400	0.85	4,400
1,1,2,2-Tetrachloroethane	79-34-5	NA	NA	1.4	NA
Tetrachloroethene (PCE) (Tetrachloroethylene)	127-18-4	47	180	1.4	47
Toluene	108-88-3	NA	22,000	0.75	22,000
1,2,4-Trichlorobenzene	120-82-1	NA	8.8	3.7	8.8
1,1,1-Trichloroethane	71-55-6	NA	22,000	1.1	22,000
1,1,2-Trichloroethane	79-00-5	NA	NA	1.1	NA
Trichloroethene (TCE) (Trichloroethylene)	79-01-6	3.0	8.8	1.1	3.0
Trichlorofluoromethane	75-69-4	NA	NA	1.1	NA
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon TF)	76-13-1	NA	22,000	1.5	22,000
1,2,4-Trimethylbenzene	95-63-6	NA	260	0.98	260

Vinyl chloride	75-01-4	2.8	440	0.51	2.8
Xylenes (total)	1330-20-7	NA	440	0.87	440

NA – Not applicable because appropriate toxicological information is not available

[1] Standard set at reporting limit

APPENDIX 2

DEVELOPMENT OF SOIL REMEDIATION STANDARDS FOR THE INGESTION-DERMAL EXPOSURE PATHWAY

This appendix describes the procedures and equations used by the Department to develop the soil remediation standards for the ingestion-dermal exposure pathway as contained in N.J.A.C. 7:26D Appendix 1 Tables 1 and 2. This appendix is also used to develop interim soil remediation standards for the ingestion-dermal exposure pathway pursuant to N.J.A.C. 7:26D-6 and for updating soil remediation standards for the ingestion-dermal exposure pathway pursuant to N.J.A.C. 7:26D-7.

If the calculated soil criterion for a contaminant for the ingestion-dermal exposure pathway is greater than one million mg/kg, a soil remediation standard for the ingestion-dermal exposure pathway for that contaminant does not apply.

APPENDIX B

2021 and 2022 Tabulated Soil Analytical Data

TABLE NO. 1
FIELD SAMPLING SUMMARY
17087.006 - ROBERT B. JOHNSON PARK IMPROVEMENTS

Sample ID	AOC	Matrix	Date	Time	Depth (feet)	PID (ppm)	Visual	Odor	Analysis
HF-2	AOC-1/AOC-2	Soil	12/14/2021	8:00	14.0-14.5'	0	Yes	No	TAL/TCL+30 and EPH
HF-3	AOC-1	Soil	12/13/2021	9:55	11.0-11.5'	0	Yes	No	TCL PAHs and TAL Metals
HF-4	AOC-1	Soil	12/13/2021	10:45	5.0-5.5'	0	Yes	No	TCL PAHs and TAL Metals
HF-5	AOC-1	Soil	12/13/2021	11:20	2.5-3.0'	0	Yes	No	TCL PAHs and TAL Metals
HF-6	AOC-1/AOC-2	Soil	12/13/2021	15:00	5.5-6.0'	0	Yes	No	TCL PAHs and TAL Metals
HF-7	AOC-1/AOC-2	Soil	12/13/2021	13:45	7.0-7.5'	1.1	Yes	No	TCL PAHs and TAL Metals
HF-8	AOC-1	Soil	12/13/2021	12:30	7.0-7.5'	0	Yes	No	TCL PAHs and TAL Metals
HF-9	AOC-1	Soil	12/14/2021	8:40	18.0-18.5'	0	Yes	No	TCL PAHs and TAL Metals
HF-10	AOC-1/AOC-2	Soil	12/13/2021	14:14	2.5-3.0'	0	Yes	No	TCL PAHs and TAL Metals
HF-11	AOC-1/AOC-2	Soil	12/13/2021	12:55	4.0-4.5'	0	Yes	No	TAL/TCL+30 and EPH
HF-12	AOC-1	Soil	12/13/2021	11:45	2.0-2.5'	0	Yes	No	TCL PAHs and TAL Metals
HF-13	AOC-1/AOC-2	Soil	12/14/2021	12:20	10.0-10.5'	0	Yes	No	TCL PAHs and TAL Metals
HF-14	AOC-1/AOC-2	Soil	12/14/2021	10:30	4.5-5.0'	0	Yes	No	TAL/TCL+30 and EPH
HF-15	AOC-1	Soil	12/14/2021	9:20	1.0-1.5'	0	Yes	No	TCL PAHs and TAL Metals
HF-16	AOC-1	Soil	12/14/2021	13:00	12.0-12.5'	0	Yes	No	TAL/TCL+30 and EPH
HF-17	AOC-1	Soil	12/14/2021	11:30	19.5-20.0'	0	Yes	No	TCL PAHs and TAL Metals
HF-18	AOC-1	Soil	12/14/2021	10:05	2.0-2.5'	0	Yes	No	TAL/TCL+30 and EPH
HF-19	AOC-1	Soil	12/14/2021	9:45	2.0-2.5'	0	Yes	No	TCL PAHs and TAL Metals
HF-20	AOC-1	Soil	12/14/2021	11:20	8.0-8.5'	0	Yes	No	TCL PAHs and TAL Metals
FIELD BLANK	AOC-1	Blank	12/13/2022	8:50	--	--	--	--	TCL PAHs and TAL Metals
TB-1	AOC-1	Soil	12/15/2021	9:30	2.0-2.5'	0	Yes	No	TAL/TCL+30 and EPH
TB-2	AOC-1	Soil	12/15/2021	10:00	3.5-4.0'	0	Yes	No	TCL PAHs and TAL Metals
TB-3	AOC-1	Soil	12/15/2021	10:15	5.0-5.5'	0	Yes	No	TCL PAHs and TAL Metals
TB-5	AOC-1	Soil	12/15/2021	11:15	4.0-4.5'	0	Yes	No	TCL PAHs and TAL Metals
SY-1	AOC-3	Soil	12/15/2021	12:00	1.5-2.0'	0	Yes	No	EPH Cat. II, TCL VO+15, TCL BN+15, TCL PCBs, and TAL Metals
SY-2	AOC-3	Soil	12/15/2021	13:15	4.5-5.0'	0	Yes	No	EPH Cat. II
SY-3	AOC-3	Soil	12/15/2021	12:25	2.5-3.0'	0	Yes	No	EPH Cat. II
SY-4	AOC-3	Soil	12/15/2021	12:50	3.0-3.5	0	Yes	No	EPH Cat. II, TCL VO+15, TCL BN+15, TCL PCBs, and TAL Metals

PID- Photoionization Detector
EPH Cat. II - Extractable Petroleum Hydrocarbons Category II
TAL/TCL+30 - Target Analyte List/Target Compound List plus a 30 compound library search
TCL VO+15 - Target Compound List of Volatile Organic Compounds plus a 15 compound library search
TCL BN+15 - Target Compound List of Base Neutrals plus a 15 compound library search
TCL PCBs - Target Compound List of Polychlorinated Biphenyls
TAL Metals - Target Analyte List of Metals
TCL PAHs - Target Compound List Polycyclic Aromatic Hydrocarbons

TABLE NO. 2
SOIL SAMPLE ANALYTICAL RESULTS
17087.006 - ROBERT B. JOHNSON PARK IMPROVEMENTS

SAMPLE ID:				HF-2				HF-3				HF-4				HF-5				HF-6				HF-7				HF-8				HF-9			
LAB ID:				L2168587-01				L2168587-02				L2168587-03				L2168587-04				L2168587-05				L2168587-06				L2168587-07				L2168587-08			
COLLECTION DATE:				12/14/2021				12/13/2021				12/13/2021				12/13/2021				12/13/2021				12/13/2021				12/13/2021				12/14/2021			
SAMPLE DEPTH:				14.0' - 14.5'				11.0' - 11.5'				5.0' - 5.5'				2.5' - 3.0'				5.5' - 6.0'				7.0' - 7.5'				7.0' - 7.5'				18.0' - 18.5'			
SAMPLE MATRIX:				SOIL				SOIL				SOIL				SOIL				SOIL				SOIL				SOIL				SOIL			
PARAMETER	**MGWSRS**	**RISRS**	**RIDSRS**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
NJ EXTRACTABLE PETROLEUM HYDROCARBONS (EPH) CAT. I																																			
Total EPH	NA	NA	5300	1450		62.2	62.2	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--
VOLATILE ORGANIC COMPOUNDS (VOCs)																																			
Benzene	0.0094	2.2	3	0.00024	J	0.00059	0.0002	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--
Acetone	19	NA	70000	0.082		0.03	0.012	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--
Carbon disulfide	3.7	NA	NA	0.012		0.012	0.0054	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--
2-Butanone	0.98	NA	47000	0.01	J	0.012	0.0026	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--
Total VOCs	NA	NA	NA	0.10424	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
VOC TICs																																			
Total TIC Compounds	NA	NA	NA	ND		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--
SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs)																																			
Dibenzofuran	NA	NA	NA	0.57	J	2.1	0.19	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--
Phenol	21	39000	19000	2.6		2.1	0.25	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--
Carbazole	NA	NA	NA	1.1	J	2.1	0.14	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--
Acenaphthene	NA	NA	3600	1.3	-	-	-	ND		3.6	0.38	ND		3.6	0.38	0.063	J	0.16	0.016	ND		3.2	0.34	ND		3.3	0.35	ND		2.1	0.22	0.024	J	0.2	0.021
Fluoranthene	NA	NA	2400	21		0.64	0.12	1	J	2.7	0.52	ND		2.7	0.52	2		0.12	0.022	0.74	J	2.4	0.47	0.73	J	2.5	0.48	ND		1.6	0.3	0.41		0.15	0.029
Naphthalene	19	5.7	2500	0.41	J	1.1	0.13	ND		4.5	0.55	ND		4.5	0.55	0.059	J	0.2	0.024	ND		4.1	0.5	ND		4.2	0.51	ND		2.6	0.32	0.088	J	0.26	0.031
Benzo(a)anthracene	0.71	78000	5.1	**14**		0.36	0.12	0.63	J	1.5	0.51	ND		1.5	0.51	**0.95**		0.066	0.022	0.51	J	1.4	0.46	ND		1.4	0.47	ND		0.87	0.29	0.22		0.086	0.029
Benzo(a)pyrene	NA	3500	0.51	**9.7**		0.78	0.26	**ND**		**3.3**	**1.1**	**ND**		**3.3**	**1.1**	**1**		0.14	0.048	**ND**		**3**	**0.99**	**ND**		**3.1**	**1**	**ND**		**1.9**	**0.63**	0.18	J	0.19	0.062
Benzo(b)fluoranthene	NA	78000	5.1	**11**		0.27	0.09	0.59	J	1.1	0.38	ND		1.1	0.38	1.4		0.049	0.016	0.5	J	1	0.34	0.39	J	1	0.35	ND		0.65	0.22	0.26		0.065	0.021
Benzo(k)fluoranthene	NA	780000	51	3.3		0.22	0.075	ND		0.95	0.32	ND		0.95	0.32	0.36		0.041	0.014	ND		0.85	0.28	ND		0.88	0.29	ND		0.54	0.18	0.082		0.054	0.018
Chrysene	NA	NA	510	16		0.64	0.11	0.51	J	2.7	0.46	ND		2.7	0.46	1		0.12	0.02	ND		2.4	0.42	ND		2.5	0.43	ND		1.6	0.27	0.22		0.15	0.026
Acenaphthylene	NA	NA	NA	0.35	J	0.86	0.12	ND		3.6	0.5	ND		3.6	0.51	0.11	J	0.16	0.022	ND		3.2	0.46	ND		3.3	0.47	ND		2.1	0.29	ND		0.2	0.029
Anthracene	NA	NA	18000	4.4		0.64	0.096	ND		2.7	0.4	ND		2.7	0.4	0.26		0.12	0.017	ND		2.4	0.36	ND		2.5	0.37	ND		1.6	0.23	0.068	J	0.15	0.023
Benzo(ghi)perylene	NA	NA	NA	5.2		0.86	0.13	ND		3.6	0.53	ND		3.6	0.53	0.78		0.16	0.023	ND		3.2	0.48	ND		3.3	0.49	ND		2.1	0.3	0.12	J	0.2	0.03
Fluorene	NA	NA	2400	1.7		1.1	0.1	ND		4.5	0.43	ND		4.5	0.44	0.072	J	0.2	0.019	ND		4.1	0.39	ND		4.2	0.4	ND		2.6	0.25	0.03	J	0.26	0.025
Phenanthrene	NA	NA	NA	20		0.64	0.077	1.1	J	2.7	0.32	0.39	J	2.7	0.32	1		0.12	0.014	0.73	J	2.4	0.29	0.95	J	2.5	0.3	0.24	J	1.6	0.19	0.37		0.15	0.018
Dibenzo(a,h)anthracene	NA	7800	0.51	**1.5**		0.37	0.12	ND		1.6	0.52	ND		1.6	0.52	0.15		0.068	0.022	ND		1.4	0.47	ND		1.4	0.48	ND		0.9	0.3	ND		0.089	0.03
Indeno(1,2,3-cd)pyrene	NA	78000	5.1	4.9		0.45	0.15	ND		1.9	0.63	ND		1.9	0.63	0.78		0.082	0.027	ND		1.7	0.57	ND		1.8	0.58	ND		1.1	0.36	0.13		0.11	0.036
Pyrene	NA	NA	1800	30		0.64	0.093	0.95	J	2.7	0.39	ND		2.7	0.39	1.7		0.12	0.017	0.65	J	2.4	0.35	0.58	J	2.5	0.36	ND		1.6	0.22	0.36		0.15	0.022
2-Methylnaphthalene	3.1	NA	240	0.32	J	1.3	0.11	ND		5.4	0.48	ND		5.4	0.48	0.037	J	0.23	0.021	ND		4.9	0.43	ND		5	0.44	ND		3.1	0.27	ND		0.31	0.027
Total SVOCs	NA	NA	NA	145.08	-	-	-	4.78	-	-	-	0.39	-	-	-	11.721	-	-	-	3.13	-	-	-	2.65	-	-	-	0.24	-	-	-	2.562	-	-	-
SVOC TICs	NA	NA	NA																																
Total TIC Compounds	NA	NA	NA	178	J	ND	ND	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--
PESTICIDES																																			
4,4'-DDD	0.47	NA	2.3	0.0159	P	0.00205	0.00073	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--
POLYCHLORINATED BIPHENYLS (PCBs)																																			
Aroclor 1260	1.6	NA	0.25	0.0315	J	0.0431	0.00797	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--
Aroclor 1268	1.6	NA	0.25	0.031	J	0.0431	0.00447	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--
PCBs, Total	1.6	NA	0.25	0.0625	J	0.0431	0.00383	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--
TOTAL METALS																																			
Aluminum, Total	NA	NA	78000	3970		9.98	2.7	964		22.9	6.19	4900		22	5.95	3720		8.92	2.41	464		20	5.4	536		21.3	5.76	1610		12.6	3.41	3780		12	3.23
Antimony, Total	5.4	NA	31	**14.8**		4.99	0.379	0.872	J	11.5	0.872	ND		11	0.837	1.93	J	4.46	0.339	ND		10	0.761	ND		10.7	0.811	ND		6.32	0.48	0.969	J	5.98	0.454
Arsenic, Total	19	1100	19	8.82		0.998	0.208	1.77	J	2.29	0.477	0.529	J	2.2	0.458	9.32		0.892	0.186	0.801	J	2	0.416	1.43	J	2.13	0.444	7		1.26	0.263	12.6		1.2	0.249
Barium, Total	2100	870000	16000	407		0.998	0.174	67.7		2.29	0.399	28.7		2.2	0.383	158		0.892	0.155	43.8		2	0.348	73.7		2.13	0.371	145		1.26	0.22	152		1.2	0.208
Beryllium, Total	0.7	2000	160	0.579		0.499	0.033	0.115	J	1.15	0.076	**0.705**	J	1.1	0.073	0.33	J	0.446	0.029	ND		1	0.066	ND		1.07	0.07	0.227	J	0.632	0.042	0.622		0.598	0.04
Cadmium, Total	1.9	2600	71	**2.66**		0.998	0.098	0.436	J	2.29	0.225	0.507	J	2.2	0.216	0.83	J	0.892	0.087	0.641	J	2	0.196	0.448	J	2.13	0.209	0.366	J	1.26	0.124	1.39		1.2	0.117
Calcium, Total	NA	NA	NA	18500		9.98	3.49	14700		22.9	8.03	7090		22	7.71	3480		8.92	3.12	8250		20	7.01	12000		21.3	7.47	3780		12.6	4.42	10400		12	4.18
Chromium, Total	NA	NA	NA	42.4	B	0.998	0.096	9.22		1.19	0.114	2.04		1.11	0.106	20.8	B	0.892	0.086	4.23		1.03	0.099	12.7		1.06	0.101	5.52		0.658	0.063	12.4	B	1.2	0.115
Cobalt, Total	90	520	23	5.55		2	0.166	1.81	J	4.59	0.381	0.837	J	4.41	0.366	3.07		1.78	0.148	0.721	J	4	0.332	0.832	J	4.27	0.354	2.87		2.53	0.21	5.25		2.39	0.198
Copper, Total	910	NA	3100	256		0.998	0.258	53.3		2.29	0.592	16.5		2.2	0.568	83.1		0.892	0.23	32.4		2	0.516	35.5		2.13	0.551	11.5		1.26	0.326	209		1.2	0.308
Iron, Total	NA	NA	NA	34300	B	4.99	0.901	5240	B	11.5	2.07	22200	B	11	1.99	16800	B	4.46	0.805	1980	B	10	1.81	3570	B	10.7	1.93	3470	B	6.32	1.14	36700	B	5.98	1.08
Lead, Total	90	NA	400	**1640**		4.99	0.268	81.6		11.5	0.615	28.2		11	0.59	**403**		4.46	0.239	52.2		10	0.536	63.2		10.7	0.572	77.6		6.32	0.338	**130**		5.98	0.32
Magnesium, Total	NA	NA	NA	1740		9.98	1.54	585		22.9	3.53	174		22	3.39	394		8.92	1.37	913		20	3.08	1690		21.3	3.29	214		12.6	1.94	1020		12	1.84
Manganese, Total	NA	87000	1900	259		0.998	0.159	275		2.29	0.365	153		2.2	0.35	109		0.892	0.142	74.2		2	0.318	125		2.13	0.339	32.4		1.26	0.201	131		1.2	0.19
Mercury, Total	0.1	520000	23	**1.31**		0.084	0.055	**0.208**	J	0.22	0.144	ND		0.186	0.121	**0.226**		0.074	0.048	ND		0.17	0.111	ND		0.205	0.134	**0.117**		0.112	0.073	**0.525**		0.104	0.068
Nickel, Total	48	20000	1600	28.1		2.5	0.242	5.71	J	5.73	0.555	2.62	J	5.51	0.533	9.02		2.23	0.216	2.14	J	5	0.484	2.52	J	5.34	0.516	3.66		3.16	0.306	16.3		2.99	0.289
Potassium, Total	NA	NA	NA	802		250	14.4	238	J	573	33	140	J	551	31.7	317		223	12.8	228	J	500	28.8	366	J	534	30.7	126	J	316	18.2	562		299	17.2
Selenium, Total	11	NA	390	0.719	J	2	0.258	1.47	J	4.59	0.592	ND		4.41	0.568	0.615	J	1.78	0.23	0.721	J	4	0.516	ND		4.27	0.551	ND		2.53	0.326	0.933	J	2.39	0.308
Silver, Total	0.5	NA	390	**4.02**		0.998	0.282	**ND**		**2.29**	**0.649**	**ND**		**2.2**	**0.624**	ND		0.892	0.252	**ND**		**2**	**0.566**	**ND**		**2.13**	**0.604**	ND		1.26	0.357	ND		1.2	0.338
Sodium, Total	NA	NA	NA	382		200	3.14	112	J	459	7.23	52.2	J	441	6.94	73.6	J	178	2.81	75	J	400	6.3	86.8	J	427	6.72	22.8	J	253	3.98	242		239	3.77
Vanadium, Total	NA	170000	390	21.2		0.998	0.203	4.08		2.29	0.466	2.69		2.2	0.447	39.2		0.892	0.181	2.44		2	0.406	2.75		2.13	0.433	4.79		1.26	0.256	18.6		1.2	0.243
Zinc, Total	930	NA	23000	725		4.99	0.292	111		11.5	0.672	47.2		11	0.646	539		4.46	0.261	60.9		10	0.586	68.4		10.7	0.625	59.6		6.32	0.37	225		5.98	0.35
GENERAL CHEMISTRY																																			
Solids, Total	NA	NA	NA	76.3		0.1	NA	32.9		0.1	NA	34.8		0.1	NA	85		0.1	NA	37.7		0.1	NA	35.9		0.1	NA	59.8		0.1	NA	63.2		0.1	NA
Cyanide, Total	20	NA	47	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--

All units are presented in milligrams per kilogram (mg/kg) unless stated otherwise
SS - Sample Specific Standard generated utilizing the 2021 NJDEP EPH Category II, Ingestion/Dermal Calculator
-- - Sample not analyzed for this parameter
D - Designates the concentration of the analyte was quantified from diluted analysis; result is based on dilution.
J - Designates the concentration is below the Quantitation Limit (RL) but above the Method Detection Limit (MDL); therefore, the concentration is considered estimated.
NJ - Designates the TIC concentration was estimated based on a mass spectral library search.
P - Designates the relative percent difference (RPD) between the two gas chromatography results exceeds the method-specified criteria for this analyte.
NA - Standard not applicable because appropriate toxicological information does not exist, the groundwater remediation standard is a secondary standard, or the calculated health based criterion exceeds one million mg/kg or the soil saturation limit.
ND - Not Detected at the method detection limit (MDL).
RISRS - Residential Inhalation Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
RIDSRS - Residential Ingestion/Dermal Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
MGWSRS - Migration to Groundwater Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
Bold values and highlighted cells indicate the concentration exceeds the more stringent of the RISRS or RIDSRS
Bold and blue colored values indicate the concentration exceeds the MGWSRS
Red Bold values indicate the Method Detection Limit (MDL) is elevated and may exceed the applicable standards.

TABLE NO. 2
SOIL SAMPLE ANALYTICAL RESULTS
17087.006 - ROBERT B. JOHNSON PARK IMPROVEMENTS

SAMPLE ID:				HF-10				HF-11				HF-12				HF-13				HF-14				HF-15				HF-16				HF-17			
LAB ID:				L2168587-09				L2168587-10				L2168587-11				L2168587-12				L2168587-13				L2168587-14				L2168587-15				L2168587-16			
COLLECTION DATE:				12/13/2021				12/13/2021				12/13/2021				12/14/2021				12/14/2021				12/14/2021				12/14/2021				12/14/2021			
SAMPLE DEPTH:				2.5' - 3.0'				4.0' - 4.5'				2.0' - 2.5'				10.0' - 10.5'				4.5' - 5.0'				1.0' - 1.5'				12.0' - 12.5'				19.5' - 20'			
SAMPLE MATRIX:				SOIL				SOIL				SOIL				SOIL				SOIL				SOIL				SOIL				SOIL			
PARAMETER	**MGWSRS**	**RISRS**	**RIDSRS**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
NJ EXTRACTABLE PETROLEUM HYDROCARBONS (EPH) CAT. I																																			
Total EPH	NA	NA	5300	--		--	--	460		29	29	--		--	--	--		--	--	523		26.4	26.4	--		--	--	1010		30.1	30.1	--		--	--
VOLATILE ORGANIC COMPOUNDS (VOCs)																																			
Benzene	0.0094	2.2	3	--		--	--	ND		0.00061	0.0002	--		--	--	--		--	--	0.00031	J	0.00056	0.00019	--		--	--	ND		0.00065	0.00021	--		--	--
Acetone	19	NA	70000	--		--	--	0.085		0.03	0.012	--		--	--	--		--	--	0.095		0.028	0.011	--		--	--	0.034		0.032	0.013	--		--	--
2-Butanone	0.98	NA	47000	--		--	--	0.013		0.012	0.0027	--		--	--	--		--	--	0.015		0.011	0.0025	--		--	--	0.0051	J	0.013	0.0029	--		--	--
Methyl Acetate	22	NA	78000	--		--	--	ND		0.0048	0.0012	--		--	--	--		--	--	0.0027	J	0.0045	0.0011	--		--	--	0.004	J	0.0052	0.0012	--		--	--
Total VOCs	NA	NA	NA	--	-	-	-	0.098	-	-	-	--	-	-	-	--	-	-	-	0.11301	-	-	-	--	-	-	-	0.0431	-	-	-	--	-	-	-
VOC TICs																																			
Total TIC Compounds	NA	NA	NA	--		--	--	0.005	J	ND	ND	--		--	--	--		--	--	0.017	J	ND	ND	--		--	--	ND		--	--	--		--	--
SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs)																																			
Dibenzofuran	NA	NA	NA	--		--	--	0.48		0.2	0.018	--		--	--	--		--	--	5.1		1.9	0.16	--		--	--	0.4	J	1.1	0.096	--		--	--
Phenol	21	39000	19000	--		--	--	0.068	J	0.2	0.024	--		--	--	--		--	--	0.24	J	1.9	0.22	--		--	--	ND		1.1	0.13	--		--	--
2-Methylphenol	0.77	NA	320	--		--	--	0.058	J	0.2	0.032	--		--	--	--		--	--	ND		1.9	0.29	--		--	--	ND		1.1	0.17	--		--	--
3-Methylphenol/4-Methylphenol	0.75	NA	630	--		--	--	0.2	J	0.29	0.029	--		--	--	--		--	--	ND		2.7	0.27	--		--	--	0.25	J	1.6	0.16	--		--	--
Carbazole	NA	NA	NA	--		--	--	0.32		0.2	0.013	--		--	--	--		--	--	2.5		1.9	0.12	--		--	--	0.5	J	1.1	0.07	--		--	--
Benzaldehyde	0.1	NA	170	--		--	--	0.1	J	0.27	0.032	--		--	--	--		--	--	ND		2.5	0.29	--		--	--	0.22	J	1.4	0.17	--		--	--
Biphenyl	NA	NA	87	--		--	--	0.14	J	0.46	0.026	--		--	--	--		--	--	1.1	J	4.3	0.24	--		--	--	ND		2.5	0.14	--		--	--
Acenaphthene	NA	NA	3600	0.11	J	0.15	0.016	0.31		0.16	0.017	0.12	J	0.16	0.017	ND		1	0.11	0.67	J	0.76	0.08	ND		0.18	0.019	0.12	J	0.17	0.018	1.2		0.83	0.087
Fluoranthene	NA	NA	2400	1.9		0.11	0.021	2.6		0.12	0.023	3.8		0.12	0.023	0.52	J	0.78	0.15	12		0.57	0.11	1.3		0.14	0.026	2.5		0.13	0.025	14		0.62	0.12
Naphthalene	19	5.7	2500	0.54		0.19	0.023	2.1		0.2	0.024	0.52		0.2	0.024	ND		1.3	0.16	1.8		0.95	0.12	0.059	J	0.22	0.027	0.56		0.22	0.026	1.8		1	0.13
Benzo(a)anthracene	0.71	78000	5.1	**1.1**		0.063	0.021	**1.7**		0.068	0.023	**2.1**		0.067	0.022	0.27	J	0.44	0.15	**4.4**		0.32	0.11	**1.1**		0.076	0.025	**1.4**		0.072	0.024	**5.3**		0.35	0.12
Benzo(a)pyrene	NA	3500	0.51	**0.89**		0.14	0.046	**1.2**		0.15	0.049	**2**		0.14	0.049	ND		0.96	0.32	**3.9**		0.7	0.23	**1**		0.16	0.055	**1.6**		0.16	0.052	**4.6**		0.76	0.25
Benzo(b)fluoranthene	NA	78000	5.1	1.2		0.047	0.016	1.5		0.051	0.017	2.6		0.05	0.017	0.32	J	0.33	0.11	4.3		0.24	0.08	1.5		0.057	0.019	2.2		0.054	0.018	**5.9**		0.26	0.087
Benzo(k)fluoranthene	NA	780000	51	0.33		0.039	0.013	0.45		0.042	0.014	0.87		0.042	0.014	0.11	J	0.28	0.092	1.7		0.2	0.067	0.61		0.047	0.016	0.54		0.045	0.015	2		0.22	0.073
Chrysene	NA	NA	510	0.99		0.11	0.019	1.6		0.12	0.021	2		0.12	0.02	0.25	J	0.78	0.13	3.9		0.57	0.098	1.5		0.14	0.023	1.6		0.13	0.022	5.1		0.62	0.11
Acenaphthylene	NA	NA	NA	0.17		0.15	0.021	0.39		0.16	0.023	0.37		0.16	0.022	ND		1	0.15	1.2		0.76	0.11	0.11	J	0.18	0.025	0.18		0.17	0.024	0.58	J	0.83	0.12
Anthracene	NA	NA	18000	0.35		0.11	0.017	1		0.12	0.018	0.85		0.12	0.018	ND		0.78	0.12	2.9		0.57	0.085	0.29		0.14	0.02	0.38		0.13	0.019	3.4		0.62	0.092
Benzo(ghi)perylene	NA	NA	NA	0.47		0.15	0.022	0.49		0.16	0.024	1.2		0.16	0.023	0.17	J	1	0.15	1.9		0.76	0.11	0.98		0.18	0.026	1		0.17	0.025	2.3		0.83	0.12
Fluorene	NA	NA	2400	0.18	J	0.19	0.018	0.79		0.2	0.019	0.46		0.2	0.019	ND		1.3	0.12	2.7		0.95	0.092	0.037	J	0.22	0.022	0.25		0.22	0.021	2.3		1	0.1
Phenanthrene	NA	NA	NA	1.6		0.11	0.013	4		0.12	0.014	3.4		0.12	0.014	0.38	J	0.78	0.094	13		0.57	0.068	0.86		0.14	0.016	2.5		0.13	0.015	12		0.62	0.075
Dibenzo(a,h)anthracene	NA	7800	0.51	0.12		0.065	0.022	0.13		0.07	0.023	0.28		0.069	0.023	ND		0.46	0.15	0.48		0.33	0.11	ND		0.078	0.026	0.26		0.075	0.025	**0.68**		0.36	0.12
Indeno(1,2,3-cd)pyrene	NA	78000	5.1	0.52		0.078	0.026	0.52		0.085	0.028	1.3		0.084	0.028	ND		0.55	0.18	2.2		0.4	0.13	0.88		0.095	0.031	1.2		0.09	0.03	2.7		0.44	0.14
Pyrene	NA	NA	1800	1.8		0.11	0.016	3		0.12	0.018	3.2		0.12	0.017	0.46	J	0.78	0.11	10		0.57	0.083	1.5		0.14	0.02	2.2		0.13	0.019	11		0.62	0.09
2-Methylnaphthalene	3.1	NA	240	0.073	J	0.22	0.02	0.57		0.24	0.021	0.13	J	0.24	0.021	ND		1.6	0.14	0.94	J	1.1	0.1	0.036	J	0.27	0.024	0.21	J	0.26	0.023	0.69	J	1.2	0.11
Total SVOCs	NA	NA	NA	12.343	-	-	-	22.35	-	-	-	25.2	-	-	-	2.48	-	-	-	67.99	-	-	-	11.762	-	-	-	18.7	-	-	-	75.55	-	-	-
SVOC TICs																																			
Total TIC Compounds	NA	NA	NA	--		--	--	15.6	J	ND	ND	--		--	--	--		--	--	74.7	J	ND	ND	--		--	--	16.8	J	ND	ND	--		--	--
PESTICIDES																																			
4,4'-DDE	0.47	NA	2	--		--	--	ND		0.00186	0.00043	--		--	--	--		--	--	0.0186	P	0.00172	0.00039	--		--	--	ND		0.00199	0.00046	--		--	--
4,4'-DDD	0.47	NA	2.3	--		--	--	0.0129	P	0.00186	0.00066	--		--	--	--		--	--	0.00345	P	0.00172	0.00061	--		--	--	ND		0.00199	0.00071	--		--	--
4,4'-DDT	0.67	NA	1.9	--		--	--	0.15	P	0.0035	0.0015	--		--	--	--		--	--	0.0251	P	0.00323	0.00139	--		--	--	ND		0.00374	0.0016	--		--	--
POLYCHLORINATED BIPHENYLS (PCBs)																																			
Aroclor 1254	1.6	NA	0.25	--		--	--	2.21		0.2	0.0218	--		--	--	--		--	--	ND		0.0376	0.00411	--		--	--	ND		0.0422	0.00462	--		--	--
PCBs, Total	1.6	NA	0.25	--		--	--	**2.21**		0.2	0.0177	--		--	--	--		--	--	ND		0.0376	0.00334	--		--	--	ND		0.0422	0.00375	--		--	--
TOTAL METALS																																			
Aluminum, Total	NA	NA	78000	3670		8.76	2.36	2140		9.39	2.54	5450		9.11	2.46	2200		12.3	3.32	4460		8.78	2.37	6080		10.3	2.79	3960		10.1	2.73	3180		9.76	2.63
Antimony, Total	5.4	NA	31	1.3	J	4.38	0.333	2.66	J	4.7	0.357	**7.88**		4.56	0.346	1.67	J	6.15	0.468	1.52	J	4.39	0.334	5.12	J	5.17	0.393	**46.2**		5.05	0.384	3.28	J	4.88	0.371
Arsenic, Total	19	1100	19	11.1		0.876	0.182	11.5		0.939	0.195	13.2		0.911	0.19	4.8		1.23	0.256	**39.6**		0.878	0.183	9.48		1.03	0.215	14.9		1.01	0.21	10.1		0.976	0.203
Barium, Total	2100	870000	16000	400		0.876	0.152	173		0.939	0.163	649		0.911	0.158	234		1.23	0.214	87.6		0.878	0.153	480		1.03	0.18	385		1.01	0.176	317		0.976	0.17
Beryllium, Total	0.7	2000	160	0.429	J	0.438	0.029	0.197	J	0.47	0.031	0.392	J	0.456	0.03	0.16	J	0.615	0.041	0.562		0.439	0.029	0.372	J	0.517	0.034	0.454	J	0.505	0.033	0.332	J	0.488	0.032
Cadmium, Total	1.9	2600	71	1.33		0.876	0.086	1.19		0.939	0.092	**3.63**		0.911	0.089	1.19	J	1.23	0.12	**4.37**		0.878	0.086	**5.45**		1.03	0.101	**5.07**		1.01	0.099	**3.38**		0.976	0.096
Calcium, Total	NA	NA	NA	6550		8.76	3.07	4650		9.39	3.29	9760		9.11	3.19	71500		12.3	4.3	39200		8.78	3.07	24800		10.3	3.62	8660		10.1	3.53	11300		9.76	3.41
Chromium, Total	NA	NA	NA	21.8	B	0.876	0.084	16.2	B	0.939	0.09	38.2	B	0.911	0.088	10.2	B	1.23	0.118	64.5	B	0.878	0.084	74.5	B	1.03	0.099	24.2	B	1.01	0.097	41.5	B	0.976	0.094
Cobalt, Total	90	520	23	5.63		1.75	0.145	4.97		1.88	0.156	6.98		1.82	0.151	3.57		2.46	0.204	**29**		1.76	0.146	15.6		2.07	0.172	6.08		2.02	0.168	5.07		1.95	0.162
Copper, Total	910	NA	3100	94.1		0.876	0.226	198		0.939	0.242	336		0.911	0.235	116		1.23	0.317	135		0.878	0.227	**1710**		1.03	0.267	174		1.01	0.26	123		0.976	0.252
Iron, Total	NA	NA	NA	22100	B	4.38	0.791	17100	B	4.7	0.848	46600	B	45.6	8.23	15700	B	6.15	1.11	22500	B	4.39	0.793	166000	B	51.7	9.33	43600	B	5.05	0.912	32800	B	4.88	0.881
Lead, Total	90	NA	400	**481**		4.38	0.235	**443**		4.7	0.252	**919**		4.56	0.244	**499**		6.15	0.33	**949**		4.39	0.235	**623**		5.17	0.277	**3270**		5.05	0.271	**1450**		4.88	0.261
Magnesium, Total	NA	NA	NA	522		8.76	1.35	392		9.39	1.45	965		9.11	1.4	914		12.3	1.89	1720		8.78	1.35	1560		10.3	1.59	796		10.1	1.56	4550		9.76	1.5
Manganese, Total	NA	87000	1900	158		0.876	0.139	122		0.939	0.149	332		0.911	0.145	138		1.23	0.196	160		0.878	0.14	614		1.03	0.164	263		1.01	0.16	206		0.976	0.155
Mercury, Total	0.1	520000	23	**0.613**		0.087	0.057	**0.61**		0.098	0.064	**1.51**		0.081	0.053	0.096	J	0.104	0.068	**0.229**		0.075	0.049	**0.321**		0.112	0.073	**0.78**		0.089	0.058	**0.272**		0.096	0.063
Nickel, Total	48	20000	1600	14.5		2.19	0.212	14.4		2.35	0.227	33.4		2.28	0.22	16.8		3.08	0.298	31		2.2	0.212	**50.8**		2.58	0.25	15.8		2.52	0.244	22.9		2.44	0.236
Potassium, Total	NA	NA	NA	454		219	12.6	320		235	13.5	601		228	13.1	482		308	17.7	1110		220	12.6	1480		258	14.9	509		252	14.5	554		244	14
Selenium, Total	11	NA	390	0.578	J	1.75	0.226	1.18	J	1.88	0.242	1.21	J	1.82	0.235	1.14	J	2.46	0.317	7.72		1.76	0.227	0.982	J	2.07	0.267	1.6	J	2.02	0.26	0.898	J	1.95	0.252
Silver, Total	0.5	NA	390	**0.569**	J	0.876	0.248	ND		0.939	0.266	**1.22**		0.911	0.258	**1.44**		1.23	0.348	**0.685**	J	0.878	0.248	**0.848**	J	1.03	0.292	0.394	J	1.01	0.286	**25.7**		0.976	0.276
Sodium, Total	NA	NA	NA	175		175	2.76	128	J	188	2.96	170	J	182	2.87	402		246	3.88	173	J	176	2.77	649		207	3.26	234		202	3.18	210		195	3.07
Vanadium, Total	NA	170000	390	25.3		0.876	0.178	18.9		0.939	0.191	32		0.911	0.185	29.1		1.23	0.25	59.2		0.878	0.178	20.8		1.03	0.21	23.7		1.01	0.205	17.2		0.976	0.198
Zinc, Total	930	NA	23000	337		4.38	0.257	376		4.7	0.275	817		4.56	0.267	380		6.15	0.36	**2850**		4.39	0.257	424		5.17	0.303	**1890**		5.05	0.296	637		4.88	0.286
GENERAL CHEMISTRY																																			
Solids, Total	NA	NA	NA	87.4		0.1	NA	81.2		0.1	NA	83.2		0.1	NA	62		0.1	NA	87.3		0.1	NA	73.4		0.1	NA	75.7		0.1	NA	78		0.1	NA
Cyanide, Total	20	NA	47	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--	--		--	--

All units are presented in milligrams per kilogram (mg/kg) unless stated otherwise
SS - Sample Specific Standard generated utilizing the 2021 NJDEP EPH Category II, Ingestion/Dermal Calculator
-- - Sample not analyzed for this parameter
D - Designates the concentration of the analyte was quantified from diluted analysis; result is based on dilution.
J - Designates the concentration is below the Quantitation Limit (RL) but above the Method Detection Limit (MDL); therefore, the concentration is considered estimated.
P - Designates the relative percent difference (RPD) between the two gas chromatography results exceeds the method-specified criteria for this analyte.
NA - Standard not applicable because appropriate toxicological information does not exist, the groundwater remediation standard is a secondary standard, or the calculated health based criterion exceeds one million mg/kg or the soil saturation limit.
ND - Not Detected at the method detection limit (MDL).
RISRS - Residential Inhalation Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
RIDSRS - Residential Ingestion/Dermal Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
MGWSRS - Migration to Groundwater Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
Bold values and highlighted cells indicate the concentration exceeds the more stringent of the RISRS or RIDSRS
Bold and blue colored values indicate the concentration exceeds the MGWSRS
Red Bold values indicate the Method Detection Limit (MDL) is elevated and may exceed the applicable standards.

TABLE NO. 2
SOIL SAMPLE ANALYTICAL RESULTS
17087.006 - ROBERT B. JOHNSON PARK IMPROVEMENTS

SAMPLE ID:				HF-18				HF-19				HF-20				TB-1				TB-2				TB-3				TB-5			
LAB ID:				L2168587-17				L2168587-18				L2168587-19				L2169443-01				L2169443-02				L2169443-03				L2169443-04			
COLLECTION DATE:				12/14/2021				12/14/2021				12/14/2021				12/15/2021				12/15/2021				12/15/2021				12/15/2021			
SAMPLE DEPTH:				2.0' - 2.5'				2.0' - 2.5'				8.0' - 8.5'				2.0' - 2.5'				3.5' - 4.0'				5.0' - 5.5'				4.0' - 4.5'			
SAMPLE MATRIX:				SOIL				SOIL				SOIL				SOIL				SOIL				SOIL				SOIL			
PARAMETER	**MGWSRS**	**RISRS**	**RIDSRS**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
NJ EXTRACTABLE PETROLEUM HYDROCARBONS (EPH) CAT. I																															
Total EPH	NA	NA	5300	1190		28.5	28.5	--		--	--	--		--	--	1010		27.4	27.4	--		--	--	--		--	--	--		--	--
VOLATILE ORGANIC COMPOUNDS (VOCs)																															
Benzene	0.0094	2.2	3	0.0023		0.00062	0.00021	--		--	--	--		--	--	ND		0.0007	0.00023	--		--	--	--		--	--	--		--	--
Toluene	7.8	NA	6300	0.001	J	0.0012	0.00068	--		--	--	--		--	--	ND		0.0014	0.00076	--		--	--	--		--	--	--		--	--
Ethylbenzene	15	10	7800	0.00018	J	0.0012	0.00018	--		--	--	--		--	--	ND		0.0014	0.0002	--		--	--	--		--	--	--		--	--
Xylenes, Total	19	NA	12000	0.0017	J	0.0012	0.00036	--		--	--	--		--	--	ND		0.0014	0.0004	--		--	--	--		--	--	--		--	--
Styrene	2.1	NA	16000	0.00057	J	0.0012	0.00024	--		--	--	--		--	--	ND		0.0014	0.00027	--		--	--	--		--	--	--		--	--
Total VOCs	NA	NA	NA	0.00578	-	-	-	--	-	-	-	--	-	-	-	0.0016	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
VOC TICs																															
Total TIC Compounds	NA	NA	NA	0.111	J	ND	ND	--		--	--	--		--	--	0.011	J	ND	ND	--		--	--	--		--	--	--		--	--
SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs)																															
Hexachloroethane	0.17	NA	17	ND		0.99	0.33	--		--	--	--		--	--	**ND**		**0.95**	**0.32**	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	NA	NA	NA	4.3		2	0.18	--		--	--	--		--	--	1.2	J	2	0.17	--	--	--	--	--	--	--	--	--	--	--	--
Phenol	21	39000	19000	0.58	J	2	0.24	--		--	--	--		--	--	ND		2	0.23	--	--	--	--	--	--	--	--	--	--	--	--
3-Methylphenol/4-Methylphenol	0.75	NA	630	0.57	J	2.9	0.29	--		--	--	--		--	--	**ND**		**2.8**	**0.28**	--	--	--	--	--	--	--	--	--	--	--	--
Carbazole	NA	NA	NA	3.9		2	0.13	--		--	--	--		--	--	1.2	J	2	0.12	--	--	--	--	--	--	--	--	--	--	--	--
Biphenyl	NA	NA	87	0.65	J	4.6	0.26	--		--	--	--		--	--	ND		4.4	0.25	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	NA	NA	3600	2.1		1.6	0.17	1.4		0.74	0.077	0.06	J	0.15	0.016	21		16	1.6	1.2		0.75	0.078	ND		0.15	0.016	ND		0.14	0.015
Fluoranthene	NA	NA	2400	49		1.2	0.24	20		0.55	0.1	1		0.11	0.022	310		12	2.2	14		0.56	0.11	0.1	J	0.11	0.022	0.14		0.11	0.02
Naphthalene	19	5.7	2500	**6.7**		2.1	0.25	2.9		0.92	0.11	0.1	J	0.19	0.023	2.8	J	20	2.4	0.98		0.93	0.11	ND		0.19	0.023	ND		0.18	0.022
Benzo(a)anthracene	0.71	78000	5.1	**26**		0.69	0.23	**11**		0.31	0.1	0.56		0.064	0.021	**150**		6.6	2.2	**6.9**		0.31	0.1	0.056	J	0.063	0.021	0.084		0.06	0.02
Benzo(a)pyrene	NA	3500	0.51	**18**		1.5	0.5	**7.9**		0.67	0.22	0.48		0.14	0.046	**100**		14	4.8	**5.2**		0.68	0.23	ND		0.14	0.046	0.07	J	0.13	0.044
Benzo(b)fluoranthene	NA	78000	5.1	**22**		0.52	0.17	**11**		0.23	0.077	0.58		0.048	0.016	**130**		4.9	1.6	**7.3**		0.24	0.078	0.062		0.047	0.016	0.094		0.045	0.015
Benzo(k)fluoranthene	NA	780000	51	10		0.43	0.14	3.5		0.19	0.064	0.22		0.04	0.013	47		4.1	1.4	2		0.2	0.065	0.021	J	0.04	0.013	0.036	J	0.038	0.012
Chrysene	NA	NA	510	22		1.2	0.21	10		0.55	0.094	0.59		0.11	0.019	140		12	2	6.6		0.56	0.096	0.052	J	0.11	0.019	0.088	J	0.11	0.018
Acenaphthylene	NA	NA	NA	8.8		1.6	0.23	3.3		0.74	0.1	0.046	J	0.15	0.021	18		16	2.2	0.48	J	0.75	0.1	ND		0.15	0.021	ND		0.14	0.02
Anthracene	NA	NA	18000	13		1.2	0.18	3.8		0.55	0.082	0.19		0.11	0.017	79		12	1.7	3.4		0.56	0.083	ND		0.11	0.017	0.018	J	0.11	0.016
Benzo(ghi)perylene	NA	NA		7.7		1.6	0.24	4.4		0.74	0.11	0.29		0.15	0.022	53		16	2.3	3		0.75	0.11	0.032	J	0.15	0.022	0.044	J	0.14	0.021
Fluorene	NA	NA	2400	10		2.1	0.2	2.4		0.92	0.088	0.081	J	0.19	0.018	38		20	1.9	1.5		0.93	0.09	ND		0.19	0.018	ND		0.18	0.017
Phenanthrene	NA	NA	NA	48		1.2	0.15	17		0.55	0.066	0.82		0.11	0.014	280		12	1.4	14		0.56	0.067	0.073	J	0.11	0.014	0.08	J	0.11	0.013
Dibenzo(a,h)anthracene	NA	7800	0.51	**2**		0.72	0.24	**1**		0.32	0.11	0.074		0.066	0.022	**17**		6.8	2.3	**0.88**		0.32	0.11	ND		0.065	0.022	ND		0.062	0.021
Indeno(1,2,3-cd)pyrene	NA	78000	5.1	**9.1**		0.87	0.29	5		0.39	0.13	0.31		0.08	0.026	**64**		8.2	2.7	3.6		0.39	0.13	0.033	J	0.079	0.026	0.053	J	0.075	0.025
Pyrene	NA	NA	1800	39		1.2	0.18	17		0.55	0.08	1		0.11	0.016	270		12	1.7	11		0.56	0.081	0.089	J	0.11	0.016	0.13		0.11	0.016
2-Methylnaphthalene	3.1	NA	240	3		2.5	0.22	1.2		1.1	0.097	0.043	J	0.23	0.02	**3.5**	J	24	2.1	0.58	J	1.1	0.099	ND		0.22	0.02	ND		0.21	0.019
Total SVOCs	NA	NA	NA	296.4	-	-	-	122.8	-	-	-	6.444	-	-	-	2.4	-	-	-	82.62	-	-	-	0.518	-	-	-	0.837	-	-	-
SVOC TICs																															
Total TIC Compounds	NA	NA	NA	127	J	ND	ND	--		--	--	--		--	--	78.8	J	ND	ND	--	--	--	--	--	--	--	--	--	--	--	--
PESTICIDES																															
Total Pesticides	NA	NA	NA	ND		0.00249	0.00065									ND		0.00249	0.00065												
POLYCHLORINATED BIPHENYLS (PCBs)																															
Aroclor 1260	1.6	NA	0.25	0.198		0.0406	0.00751	--		--	--	--		--	--	ND		0.0388	0.00718	--		--	--	--		--	--	--		--	--
Aroclor 1268	1.6	NA	0.25	0.12		0.0406	0.00421	--		--	--	--		--	--	ND		0.0388	0.00402	--		--	--	--		--	--	--		--	--
PCBs, Total	1.6	NA	0.25	**0.318**		0.0406	0.00361	--		--	--	--		--	--	ND		0.0388	0.00345	--		--	--	--		--	--	--		--	--
TOTAL METALS																															
Aluminum, Total	NA	NA	78000	3600		9.46	2.55	5040		8.69	2.34	2820		8.83	2.38	3290		9.45	2.55	3260		8.64	2.33	3630		9	2.43	3350		8.52	2.3
Antimony, Total	5.4	NA	31	**42.7**		4.73	0.359	5.29		4.34	0.33	1.88	J	4.42	0.336	ND		4.72	0.359	0.536	J	4.32	0.328	ND		4.5	0.342	ND		4.26	0.324
Arsenic, Total	19	1100	19	13.7		0.946	0.197	11.2		0.869	0.181	5.65		0.883	0.184	10.5		0.945	0.196	6.13		0.864	0.18	9.1		0.9	0.187	6.74		0.852	0.177
Barium, Total	2100	870000	16000	410		0.946	0.164	563		0.869	0.151	348		0.883	0.154	310		0.945	0.164	207		0.864	0.15	218		0.9	0.157	221		0.852	0.148
Beryllium, Total	0.7	2000	160	0.331	J	0.473	0.031	0.469		0.434	0.029	0.194	J	0.442	0.029	0.368	J	0.472	0.031	0.294	J	0.432	0.029	0.243	J	0.45	0.03	0.264	J	0.426	0.028
Cadmium, Total	1.9	2600	71	**2.59**		0.946	0.093	**2**		0.869	0.085	1.05		0.883	0.087	0.737	J	0.945	0.093	0.596	J	0.864	0.085	1.58		0.9	0.088	0.537	J	0.852	0.084
Calcium, Total	NA	NA	NA	7010		9.46	3.31	10600		8.69	3.04	9500		8.83	3.09	8620		9.45	3.31	3660		8.64	3.02	2840		9	3.15	6850		8.52	2.98
Chromium, Total	NA	NA	NA	41.9	B	0.946	0.091	16.1	B	0.869	0.083	13.6	B	0.883	0.085	23.8		0.945	0.091	12.4		0.864	0.083	11.1		0.9	0.086	8.8		0.852	0.082
Cobalt, Total	90	520	23	5.82		1.89	0.157	3.57		1.74	0.144	2.46		1.77	0.147	2.46		1.89	0.157	2.21		1.73	0.143	2.46		1.8	0.149	2.43		1.7	0.141
Copper, Total	910	NA	3100	395		0.946	0.244	126		0.869	0.224	78		0.883	0.228	33		0.945	0.244	63.3		0.864	0.223	22.5		0.9	0.232	17.7		0.852	0.22
Iron, Total	NA	NA	NA	29500	B	4.73	0.854	16500	B	4.34	0.784	10400	B	4.42	0.798	11700		4.72	0.853	7370		4.32	0.78	10200		4.5	0.813	7390		4.26	0.769
Lead, Total	90	NA	400	**1100**		4.73	0.253	**605**		4.34	0.233	**351**		4.42	0.237	**346**		4.72	0.253	**153**		4.32	0.232	**173**		4.5	0.241	**222**		4.26	0.228
Magnesium, Total	NA	NA	NA	743		9.46	1.46	1550		8.69	1.34	865		8.83	1.36	964		9.45	1.46	614		8.64	1.33	608		9	1.39	736		8.52	1.31
Manganese, Total	NA	87000	1900	182		0.946	0.15	435		0.869	0.138	96.9		0.883	0.14	117		0.945	0.15	83.4		0.864	0.137	82.7		0.9	0.143	106		0.852	0.135
Mercury, Total	0.1	520000	23	**1.21**		0.082	0.054	**0.796**		0.082	0.053	**0.497**		0.08	0.052	**0.704**		0.088	0.057	**0.247**		0.079	0.051	**0.314**		0.078	0.051	**0.415**		0.078	0.051
Nickel, Total	48	20000	1600	29.8		2.36	0.229	11.6		2.17	0.21	7.13		2.21	0.214	5.51		2.36	0.229	4.8		2.16	0.209	4.53		2.25	0.218	5.13		2.13	0.206
Potassium, Total	NA	NA	NA	540		236	13.6	546		217	12.5	444		221	12.7	285		236	13.6	369		216	12.4	388		225	13	385		213	12.3
Selenium, Total	11	NA	390	0.728	J	1.89	0.244	0.278	J	1.74	0.224	0.486	J	1.77	0.228	0.605	J	1.89	0.244	0.311	J	1.73	0.223	1.06	J	1.8	0.232	0.537	J	1.7	0.22
Silver, Total	0.5	NA	390	**2.54**		0.946	0.268	**0.556**	J	0.869	0.246	ND		0.883	0.25	ND		0.945	0.267	ND		0.864	0.244	ND		0.9	0.255	ND		0.852	0.241
Sodium, Total	NA	NA	NA	421		189	2.98	170	J	174	2.74	81.2	J	177	2.78	108	J	189	2.98	25.1	J	173	2.72	28.2	J	180	2.84	43	J	170	2.68
Vanadium, Total	NA	170000	390	20.2		0.946	0.192	16.9		0.869	0.176	12.1		0.883	0.179	11.5		0.945	0.192	12.5		0.864	0.175	14.8		0.9	0.183	11.2		0.852	0.173
Zinc, Total	930	NA	23000	588		4.73	0.277	424		4.34	0.254	275		4.42	0.259	164		4.72	0.277	125		4.32	0.253	183		4.5	0.264	176		4.26	0.25
GENERAL CHEMISTRY																															
Solids, Total	NA	NA	NA	79.8		0.1	NA	88.4		0.1	NA	85.7		0.1	NA	84.2		0.1	NA	88.6		0.1	NA	86.8		0.1	NA	91.2		0.1	NA
Cyanide, Total	20	NA	47	--		--	--	--		--	--	--		--	--	0.91	J	1.2	0.24	--	--	--	--	--	--	--	--	--	--	--	--

All units are presented in milligrams per kilogram (mg/kg) unless stated otherwise
SS - Sample Specific Standard generated utilizing the 2021 NJDEP EPH Category II, Ingestion/Dermal Calculator
-- - Sample not analyzed for this parameter
D - Designates the concentration of the analyte was quantified from diluted analysis; result is based on dilution.
J - Designates the concentration is below the Quantitation Limit (RL) but above the Method Detection Limit (MDL); therefore, the concentration is considered estimated.
NJ - Designates the TIC concentration was estimated based on a mass spectral library search.
P - Designates the relative percent difference (RPD) between the two gas chromatography results exceeds the method-specified criteria for this analyte.
NA - Standard not applicable because appropriate toxicological information does not exist, the groundwater remediation standard is a secondary standard, or the calculated health based criterion exceeds one million mg/kg or the soil saturation limit.
ND - Not Detected at the method detection limit (MDL).
RISRS - Residential Inhalation Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
RIDSRS - Residential Ingestion/Dermal Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
MGWSRS - Migration to Groundwater Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
Bold values and highlighted cells indicate the concentration exceeds the more stringent of the RISRS or RIDSRS
Bold and blue colored values indicate the concentration exceeds the MGWSRS
Red Bold values indicate the Method Detection Limit (MDL) is elevated and may exceed the applicable standards.

TABLE NO. 3
SOIL SAMPLE ANALYTICAL RESULTS
17087.006 - ROBERT B. JOHNSON PARK IMPROVEMENTS

SAMPLE ID:				SY-1				SY-2				SY-3				SY-4			
LAB ID:				L2169443-05				L2169443-06				L2169443-07				L2169443-08			
COLLECTION DATE:				12/15/2021				12/15/2021				12/15/2021				12/15/2021			
SAMPLE DEPTH:				1.5' - 2.0'				4.5' - 5.0'				2.5' - 3.0'				3.0' - 3.5'			
SAMPLE MATRIX:				SOIL				SOIL				SOIL				SOIL			
PARAMETER	**MGWSRS**	**RISRS**	**RIDSRS**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
NJ EXTRACTABLE PETROLEUM HYDROCARBONS (EPH) CAT. I																			
Total EPH	NA	NA	5300	336		26.3	26.3	ND		26.5	26.5	ND		24.6	24.6	98.5		25.8	25.8
VOLATILE ORGANIC COMPOUNDS (VOCs)																			
Toluene	7.8	NA	6300	ND		0.00093	0.0005	--		--	--	--		--	--	ND		0.0011	0.00061
Ethylbenzene	15	10	7800	ND		0.00093	0.00013	--		--	--	--		--	--	ND		0.0011	0.00016
Xylenes, Total	19	NA	12000	ND		0.00093	0.00027	--		--	--	--		--	--	ND		0.0011	0.00033
Total VOCs	NA	NA	NA	--	-	-	-	--	-	-	-	--	-	-	-	--	-	-	-
VOC TICs																			
Total TIC Compounds	NA	NA	NA	0.013	J	ND	ND	--		--	--	--		--	--	0.016	J	ND	ND
BASE/NEUTRAL (BNs)																			
Acenaphthene	NA	NA	3600	0.93		0.72	0.076	--		--	--	--		--	--	0.089	J	0.15	0.015
Fluoranthene	NA	NA	2400	11		0.54	0.1	--		--	--	--		--	--	1.7		0.11	0.021
Naphthalene	19	5.7	2500	0.33	J	0.91	0.11	--		--	--	--		--	--	ND		0.18	0.022
Bis(2-ethylhexyl)phthalate	14	NA	39	0.12	J	0.91	0.094	--		--	--	--		--	--	0.087	J	0.18	0.019
Butyl benzyl phthalate	29	NA	290	0.23	J	0.91	0.12	--		--	--	--		--	--	ND		0.18	0.024
Benzo(a)anthracene	0.71	78000	5.1	**5.6**		0.3	0.1	--		--	--	--		--	--	**0.89**		0.062	0.021
Benzo(a)pyrene	NA	3500	0.51	**4.3**		0.66	0.22	--		--	--	--		--	--	**0.76**		0.13	0.045
Benzo(b)fluoranthene	NA	78000	5.1	**5.4**		0.23	0.076	--		--	--	--		--	--	1		0.046	0.015
Benzo(k)fluoranthene	NA	780000	51	1.8		0.19	0.063	--		--	--	--		--	--	0.35		0.039	0.013
Chrysene	NA	NA	510	6.2		0.54	0.093	--		--	--	--		--	--	0.87		0.11	0.019
Acenaphthylene	NA	NA	NA	0.36	J	0.72	0.1	--		--	--	--		--	--	0.065	J	0.15	0.021
Anthracene	NA	NA	18000	2.1		0.54	0.081	--		--	--	--		--	--	0.25		0.11	0.016
Benzo(ghi)perylene	NA	NA	NA	2.5		0.72	0.11	--		--	--	--		--	--	0.48		0.15	0.022
Fluorene	NA	NA	2400	0.96		0.91	0.087	--		--	--	--		--	--	0.097	J	0.18	0.018
Phenanthrene	NA	NA	NA	12		0.54	0.065	--		--	--	--		--	--	1.1		0.11	0.013
Dibenzo(a,h)anthracene	NA	7800	0.51	**0.65**		0.32	0.1	--		--	--	--		--	--	0.1		0.064	0.021
Indeno(1,2,3-cd)pyrene	NA	78000	5.1	2.7		0.38	0.13	--		--	--	--		--	--	0.5		0.077	0.026
Pyrene	NA	NA	1800	13		0.54	0.079	--		--	--	--		--	--	1.4		0.11	0.016
Dibenzofuran	NA	NA		0.38	J	0.91	0.08	--		--	--	--		--	--	0.052	J	0.18	0.016
2-Methylnaphthalene	3.1	NA	240	0.29	J	1.1	0.096	--		--	--	--		--	--	0.024	J	0.22	0.019
Carbazole	NA	NA	NA	0.68	J	0.91	0.058	--		--	--	--		--	--	0.14	J	0.18	0.012
BN TICs																			
Total TIC Compounds	NA	NA	NA	29.4	J	ND	ND	--		--	--	--		--	--	3.45	J	ND	ND
POLYCHLORINATED BIPHENYLS (PCBs)																			
Aroclor 1260	1.6	NA	0.25	0.0264	J	0.0357	0.0066	--		--	--	--		--	--	0.0166	J	0.0367	0.00679
Aroclor 1268	1.6	NA	0.25	0.0272	J	0.0357	0.0037	--		--	--	--		--	--	0.0151	J	0.0367	0.00381
PCBs, Total	1.6	NA	0.25	0.0536	J	0.0357	0.00317	--		--	--	--		--	--	0.0317	J	0.0367	0.00326
TOTAL METALS																			
Aluminum, Total	NA	NA	78000	3000		8.7	2.35	--		--	--	--		--	--	7030		8.83	2.38
Antimony, Total	5.4	NA	31	0.557	J	4.35	0.33	--		--	--	--		--	--	ND		4.42	0.336
Arsenic, Total	19	1100	19	7.36		0.87	0.181	--		--	--	--		--	--	4.25		0.883	0.184
Barium, Total	2100	870000	16000	318		0.87	0.151	--		--	--	--		--	--	14.9		0.883	0.154
Beryllium, Total	0.7	2000	160	0.217	J	0.435	0.029	--		--	--	--		--	--	0.221	J	0.442	0.029
Cadmium, Total	1.9	2600	71	1.2		0.87	0.085	--		--	--	--		--	--	0.291	J	0.883	0.087
Calcium, Total	NA	NA	NA	1720		8.7	3.04	--		--	--	--		--	--	525		8.83	3.09
Chromium, Total	NA	NA	NA	13.9		0.87	0.084	--		--	--	--		--	--	18		0.883	0.085
Cobalt, Total	90	520	23	2.17		1.74	0.144	--		--	--	--		--	--	1.64	J	1.77	0.147
Copper, Total	910	NA	3100	27.1		0.87	0.224	--		--	--	--		--	--	1.52		0.883	0.228
Iron, Total	NA	NA	NA	7320		4.35	0.786	--		--	--	--		--	--	11900		4.42	0.798
Lead, Total	90	NA	400	**306**		4.35	0.233	--		--	--	--		--	--	5.13		4.42	0.237
Magnesium, Total	NA	NA	NA	438		8.7	1.34	--		--	--	--		--	--	1210		8.83	1.36
Manganese, Total	NA	87000	1900	80		0.87	0.138	--		--	--	--		--	--	19.2		0.883	0.14
Mercury, Total	0.1	520000	23	**0.342**		0.076	0.049	--		--	--	--		--	--	ND		0.075	0.049
Nickel, Total	48	20000	1600	5.53		2.17	0.21	--		--	--	--		--	--	3.7		2.21	0.214
Potassium, Total	NA	NA	NA	275		217	12.5	--		--	--	--		--	--	652		221	12.7
Selenium, Total	11	NA	390	ND		1.74	0.224	--		--	--	--		--	--	ND		1.77	0.228
Silver, Total	0.5	NA	390	ND		0.87	0.246	--		--	--	--		--	--	ND		0.883	0.25
Sodium, Total	NA	NA	NA	38.4	J	174	2.74	--		--	--	--		--	--	30.2	J	177	2.78
Vanadium, Total	NA	170000	390	24.6		0.87	0.176	--		--	--	--		--	--	24.1		0.883	0.179
Zinc, Total	930	NA	23000	248		4.35	0.255	--		--	--	--		--	--	12		4.42	0.259
GENERAL CHEMISTRY																			
Solids, Total	NA	NA	NA	89.6		0.1	NA	89.1		0.1	NA	92.1		0.1	NA	89		0.1	NA

All units are presented in milligrams per kilogram (mg/kg) unless stated otherwise
SS - Sample Specific Standard generated utilizing the 2021 NJDEP EPH Category II, Ingestion/Dermal Calculator
-- - Sample not analyzed for this parameter
D - Designates the concentration of the analyte was quantified from diluted analysis; result is based on dilution.
J - Designates the concentration is below the Quantitation Limit (RL) but above the Method Detection Limit (MDL); therefore, the concentration is considered estimated.
NJ - Designates the TIC concentration was estimated based on a mass spectral library search.
P - Designates the relative percent difference (RPD) between the two gas chromatography results exceeds the method-specified criteria for this analyte.
NA - Standard not applicable because appropriate toxicological information does not exist, the groundwater remediation standard is a secondary standard, or the calculated health based criterion exceeds one million mg/kg or the soil saturation limit.
ND - Not Detected at the method detection limit (MDL).
RISRS - Residential Inhalation Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
RIDSRS - Residential Ingestion/Dermal Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
MGWSRS - Migration to Groundwater Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
Bold values and highlighted cells indicate the concentration exceeds the more stringent of the RISRS or RIDSRS
Bold and blue colored values indicate the concentration exceeds the MGWSRS
Red Bold values indicate the Method Detection Limit (MDL) is elevated and may exceed the applicable standards.

TABLE NO. 4
SUBJECT AND SURROUNDING PROPERTY USE TABLE
17087.006 - ROBERT B. JOHNSON PARK IMPROVEMENTS

BLOCK	LOT	PROPERTY USE	PROPERTY LOCATION	OWNER	STREET ADDRESS	CITY/STATE	ZIP CODE
520	15	Commercial	645 CARL MILLER BLVD	CAMDEN CITY	PO BOX 95120	CAMDEN, NJ	08101
520	5	Commercial	NS CARL MILLER 33E RAILRD	NJ DEPT OF TRANSPORTATION	PO BOX 600	TRENTON, NJ	08625
517	3	Commercial	SS ATLANTIC 204 E 7TH ST	NJ DEPT OF TRANSPORTATION	PO BOX 600	TRENTON, NJ	08625
523	10	Residential	1559 SO 8TH ST	CASTRO, DORIS E & MORALES, ANGEL A	814 POINT STREET APT B	CAMDEN, NJ	08102
444	26	Commercial	831 CARL MILLER BLVD	DABNEY, PAMELA M	8009 TARRINGTON COURT	PENNSAUKEN, NJ	08109
523	2	Residential	1543 SO 8TH ST	SMITH, MICHELLE	1343 SO 8TH STREET	CAMDEN, NJ	08104
523	3	Residential	1545 SO 8TH ST	DANA & SMITH INVESTMENT	1545 SO 8TH STREET	CAMDEN, NJ	08104
444	1	Public School	1600 SO 8TH ST	CAMDEN BOARD OF EDUCATION	1033 CAMBRIDGE STREET	CAMDEN, NJ	08105
523	5	Residential	1549 SO 8TH ST	CHAVARRIA, THALIA	7242 IRVING AVENUE	PENNSAUKEN, NJ	08109
523	19	Residential	1561 SO 8TH ST	JONES, LINDA	1561 SO 8TH STREET	CAMDEN, NJ	08104
523	26	Residential	1575 SO 8TH ST	LYNCH, BALDY LEE & ELMARIE	271 EAST 9TH STREET	BROOKLYN, NY	11218
523	36	Vacant Land	1597 SO 8TH ST	REED, EVELYN	4 MARBORO LANE	WILLINGBORO, NJ	08046
523	35	Residential	1595 SO 8TH ST	LYNCH, ELMARIE & BALDY LEE	271 EAST 9TH STREET	BROOKLYN, NY	11218
522	9	Public	701 CARL MILLER BLVD	CAMDEN CITY	PO BOX 95120	CAMDEN, NJ	08101
523	22	Residential	1567 SO 8TH ST	DANA & SMITH INVESTMENT	1567 SO 8TH STREET	CAMDEN, NJ	08104
523	27	Residential	1577 SO 8TH ST	NORTON, WILLIAM L JR	1577 SO 8TH STREET	CAMDEN, NJ	08104
523	23	Residential	1569 SO 8TH ST	ADM OF VET AFFAIRS	20 WASHINGTON PLACE	NEWARK, NJ	07102
444	27	Commercial	803 CARL MILLER BLVD	YOUNG, GEORGE E & THELMA	803 CARL MILLER BLVD	CAMDEN, NJ	08104
527	1	Other Exempt (Residential)	NE MASTER & TILGHMAN DR	HOUSING AUTHORITY - CITY OF CAMDEN	2021 WATSON ST, 2ND FL	CAMDEN, NJ	08105
523	7	Residential	1553 SO 8TH ST	JOHNSON, RUBYSTEIN	1553 SO 8TH STREET	CAMDEN, NJ	08104
523	6	Residential	1551 SO 8TH ST	SMITH, GARNETT W	1129 PRINCESS AVENUE	CAMDEN, NJ	08103
523	28	Residential	1581 SO 8TH ST	DAVIS, BRIAN	1167 WHITMAN AVENUE	CAMDEN, NJ	08104
523	25	Residential	1573 SO 8TH ST	TEFERA, ABEY & TESFU, MAHDER T	23494 VIA SOLANA	MORENO VALLEY, CA	092557
523	24	Residential	1571 SO 8TH ST	HOLLAND, BERNICE & WALTER	1571 SO 8TH STREET	CAMDEN, NJ	08104
523	31	Residential	1587 SO 8TH ST	FARHAT, MAMOUN	PO BOX 2191	CINNAMINSON, NJ	08077
523	30	Residential	1585 SO 8TH ST	HOLLAND, DONALD & SONIA	1123 SO PARKVIEW DRIVE	COVINA, CA	91724
523	11	Residential	1579 SO 8TH ST	MOBLEY, CATHY	5 PLAZA WAY	VOORHEES, NJ	08043
523	32	Residential	1589 SO 8TH ST	BARKER, J & FUSSELL, C & DENNIS, J	1589 SO 8TH STREET	CAMDEN, NJ	8104
523	8	Residential	1555 SO 8TH ST	BULLOCK, EUNICE	1555 SO 8TH STREET	CAMDEN, NJ	08104
518	5	Class I Railroad	Unknown	Unknown	Unknown	Unknown	Unknown
540	60	Other Exempt (Residential)	1707-1717 SO 8TH ST	CAMDEN HOUSING AUTHORITY	2021 WATSON STREET	CAMDEN, NJ	08105
429	4	Religious/Charity	1551 SO 9TH ST	JEHOVAH'S WITNESSES SOUTH CAMDEN	1551 SO 9TH STREET	CAMDEN, NJ	08104
427	6	Religious/Charity	1500 SO 8TH ST	FIRST NAZARENE BAPTIST CHURCH	1500 SO 8TH STREET	CAMDEN, NJ	08104
523	29	Residential	1583 SO 8TH ST	VALERIO, RICARDO J	1729 SPRINGFIELD AVENUE	PENNSAUKEN, NJ	08110
520	21	Public	NS CARL MILLER 270 E RAIL	CAMDEN CITY	PO BOX 95120	CAMDEN, NJ	08101
523	34	Residential	1593 SO 8TH ST	BLUE GLOBAL, INC	PO BOX 1249	CAMDEN, NJ	08105
523	33	Residential	1591 SO 8TH ST	WAGMAN, BRACHA	1838 49TH STREET	BROOKLYN, NY	11204
444	32	Commercial	NS CARL MILLER 100 E 8TH	DABNEY, PAMELA M	8009 TARRINGTON COURT	PENNSAUKEN, NJ	08109
444	28	Commercial	NS CARL MILLER 41 E 8TH S	DABNEY, PAMELA M	8009 TARRINGTON COURT	PENNSAUKEN, NJ	08109
523	9	Residential	1557 SO 8TH ST	WHALEY, EARL C	1557 SO 8TH STREET	CAMDEN, NJ	08104
520	16	Public	NS CARL MILLER 153 E RAIL	NJ DEPT OF TRANSPORTATION	PO BOX 600	TRENTON, NJ	08625
520	26	Public	NW CARL MILLER & 7TH ST	CAMDEN CITY	PO BOX 95120	CAMDEN, NJ	08101
526	9	Public	634 CARL MILLER BLVD	NJ DEPT OF TRANSPORTATION	PO BOX 600	TRENTON, NJ	86250600
437	38	Commercial	1584 SO 8TH ST	WAYS, ANTHONY T	1345 MORTON STREET	CAMDEN, NJ	08104
518	1	Other Exempt	NW 8TH & EVERETT ST	LIBERTY PARK EST URBAN RENEWAL, LLC	575 ROUTE 70, 2ND FL	BRICK, NJ	08723
518	3	Public	CL LANSDOWN TO CL 7TH ST	CAMDEN CITY	PO BOX 95120	CAMDEN, NJ	08101
521	2	Class I Railroad	NS CARL MILLER 693 W VAN	CONSOLIDATED RAIL CORP; %TAX DEPT	THREE COMMERCIAL PL, #209	NORFOLK, VA	23510
437	2	Religious/Charity	SS MORTON 8TH TO 9TH	JEHOVAH'S WITNESSES SOUTH CAMDEN	1551 SO 9TH STREET	CAMDEN, NJ	08104
539	1.01	Public	NW CENTRAL & 7TH ST	HOUSING AUTHORITY - CITY OF CAMDEN	2020 WATSON ST, 2ND FLR	CAMDEN, NJ	08105
521	1	Public	NO CL WEBSTER E RAILROAD	NJ DEPT OF TRANSPORTATION	PO BOX 600	TRENTON, NJ	08625
444	23	Commercial	801 CARL MILLER BLVD	YOUNG, GEORGE & THELMA	803 CARL MILLER BLVD	CAMDEN, NJ	08104
541.02	7	Residential	Unknown	Unknown	Unknown	Unknown	Unknown
523	21	Residential	1565 SO 8TH ST	SANTIAGO, EDWIN & ROSYMAR	1519 SO DELAWARE STREET	PAULSBORO, NJ	08066
523	20	Residential	1563 SO 8TH ST	FULLER, PEDRO & FULLER, MARIA	1563 SO 8TH STREET	CAMDEN, NJ	08104
541.02	1	Public	1708-1718 SO 8TH ST	CAMDEN HOUSING AUTHORITY	2021 WATSON STREET	CAMDEN, NJ	08105
541.02	2	Other Exempt (Residential)	802 CARL MILLER BLVD	CAMDEN HOUSING AUTHORITY	2021 WATSON STREET	CAMDEN, NJ	08105
541.02	6	Residential	Unknown	Unknown	Unknown	Unknown	Unknown
540	2	Other Exempt (Residential)	722 CARL MILLER BLVD	CAMDEN HOUSING AUTHORITY	2021 WATSON STREET	CAMDEN, NJ	08105
523	13	Public	SS THURMAN 92 W OF 8TH ST	CAMDEN CITY	PO BOX 95120	CAMDEN, NJ	08101
525	2	Other Exempt	SW 8TH & EVERETT ST	LIBERTY PARK EST URBAN RENEWAL, LLC	575 ROUTE 70, 2ND FL	BRICK, NJ	08723
523	4	Residential	1547 SO 8TH ST	TYREE, THOMAS & BETTY	1547 SO 8TH STREET	CAMDEN, NJ	08104
540	8	Residential	Unknown	Unknown	Unknown	Unknown	Unknown
540	4	Residential	Unknown	Unknown	Unknown	Unknown	Unknown
541.02	5	Residential	Unknown	Unknown	Unknown	Unknown	Unknown
541.02	4	Residential	Unknown	Unknown	Unknown	Unknown	Unknown
540	7	Residential	Unknown	Unknown	Unknown	Unknown	Unknown
541.02	3	Residential	Unknown	Unknown	Unknown	Unknown	Unknown
523	1	Residential	1541 SO 8TH ST	HALYARD, LEON & MARGARET V	1541 SO 8TH STREET	CAMDEN, NJ	08104
524	10	Other Exempt	SW EVERETT & 7TH STS	LIBERTY PARK EST URBAN RENEWAL, LLC	575 ROUTE 70, 2ND FL	BRICK, NJ	08723
540	3	Residential	Unknown	Unknown	Unknown	Unknown	Unknown
540	5	Residential	Unknown	Unknown	Unknown	Unknown	Unknown
540	6	Residential	Unknown	Unknown	Unknown	Unknown	Unknown
539	1.02	Public	SW 7TH & CARL MILLER BLVD	CAMDEN REDEVELOPMENT AGENCY	520 MARKET ST, 13TH FL	CAMDEN, NJ	08102

TABLE NO. 1
SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
17087.006 ROBERT B. JOHNSON PARK - CAP-IN-PLACE ASSESSMENT

SAMPLE ID:				CP-1				CP-2				CP-3				CP-4				CP-5			
LAB ID:				L2237235-01				L2237235-02				L2237235-03				L2237235-04				L2237235-05			
COLLECTION DATE:				7/12/2022				7/12/2022				7/12/2022				7/12/2022				7/12/2022			
SAMPLE DEPTH:				0-0.5'				0.5-1.0'				0-0.5'				0.5-1.0'				0-0.5'			
SAMPLE MATRIX:				SOIL				SOIL				SOIL				SOIL				SOIL			
ANALYTE	**MGWSRS**	**RISRS**	**RIDSRS**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
Extractable Petroleum Hydrocarbons (EPH) Cat II																							
Total EPH	NA	NA	5300	-		-	-	-		-	-	179		24.3	24.3	83		27.5	27.5	141		24.4	24.4
EPH Category II - Fractionated																							
C10-C12 Aromatics	NA	NA	NA	190		86.5	86.5	ND		88.1	88.1	-	-	-	-	-	-	-	-	-	-	-	-
C12-C16 Aromatics	NA	NA	NA	336		130	130	137		132	132	-	-	-	-	-	-	-	-	-	-	-	-
C16-C21 Aromatics	NA	NA	NA	3260		216	216	705		220	220	-	-	-	-	-	-	-	-	-	-	-	-
C21-C36 Aromatics	NA	NA	NA	4080		346	346	1690		352	352	-	-	-	-	-	-	-	-	-	-	-	-
Total EPH	NA	NA	*SS	**7870**		86.5	86.5	**2530**		88.1	88.1	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (VOCs)																							
Benzene	0.0094	2.2	3	**0.0093**		0.00064	0.00021	0.00028	J	0.00064	0.00021	ND		0.00053	0.00018	ND		0.00071	0.00024	ND		0.00056	0.00018
Toluene	7.8	NA	6300	0.01		0.0013	0.00069	ND		0.0013	0.00069	ND		0.0011	0.00058	ND		0.0014	0.00078	ND		0.0011	0.00061
Ethylbenzene	15	10	7800	0.0021		0.0013	0.00018	ND		0.0013	0.00018	ND		0.0011	0.00015	ND		0.0014	0.0002	ND		0.0011	0.00016
Xylenes, Total	19	NA	12000	0.048		0.0013	0.00037	ND		0.0013	0.00037	ND		0.0011	0.00031	ND		0.0014	0.00042	ND		0.0011	0.00032
Styrene	2.1	NA	16000	0.0051		0.0013	0.00025	ND		0.0013	0.00025	ND		0.0011	0.00021	ND		0.0014	0.00028	ND		0.0011	0.00022
Isopropylbenzene	22	NA	7800	0.00057	J	0.0013	0.00014	ND		0.0013	0.00014	ND		0.0011	0.00012	ND		0.0014	0.00016	ND		0.0011	0.00012
Methyl Acetate	22	NA	78000	0.015		0.0051	0.0012	ND		0.0051	0.0012	0.0062		0.0043	0.001	0.0021	J	0.0057	0.0014	ND		0.0045	0.0011
Total VOCs	NA	NA	NA	0.09007	-	-	-	0.00028	-	-	-	0.0062	-	-	-	0.0021	-	-	-	-	-	-	-
VOC TICs																							
Total TIC Compounds	NA	NA	NA	0.868	J	0	0	0.009	J	0	0	0.007	J	0	0	0.003	J	0	0	-		-	-
VOCs High (5035)																							
1,2,4-Trichlorobenzene	0.52	94	780	**1.4**		0.12	0.017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Semivolatile Organic Compounds (SVOCs)																							
Acenaphthene		NA	3600	12		2.9	0.3	2.5		1.5	0.16	0.29	J	0.69	0.072	0.15		0.15	0.016	0.14		0.14	0.015
Hexachlorobenzene	0.17	NA	0.43	**ND**		**1**	**0.35**	**ND**		**0.54**	**0.18**	**ND**		**0.25**	**0.083**	ND		0.055	0.018	ND		0.051	0.017
Bis(2-chloroethyl)ether	0.33	NA	0.63	**ND**		**1.3**	**0.44**	**ND**		**0.67**	**0.22**	**ND**		**0.31**	**0.1**	ND		0.069	0.023	ND		0.064	0.021
2,4-Dinitrotoluene	0.27	NA	0.8	**ND**		**1.8**	**0.61**	**ND**		**0.93**	**0.31**	**ND**		**0.43**	**0.14**	ND		0.096	0.032	ND		0.088	0.029
2,6-Dinitrotoluene	0.27	NA	0.8	**ND**		**1.4**	**0.48**	**ND**		**0.74**	**0.25**	**ND**		**0.34**	**0.11**	ND		0.076	0.025	ND		0.07	0.023
Fluoranthene	NA	NA	2400	410		11	2.1	19		1.1	0.21	7.6		0.52	0.099	2.8		0.12	0.022	3.1		0.11	0.02
Hexachlorobutadiene	0.17	NA	8.9	**ND**		**1.4**	**0.45**	**ND**		**0.69**	**0.23**	**ND**		**0.32**	**0.11**	ND		0.071	0.024	ND		0.066	0.022
Hexachloroethane	0.17	NA	17	**ND**		**1.8**	**0.59**	**ND**		**0.91**	**0.3**	**ND**		**0.42**	**0.14**	ND		0.093	0.031	ND		0.086	0.029
Isophorone	0.23	NA	570	**ND**		**1.2**	**0.41**	**ND**		**0.63**	**0.21**	**ND**		**0.29**	**0.097**	ND		0.064	0.021	ND		0.06	0.02
Naphthalene	19	5.7	2500	**87**		3.6	0.44	**18**		1.9	0.23	0.62	J	0.87	0.1	0.16	J	0.19	0.023	0.12	J	0.18	0.022
Nitrobenzene	0.17	7.5	160	**ND**		**1.6**	**0.54**	**ND**		**0.83**	**0.28**	**ND**		**0.38**	**0.13**	ND		0.085	0.028	ND		0.079	0.026
n-Nitrosodi-n-propylamine	0.17	NA	0.17	**ND**		**0.92**	**0.3**	**ND**		**0.47**	**0.16**	**ND**		**0.22**	**0.072**	ND		0.048	0.016	ND		0.045	0.015
Bis(2-ethylhexyl)phthalate	14	NA	39	ND		3.6	0.38	ND		1.9	0.19	0.4	J	0.87	0.09	0.055	J	0.19	0.02	2		0.18	0.018
Butyl benzyl phthalate	29	NA	290	ND		3.6	0.49	ND		1.9	0.25	ND		0.87	0.12	ND		0.19	0.026	0.059	J	0.18	0.024
Benzo(a)anthracene	0.71	78000	5.1	**200**		6.1	2	**18**		0.63	0.21	**4.1**		0.29	0.098	**1.3**		0.064	0.022	**1.6**		0.06	0.02
Benzo(a)pyrene	NA	3500	0.51	**210**		13	4.4	**19**		1.4	0.46	**4.8**		0.63	0.21	**1.2**		0.14	0.047	**1.5**		0.13	0.043
Benzo(b)fluoranthene	NA	78000	5.1	**220**		4.6	1.5	**16**		0.47	0.16	**5.9**		0.22	0.072	1.7		0.048	0.016	1.9		0.045	0.015
Benzo(k)fluoranthene	NA	780000	51	**61**		0.77	0.26	4.6		0.39	0.13	1.6		0.18	0.061	0.48		0.04	0.013	0.7		0.037	0.012
Chrysene	NA	NA	510	**170**		11	1.9	20		1.1	0.19	3.8		0.52	0.089	1.5		0.12	0.02	1.6		0.11	0.018
Acenaphthylene	NA	NA	NA	96		2.9	0.41	22		1.5	0.21	0.91		0.69	0.097	0.23		0.15	0.021	0.41		0.14	0.02
Anthracene	NA	NA	18000	82		2.2	0.32	12		1.1	0.17	1.2		0.52	0.077	0.41		0.12	0.017	0.58		0.11	0.016
Benzo(ghi)perylene	NA	NA	NA	100		2.9	0.43	9.5		1.5	0.22	2.3		0.69	0.1	0.74		0.15	0.022	0.89		0.14	0.021
Fluorene	NA	NA	2400	69		3.6	0.35	8.7		1.9	0.18	0.42	J	0.87	0.083	0.13	J	0.19	0.018	0.2		0.18	0.017
Phenanthrene	NA	NA	NA	320		11	1.3	25		1.1	0.13	4.5		0.52	0.062	1.9		0.12	0.014	2.2		0.11	0.013
Dibenzo(a,h)anthracene	NA	7800	0.51	**23**		1.3	0.42	**2.8**		0.65	0.22	**0.57**		0.3	0.1	0.2		0.067	0.022	0.24		0.062	0.02
Indeno(1,2,3-cd)pyrene	NA	78000	5.1	**130**		1.5	0.51	**9.2**		0.78	0.26	2.6		0.36	0.12	0.84		0.08	0.027	1		0.074	0.025
Pyrene	NA	NA	1800	320		11	1.6	30		1.1	0.16	6.5		0.52	0.075	2.5		0.12	0.017	2.7		0.11	0.015
4-Chloroaniline	0.23	NA	2.7	**ND**		**3.6**	**0.42**	**ND**		**1.9**	**0.21**	**ND**		**0.87**	**0.1**	ND		0.19	0.022	ND		0.18	0.02
Dibenzofuran	NA	NA	NA	46		3.6	0.32	ND		1.9	0.16	0.28	J	0.87	0.076	0.1	J	0.19	0.017	0.13	J	0.18	0.016
2-Methylnaphthalene	3.1	NA	240	**38**		4.4	0.39	**17**		2.2	0.2	0.25	J	1	0.092	0.15	J	0.23	0.02	0.088	J	0.21	0.019
2,4-Dichlorophenol	0.19	NA	190	**ND**		**1.8**	**0.59**	**ND**		**0.9**	**0.3**	**ND**		**0.42**	**0.14**	ND		0.092	0.031	ND		0.085	0.028
2,4-Dinitrophenol	0.33	NA	130	**ND**		**5.2**	**1.7**	**ND**		**2.7**	**0.87**	**ND**		**1.2**	**0.4**	ND		0.28	0.089	ND		0.26	0.083
Phenol	21	39000	19000	3.8		3.6	0.43	ND		1.9	0.22	ND		0.87	0.1	0.034	J	0.19	0.023	ND		0.18	0.021
2-Methylphenol	0.77	NA	320	**0.92**	J	3.6	0.57	**ND**		**1.9**	**0.29**	**ND**		**0.87**	**0.13**	ND		0.19	0.03	ND		0.18	0.027
3-Methylphenol/4-Methylphenol	0.75	NA	630	**3.1**	J	5.2	0.53	**ND**		**2.7**	**0.27**	**ND**		**1.2**	**0.12**	0.045	J	0.28	0.028	ND		0.26	0.026
Carbazole	NA	NA	NA	15		3.6	0.23	0.75	J	1.9	0.12	0.46	J	0.87	0.055	0.12	J	0.19	0.012	0.23		0.18	0.011
Benzaldehyde	NA	NA	170	ND		4.8	0.57	ND		2.5	0.29	ND		1.1	0.13	ND		0.25	0.03	0.11	J	0.23	0.028
Biphenyl	NA	NA	87	7.8	J	8.3	0.47	1.9	J	4.2	0.24	ND		2	0.11	0.029	J	0.44	0.025	ND		0.4	0.023
Atrazine	0.33	NA	220	**ND**		**2.9**	**1.3**	**ND**		**1.5**	**0.65**	**ND**		**0.69**	**0.3**	ND		0.15	0.067	ND		0.14	0.062
2,3,4,6-Tetrachlorophenol	26	NA	1900	ND		3.6	0.74	ND		1.9	0.38	ND		0.87	0.18	ND		0.19	0.039	ND		0.18	0.036
1,4-Dioxane	0.067	45	7	**ND**		**0.55**	**0.17**	**ND**		**0.28**	**0.085**	**ND**		**0.13**	**0.04**	ND		0.029	0.0087	ND		0.027	0.0081
Total SVOCs	NA	NA	NA	2144.62	-	-	-	255.95	-	-	-	49.1	-	-	-	16.773	-	-	-	21.497	-	-	-
SVOC TICs																							
Total TIC Compounds	NA	NA	NA	467	J	0	0	143	J	0	0	9.87	J	0	0	6.76	J	0	0	7.6	J	0	0
Pesticides																							
Beta-BHC	0.0046	NA	0.3	**ND**		**0.017**	**0.00645**	ND		0.00175	0.00066	ND		0.00164	0.00062	ND		0.00184	0.00069	ND		0.00166	0.00063
Heptachlor	0.083	NA	0.15	**0.689**		0.0085	0.00381	ND		0.00087	0.00039	ND		0.00082	0.00036	ND		0.00091	0.00041	ND		0.00083	0.00037
Heptachlor epoxide	0.081	NA	0.076	**0.141**	IP	0.0319	0.00956	ND		0.00329	0.00098	ND		0.00308	0.00092	ND		0.00344	0.00103	ND		0.00312	0.00093
4,4'-DDE	0.47	NA	2	ND		0.017	0.00393	0.0877	P	0.00175	0.0004	0.0317	P	0.00164	0.00038	0.00727		0.00184	0.00042	0.00937		0.00166	0.00038
4,4'-DDD	0.47	NA	2.3	ND		0.017	0.00606	ND		0.00175	0.00062	0.00592	IP	0.00164	0.00058	ND		0.00184	0.00065	0.00124	JIP	0.00166	0.00059
4,4'-DDT	0.67	NA	1.9	ND		0.0319	0.0137	0.192	P	0.00658	0.00282	0.0252		0.00308	0.00132	ND		0.00344	0.00148	0.00984		0.00312	0.00134
Chlordane	1.4	NA	0.27	**98.2**		2.83	1.13	ND		0.0146	0.00581	ND		0.0137	0.00544	ND		0.0153	0.00608	ND		0.0139	0.00552
cis-Chlordane	1.4	NA	0.27	**14.7**	P	0.425	0.118	ND		0.00219	0.00061	ND		0.00205	0.00057	ND		0.00229	0.00063	0.00358	IP	0.00208	0.00058
trans-Chlordane	1.4	NA	0.27	**11.6**		0.425	0.112	ND		0.00219	0.00057	ND		0.00205	0.00054	ND		0.00229	0.0006	0.00194	JIP	0.00208	0.00055
Polychlorinated Biphenyls (PCBs)																							
Aroclor 1260	1.6	NA	0.25	ND		0.183	0.0339	0.0887	J	0.183	0.0338	0.0621		0.0332	0.00613	ND		0.0383	0.00708	0.0364		0.0344	0.00636
Aroclor 1268	1.6	NA	0.25	ND		0.183	0.019	0.0298	J	0.183	0.0189	0.0326	J	0.0332	0.00344	ND		0.0383	0.00397	0.0134	J	0.0344	0.00356
PCBs, Total	1.6	NA	0.25	ND		0.183	0.0163	0.118	J	0.183	0.0162	0.0947	J	0.0332	0.00294	ND		0.0383	0.0034	0.0498	J	0.0344	0.00306
Total Metals																							
Aluminum, Total	NA	NA	78000	2260		8.77	2.37	3130		8.52	2.3	2970		8.31	2.24	14800		9.27	2.5	3530		8.54	2.3
Antimony, Total	5.4	NA	31	3.82	J	4.38	0.333	3.85	J	4.26	0.324	5.19		4.15	0.316	1.84	J	4.64	0.352	1.09	J	4.27	0.324
Arsenic, Total	19	1100	19	7.35		0.877	0.182	11.1		0.852	0.177	8.73		0.831	0.173	7.84		0.927	0.193	5.42		0.854	0.178
Barium, Total	2100	870000	16000	1080		0.877	0.152	236		0.852	0.148	254		0.831	0.144	362		0.927	0.161	86.2		0.854	0.148
Beryllium, Total	0.7	2000	160	0.21	J	0.438	0.029	0.392	J	0.426	0.028	0.216	J	0.415	0.027	**0.881**		0.464	0.031	0.239	J	0.427	0.028
Cadmium, Total	1.9	2600	71	1.24		0.877	0.086	1.5		0.852	0.083	**2.23**		0.831	0.081	0.779	J	0.927	0.091	0.709	J	0.854	0.084
Calcium, Total	NA	NA	NA	8390		8.77	3.07	2640		8.52	2.98	5030		8.31	2.91	39000		9.27	3.24	2540		8.54	2.99
Chromium, Total	NA	NA	NA	43.3		0.877	0.084	24.9		0.852	0.082	14.4		0.831	0.08	28.8		0.927	0.089	10.6		0.854	0.082
Cobalt, Total	90	520	23	17.1		1.75	0.146	4.07		1.7	0.141	3.47		1.66	0.138	9.07		1.85	0.154	2.08		1.71	0.142
Copper, Total	910	NA	3100	117		0.877	0.226	123		0.852	0.22	116		0.831	0.214	150		0.927	0.239	29.9		0.854	0.22
Iron, Total	NA	NA	NA	9130		4.38	0.792	17500		4.26	0.769	15300		4.15	0.75	10700		4.64	0.837	10100		4.27	0.771
Lead, Total	90	NA	400	**404**		4.38	0.235	**407**		4.26	0.228	**328**		4.15	0.223	**95.1**		4.64	0.248	**108**		4.27	0.229
Magnesium, Total	NA	NA	NA	811		8.77	1.35	548		8.52	1.31	1370		8.31	1.28	5510		9.27	1.43	1340		8.54	1.31
Manganese, Total	NA	87000	1900	93.9		0.877	0.139	139		0.852	0.135	580		0.831	0.132	346		0.927	0.147	81.5		0.854	0.136
Mercury, Total	0.1	520000	23	**0.454**		0.075	0.049	**1.26**		0.073	0.047	**0.576**		0.075	0.049	**0.154**		0.086	0.056	**0.158**		0.076	0.049
Nickel, Total	48	20000	1600	26.8		2.19	0.212	10.1		2.13	0.206	9.5		2.08	0.201	36.9		2.32	0.224	4.8		2.13	0.207
Potassium, Total	NA	NA	NA	214	J	219	12.6	706		213	12.3	393		208	12	2070		232	13.4	607		213	12.3
Selenium, Total	11	NA	390	0.973	J	1.75	0.226	0.23	J	1.7	0.22	ND		1.66	0.214	0.371	J	1.85	0.239	ND		1.71	0.22
Silver, Total	0.5	NA	390	**0.789**	J	0.877	0.248	**ND**		**0.852**	**0.241**	0.357	J	0.831	0.235	**ND**		**0.927**	**0.262**	**ND**		**0.854**	**0.242**
Sodium, Total		NA	NA	102	J	175	2.76	118	J	170	2.68	46.9	J	166	2.62	1130		185	2.92	265		171	2.69
Vanadium, Total	NA	170000	390	64.7		0.877	0.178	28		0.852	0.173	16.9		0.831	0.169	31.2		0.927	0.188	17.1		0.854	0.173
Zinc, Total	930	NA	23000	**1120**		4.38	0.257	268		4.26	0.249	593		4.15	0.243	308		4.64	0.272	104		4.27	0.25
General Chemistry																							
Solids, Total	NA	NA	NA	89.4		0.1	NA	88.3		0.1	NA	94.7		0.1	NA	86.2		0.1	NA	92.8		0.1	NA
Cyanide, Total	20	NA	47	1	J	1.1	0.23	1.6		1.1	0.24	ND		0.98	0.21	0.32	J	1.1	0.24	ND		1	0.22

All units are presented in milligrams per kilogram (mg/kg) unless stated otherwise
SS - Sample Specific Standard generated utilizing the 2021 NJDEP EPH Category II, Ingestion/Dermal Calculator
-- - Sample not analyzed for this parameter
J - Designates the concentration is below the Quantitation Limit (RL) but above the Method Detection Limit (MDL); therefore, the concentration is considered estimated.
P - Designates the relative percent difference (RPD) between the two gas chromatography results exceeds the method-specified criteria for this analyte.
NA - Standard not applicable because appropriate toxicological information does not exist, the groundwater remediation standard is a secondary standard, or the calculated health based criterion exceeds one million mg/kg or the soil saturation limit.
ND - Not Detected at the method detection limit (MDL).
RISRS - Residential Inhalation Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
RIDSRS - Residential Ingestion/Dermal Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
MGWSRS - Migration to Groundwater Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
Bold values and highlighted cells indicate the concentration exceeds the more stringent of the RISRS or RIDSRS
Bold and blue colored values indicate the concentration exceeds the MGWSRS
Red Bold values indicate the Method Detection Limit (MDL) is elevated and may exceed the applicable standards.

TABLE NO. 1
SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
17087.006 ROBERT B. JOHNSON PARK - CAP-IN-PLACE ASSESSMENT

SAMPLE ID:				CP-6				CP-7				CP-8				CP-9				CP-10			
LAB ID:				L2237235-06				L2237235-07				L2237235-08				L2237235-09				L2237235-10			
COLLECTION DATE:				7/12/2022				7/12/2022				7/12/2022				7/12/2022				7/12/2022			
SAMPLE DEPTH:				0.5-1.0'				0-0.5'				0.5-1.0'				0.5-1.0'				0-0.5'			
SAMPLE MATRIX:				SOIL				SOIL				SOIL				SOIL				SOIL			
ANALYTE	**MGWSRS**	**RISRS**	**RIDSRS**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
Extractable Petroleum Hydrocarbons (EPH) Cat II																							
Total EPH	NA	NA	5300	43.3		26	26	572		26.2	26.2	141		24.7	24.7	478		28.1	28.1	239		24.5	24.5
Volatile Organic Compounds (VOCs)																							
Benzene	0.0094	2.2	3	ND		0.00071	0.00024	0.00072		0.00059	0.0002	ND		0.0005	0.00017	ND		0.00086	0.00029	ND		0.00078	0.00026
Total VOCs	NA	NA	NA	0	-	-	-	0.00072	-	-	-	0	-	-	-	0	-	-	-	0	-	-	-
VOC TICs																							
Total TIC Compounds	NA	NA	NA	-		-	-	-		-	-	0.024	J	0	0	-		-	-	-		-	-
Semivolatile Organic Compounds (SVOCs)																							
Acenaphthene	NA	NA	3600	0.015	J	0.14	0.015	0.9	J	1.5	0.16	0.057	J	0.14	0.015	0.48	J	0.78	0.082	0.3	J	0.7	0.073
Hexachlorobenzene	0.17	NA	0.43	ND		0.052	0.017	**ND**		**0.54**	**0.18**	ND		0.05	0.017	**ND**		**0.28**	**0.093**	**ND**		**0.25**	**0.083**
2,4-Dinitrotoluene	0.27	NA	0.8	ND		0.089	0.03	**ND**		**0.94**	**0.31**	ND		0.087	0.029	**ND**		**0.48**	**0.16**	**ND**		**0.44**	**0.14**
Fluoranthene	NA	NA	2400	0.62		0.11	0.02	26		1.1	0.22	1.7		0.1	0.02	11		0.58	0.11	7.4		0.52	0.1
Hexachlorobutadiene	0.17	NA	8.9	ND		0.067	0.022	**ND**		**0.7**	**0.24**	ND		0.065	0.022	**ND**		**0.36**	**0.12**	**ND**		**0.32**	**0.11**
Hexachloroethane	0.17	NA	17	ND		0.087	0.029	**ND**		**0.92**	**0.31**	ND		0.085	0.028	**ND**		**0.47**	**0.16**	**ND**		**0.42**	**0.14**
Naphthalene	19	5.7	2500	0.028	J	0.18	0.022	2.7		1.9	0.23	0.091	J	0.18	0.021	0.71	J	0.98	0.12	0.32	J	0.87	0.11
Nitrobenzene	0.17	7.5	160	ND		0.08	0.026	**ND**		**0.84**	**0.28**	ND		0.078	0.026	**ND**		**0.43**	**0.14**	**ND**		**0.39**	**0.13**
Bis(2-ethylhexyl)phthalate	14	NA	39	ND		0.18	0.018	0.64	J	1.9	0.2	0.11	J	0.18	0.018	0.65	J	0.98	0.1	0.43	J	0.87	0.091
Di-n-butylphthalate	NA	NA	6300	ND		0.18	0.016	ND		1.9	0.17	ND		0.18	0.016	ND		0.98	0.086	0.2	J	0.87	0.077
Benzo(a)anthracene	0.71	78000	5.1	0.31		0.06	0.02	**13**		0.64	0.21	**0.91**		0.059	0.02	**6.2**		0.33	0.11	**4.3**		0.29	0.098
Benzo(a)pyrene	NA	3500	0.51	**0.35**		0.13	0.044	**16**		1.4	0.46	**1**		0.13	0.043	**6.9**		0.71	0.24	**4.9**		0.64	0.21
Benzo(b)fluoranthene	NA	78000	5.1	0.42		0.045	0.015	**18**		0.48	0.16	1.2		0.044	0.015	**8.4**		0.24	0.081	**5.7**		0.22	0.073
Benzo(k)fluoranthene	NA	780000	51	0.14		0.038	0.012	5.4		0.4	0.13	0.4		0.037	0.012	2.5		0.2	0.068	1.6		0.18	0.061
Chrysene	NA	NA	510	0.34		0.11	0.018	12		1.1	0.19	0.92		0.1	0.018	5.8		0.58	0.1	4		0.52	0.09
Acenaphthylene	NA	NA	NA	0.068	J	0.14	0.02	4.1		1.5	0.21	0.28		0.14	0.02	1		0.78	0.11	0.73		0.7	0.098
Anthracene	NA	NA	18000	0.079	J	0.11	0.016	4.5		1.1	0.17	0.32		0.1	0.016	1.8		0.58	0.087	1.2		0.52	0.078
Benzo(ghi)perylene	NA	NA	NA	0.21		0.14	0.021	7.1		1.5	0.22	0.6		0.14	0.021	3.6		0.78	0.11	2.5		0.7	0.1
Fluorene	NA	NA	2400	0.026	J	0.18	0.017	2.7		1.9	0.18	0.085	J	0.18	0.017	0.83	J	0.98	0.094	0.41	J	0.87	0.084
Phenanthrene	NA	NA	NA	0.36		0.11	0.013	19		1.1	0.14	0.89		0.1	0.013	7.3		0.58	0.07	4.4		0.52	0.063
Dibenzo(a,h)anthracene	NA	7800	0.51	0.052	J	0.062	0.021	**1.7**		0.66	0.22	0.15		0.061	0.02	**0.83**		0.34	0.11	**0.62**		0.3	0.1
Indeno(1,2,3-cd)pyrene	NA	78000	5.1	0.22		0.075	0.025	**8.6**		0.8	0.26	0.69		0.074	0.024	4		0.41	0.14	2.8		0.37	0.12
Pyrene	NA	NA	1800	0.58		0.11	0.016	22		1.1	0.16	1.5		0.1	0.015	9.2		0.58	0.085	6.4		0.52	0.076
Dibenzofuran	NA	NA	NA	0.018	J	0.18	0.016	1.7	J	1.9	0.17	0.049	J	0.18	0.015	0.51	J	0.98	0.086	0.24	J	0.87	0.077
2-Methylnaphthalene	3.1	NA	240	ND		0.22	0.019	0.89	J	2.3	0.2	0.044	J	0.21	0.018	0.34	J	1.2	0.1	0.21	J	1	0.092
2,4-Dichlorophenol	0.19	NA	190	ND		0.086	0.029	**ND**		**0.91**	**0.3**	ND		0.084	0.028	**ND**		**0.47**	**0.16**	**ND**		**0.42**	**0.14**
2,4-Dinitrophenol	0.33	NA	130	ND		0.26	0.083	**ND**		**2.7**	**0.88**	ND		0.25	0.082	**ND**		**1.4**	**0.45**	**ND**		**1.2**	**0.41**
Pentachlorophenol	0.33	NA	1	ND		0.12	0.039	**ND**		**1.2**	**0.42**	ND		0.12	0.039	**ND**		**0.64**	**0.21**	**ND**		**0.58**	**0.19**
Phenol	21	39000	19000	ND		0.18	0.021	0.25	J	1.9	0.22	ND		0.18	0.021	ND		0.98	0.12	ND		0.87	0.1
Carbazole	NA	NA	NA	0.042	J	0.18	0.011	1.6	J	1.9	0.12	0.094	J	0.18	0.011	0.76	J	0.98	0.062	0.4	J	0.87	0.056
Benzaldehyde	NA	NA	170	ND		0.24	0.028	ND		2.5	0.3	0.088	J	0.23	0.027	ND		1.3	0.15	ND		1.2	0.14
Biphenyl	NA	NA	87	ND		0.41	0.023	0.27	J	4.3	0.25	ND		0.4	0.023	ND		2.2	0.13	ND		2	0.11
Atrazine	0.33	NA	220	ND		0.14	0.063	**ND**		**1.5**	**0.66**	ND		0.14	0.061	**ND**		**0.78**	**0.34**	**ND**		**0.7**	**0.31**
1,4-Dioxane	0.067	45	7	ND		0.027	0.0082	**ND**		**0.28**	**0.086**	ND		0.026	0.008	**ND**		**0.15**	**0.044**	**ND**		**0.13**	**0.04**
Total SVOCs	NA	NA	NA	3.878	-	-	-	169.05	-	-	-	11.178	-	-	-	72.81	-	-	-	49.06	-	-	-
SVOC TICs																							
Total TIC Compounds	NA	NA	NA	1.74	J	0	0	40.7	J	0	0	2.95	J	0	0	17	J	0	0	17.6	J	0	0
Pesticides																							
4,4'-DDE	0.47	NA	2	0.00398		0.00171	0.00039	0.0385	P	0.00176	0.0004	0.00861		0.00165	0.00038	0.0331		0.00184	0.00042	0.00303	IP	0.00167	0.00038
4,4'-DDD	0.47	NA	2.3	0.00074	JIP	0.00171	0.00061	ND		0.00176	0.00062	0.0033		0.00165	0.00058	0.003	IP	0.00184	0.00065	ND		0.00167	0.00059
4,4'-DDT	0.67	NA	1.9	0.0044		0.00321	0.00138	0.0415	P	0.00329	0.00141	0.00983		0.00309	0.00132	0.0425		0.00345	0.00148	ND		0.00314	0.00134
cis-Chlordane	1.4	NA	0.27	ND		0.00214	0.00059	ND		0.0022	0.00061	0.00397	IP	0.00206	0.00057	ND		0.0023	0.00064	ND		0.00209	0.00058
trans-Chlordane	1.4	NA	0.27	ND		0.00214	0.00056	ND		0.0022	0.00058	0.00259	IP	0.00206	0.00054	ND		0.0023	0.0006	ND		0.00209	0.00055
Polychlorinated Biphenyls (PCBs)																							
Aroclor 1260	1.6	NA	0.25	0.0164	J	0.0363	0.00671	0.0908		0.0371	0.00686	0.0849		0.0335	0.00619	0.0419		0.0378	0.00698	0.0373		0.0342	0.00632
Aroclor 1268	1.6	NA	0.25	ND		0.0363	0.00376	0.0507		0.0371	0.00385	ND		0.0335	0.00347	0.0193	J	0.0378	0.00391	0.0177	J	0.0342	0.00355
PCBs, Total	1.6	NA	0.25	0.0164	J	0.0363	0.00322	0.142		0.0371	0.0033	0.0849		0.0335	0.00298	0.0612	J	0.0378	0.00336	0.055	J	0.0342	0.00304
Total Metals																							
Aluminum, Total	NA	NA	78000	3820		8.6	2.32	4710		8.86	2.39	2320		8.25	2.23	2800		9.49	2.56	3420		8.04	2.17
Antimony, Total	5.4	NA	31	2.17	J	4.3	0.327	0.992	J	4.43	0.336	1.33	J	4.12	0.313	3.92	J	4.75	0.361	2.03	J	4.02	0.306
Arsenic, Total	19	1100	19	9.33		0.86	0.179	7.28		0.886	0.184	3.41		0.825	0.172	8.87		0.949	0.197	5.7		0.804	0.167
Barium, Total	2100	870000	16000	234		0.86	0.15	69.4		0.886	0.154	120		0.825	0.143	292		0.949	0.165	212		0.804	0.14
Beryllium, Total	0.7	2000	160	0.31	J	0.43	0.028	0.31	J	0.443	0.029	0.132	J	0.412	0.027	0.19	J	0.475	0.031	0.298	J	0.402	0.027
Cadmium, Total	1.9	2600	71	1.41		0.86	0.084	0.956		0.886	0.087	0.676	J	0.825	0.081	1.74		0.949	0.093	1.36		0.804	0.079
Calcium, Total	NA	NA	NA	2630		8.6	3.01	2450		8.86	3.1	1040		8.25	2.89	3310		9.49	3.32	7450		8.04	2.82
Chromium, Total	NA	NA	NA	15.2		0.86	0.083	12.6		0.886	0.085	8.26		0.825	0.079	15.8		0.949	0.091	13.3		0.804	0.077
Cobalt, Total	90	520	23	6.37		1.72	0.143	2.93		1.77	0.147	1.65		1.65	0.137	2.87		1.9	0.158	1.96		1.61	0.134
Copper, Total	910	NA	3100	69.4		0.86	0.222	54.1		0.886	0.228	40.4		0.825	0.213	164		0.949	0.245	75		0.804	0.208
Iron, Total	NA	NA	NA	21100		4.3	0.777	11100		4.43	0.8	6850		4.12	0.745	13200		4.75	0.857	8030		4.02	0.726
Lead, Total	90	NA	400	**395**		4.3	0.23	**93.7**		4.43	0.237	**183**		4.12	0.221	**350**		4.75	0.254	**226**		4.02	0.216
Magnesium, Total	NA	NA	NA	503		8.6	1.32	1240		8.86	1.36	254		8.25	1.27	713		9.49	1.46	1300		8.04	1.24
Manganese, Total	NA	87000	1900	178		0.86	0.137	103		0.886	0.141	41.4		0.825	0.131	136		0.949	0.151	155		0.804	0.128
Mercury, Total	0.1	520000	23	**0.253**		0.074	0.048	**0.219**		0.077	0.05	**0.284**		0.071	0.046	**0.775**		0.083	0.054	**0.412**		0.069	0.045
Nickel, Total	48	20000	1600	14.1		2.15	0.208	6.13		2.21	0.214	4.19		2.06	0.2	10.7		2.37	0.23	7.13		2.01	0.195
Potassium, Total	NA	NA	NA	312		215	12.4	520		221	12.8	164	J	206	11.9	306		237	13.7	390		201	11.6
Selenium, Total	11	NA	390	0.387	J	1.72	0.222	0.292	J	1.77	0.228	ND		1.65	0.213	0.418	J	1.9	0.245	0.467	J	1.61	0.208
Silver, Total	0.5	NA	390	0.37	J	0.86	0.243	0.425	J	0.886	0.251	**ND**		**0.825**	**0.233**	**0.702**	J	0.949	0.269	0.386	J	0.804	0.228
Sodium, Total	NA	NA	NA	61.6	J	172	2.71	39.7	J	177	2.79	15.2	J	165	2.6	47.1	J	190	2.99	65.8	J	161	2.53
Vanadium, Total	NA	170000	390	45.2		0.86	0.175	19.6		0.886	0.18	11.6		0.825	0.167	14.8		0.949	0.193	12.2		0.804	0.163
Zinc, Total	930	NA	23000	362		4.3	0.252	104		4.43	0.259	126		4.12	0.242	468		4.75	0.278	282		4.02	0.236
General Chemistry																							
Solids, Total	NA	NA	NA	90.9		0.1	NA	87.6		0.1	NA	93.5		0.1	NA	83.6		0.1	NA	94.3		0.1	NA
Cyanide, Total	20	NA	47	ND		1	0.22	0.37	J	1.1	0.24	ND		1	0.21	1	J	1.2	0.25	0.26	J	0.98	0.21

All units are presented in milligrams per kilogram (mg/kg) unless stated otherwise
SS - Sample Specific Standard generated utilizing the 2021 NJDEP EPH Category II, Ingestion/Dermal Calculator
-- - Sample not analyzed for this parameter
J - Designates the concentration is below the Quantitation Limit (RL) but above the Method Detection Limit (MDL); therefore, the concentration is considered estimated.
P - Designates the relative percent difference (RPD) between the two gas chromatography results exceeds the method-specified criteria for this analyte.
NA - Standard not applicable because appropriate toxicological information does not exist, the groundwater remediation standard is a secondary standard, or the calculated health based criterion exceeds one million mg/kg or the soil saturation limit.
ND - Not Detected at the method detection limit (MDL).
RISRS - Residential Inhalation Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
RIDSRS - Residential Ingestion/Dermal Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
MGWSRS - Migration to Groundwater Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
Bold values and highlighted cells indicate the concentration exceeds the more stringent of the RISRS or RIDSRS
Bold and blue colored values indicate the concentration exceeds the MGWSRS
Red Bold values indicate the Method Detection Limit (MDL) is elevated and may exceed the applicable standards.

TABLE NO. 1
SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
17087.006 ROBERT B. JOHNSON PARK - CAP-IN-PLACE ASSESSMENT

SAMPLE ID:				CP-11				CP-12				CP-13				CP-14				CP-15			
LAB ID:				L2237235-11				L2237235-12				L2237235-13				L2237235-14				L2237235-15			
COLLECTION DATE:				7/12/2022				7/12/2022				7/12/2022				7/12/2022				7/12/2022			
SAMPLE DEPTH:				0.5-1.0'				0-0.5'				0.5-1.0'				0-0.5'				0-0.5'			
SAMPLE MATRIX:				SOIL				SOIL				SOIL				SOIL				SOIL			
ANALYTE	**MGWSRS**	**RISRS**	**RIDSRS**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
Extractable Petroleum Hydrocarbons (EPH) Cat II																							
Total EPH	NA	NA	5300	50		25.6	25.6	202		25.3	25.3	491		23.8	23.8	167		26.3	26.3	442		27.7	27.7
Volatile Organic Compounds (VOCs)																							
Benzene	0.0094	2.2	3	ND		0.00062	0.0002	ND		0.00064	0.00021	0.0013		0.00052	0.00017	ND		0.00072	0.00024	ND		0.00082	0.00027
Toluene	7.8	NA	6300	ND		0.0012	0.00067	ND		0.0013	0.00069	0.00068	J	0.001	0.00056	ND		0.0014	0.00079	ND		0.0016	0.0009
Xylenes, Total	19	NA	12000	ND		0.0012	0.00036	ND		0.0013	0.00037	0.0019	J	0.001	0.0003	ND		0.0014	0.00042	ND		0.0016	0.00048
Styrene	2.1	NA	16000	ND		0.0012	0.00024	ND		0.0013	0.00025	0.00027	J	0.001	0.0002	ND		0.0014	0.00028	ND		0.0016	0.00032
Total VOCs	NA	NA	NA	0	-	-	-	0	-	-	-	0.00411	-	-	-	0.51	-	-	-	0	-	-	-
VOC TICs																							
Total TIC Compounds	NA	NA	NA	0		-	-	0.009	J	0	0	0.249	J	0	0	0.005	J	0	0	0		-	-
Semivolatile Organic Compounds (SVOCs)																							
Acenaphthene	NA	NA	3600	0.024	J	0.15	0.015	0.23	J	1.4	0.15	0.76	J	1.4	0.14	0.059	J	0.14	0.015	0.67	J	1.6	0.16
Hexachlorobenzene	0.17	NA	0.43	ND		0.053	0.018	ND		0.52	0.17	ND		0.49	0.16	ND		0.052	0.017	**ND**		**0.56**	**0.18**
2,4-Dinitrotoluene	0.27	NA	0.8	ND		0.091	0.03	**ND**		**0.9**	**0.3**	**ND**		**0.84**	**0.28**	ND		0.09	0.03	**ND**		**0.97**	**0.32**
Fluoranthene		NA	2400	1.3		0.11	0.021	11		1.1	0.21	18		1	0.19	2.4		0.11	0.021	34		1.2	0.22
Hexachlorobutadiene	0.17	NA	8.9	ND		0.068	0.023	**ND**		**0.67**	**0.22**	**ND**		**0.63**	**0.21**	ND		0.067	0.022	**ND**		**0.72**	**0.24**
Hexachloroethane	0.17	NA	17	ND		0.089	0.03	**ND**		**0.88**	**0.29**	**ND**		**0.82**	**0.27**	ND		0.088	0.029	**ND**		**0.95**	**0.32**
Naphthalene	19	5.7	2500	0.064	J	0.18	0.022	0.42	J	1.8	0.22	1.8		1.7	0.21	0.12	J	0.18	0.022	3.4		1.9	0.24
Nitrobenzene	0.17	7.5	160	ND		0.082	0.027	**ND**		**0.8**	**0.27**	**ND**		**0.75**	**0.25**	ND		0.08	0.027	**ND**		**0.86**	**0.29**
Bis(2-ethylhexyl)phthalate	14	NA	39	0.053	J	0.18	0.019	ND		1.8	0.19	0.61	J	1.7	0.18	0.27		0.18	0.019	0.68	J	1.9	0.2
Benzo(a)anthracene	0.71	78000	5.1	0.62		0.062	0.021	**4.9**		0.61	0.2	**9.9**		0.57	0.19	**1.2**		0.061	0.02	**18**		0.65	0.22
Benzo(a)pyrene	NA	3500	0.51	**0.71**		0.13	0.045	**4.2**		1.3	0.44	**11**		1.2	0.41	**1.3**		0.13	0.044	**21**		1.4	0.48
Benzo(b)fluoranthene	NA	78000	5.1	0.88		0.046	0.015	**4.9**		0.46	0.15	**13**		0.43	0.14	1.6		0.046	0.015	**24**		0.49	0.16
Benzo(k)fluoranthene	NA	780000	51	0.28		0.038	0.013	1.7		0.38	0.13	3.7		0.36	0.12	0.54		0.038	0.013	7		0.41	0.14
Chrysene	NA	NA	510	0.57		0.11	0.019	4.3		1.1	0.19	8.7		1	0.17	1.3		0.11	0.018	15		1.2	0.2
Acenaphthylene	NA	NA	NA	0.2		0.15	0.02	2.5		1.4	0.2	2.1		1.4	0.19	0.5		0.14	0.02	5.1		1.6	0.22
Anthracene	NA	NA	18000	0.17		0.11	0.016	2.2		1.1	0.16	3.3		1	0.15	0.41		0.11	0.016	6.4		1.2	0.17
Benzo(ghi)perylene	NA	NA		0.41		0.15	0.022	1.9		1.4	0.21	5.5		1.4	0.2	0.82		0.14	0.021	11		1.6	0.23
Fluorene	NA	NA	2400	0.05	J	0.18	0.018	0.84	J	1.8	0.17	1.7		1.7	0.16	0.11	J	0.18	0.017	3.2		1.9	0.19
Phenanthrene	NA	NA	NA	0.58		0.11	0.013	6.2		1.1	0.13	13		1	0.12	1		0.11	0.013	24		1.2	0.14
Dibenzo(a,h)anthracene	NA	7800	0.51	0.093		0.064	0.021	0.48	J	0.63	0.21	**1.5**		0.59	0.2	0.2		0.063	0.021	**2.3**		0.68	0.22
Indeno(1,2,3-cd)pyrene	NA	78000	5.1	0.46		0.077	0.026	2.4		0.76	0.25	**6.4**		0.71	0.24	0.92		0.076	0.025	**12**		0.82	0.27
Pyrene	NA	NA	1800	1.2		0.11	0.016	8.2		1.1	0.16	15		1	0.15	2.2		0.11	0.016	29		1.2	0.17
Dibenzofuran	NA	NA	NA	0.026	J	0.18	0.016	0.34	J	1.8	0.16	1.1	J	1.7	0.15	0.054	J	0.18	0.016	1.8	J	1.9	0.17
2-Methylnaphthalene	3.1	NA	240	0.021	J	0.22	0.019	ND		2.2	0.19	0.69	J	2	0.18	0.05	J	0.22	0.019	1.2	J	2.3	0.21
2,4-Dichlorophenol	0.19	NA	190	ND		0.088	0.03	**ND**		**0.87**	**0.29**	**ND**		**0.81**	**0.27**	ND		0.087	0.029	**ND**		**0.93**	**0.31**
2,4-Dinitrophenol	0.33	NA	130	ND		0.26	0.086	**ND**		**2.6**	**0.84**	**ND**		**2.4**	**0.79**	ND		0.26	0.084	**ND**		**2.8**	**0.91**
Pentachlorophenol	0.33	NA	1	ND		0.12	0.04	**ND**		**1.2**	**0.4**	**ND**		**1.1**	**0.37**	ND		0.12	0.04	**ND**		**1.3**	**0.43**
Carbazole	NA	NA	NA	0.049	J	0.18	0.012	0.26	J	1.8	0.12	1.3	J	1.7	0.11	0.094	J	0.18	0.012	2.1		1.9	0.12
Benzaldehyde	NA	NA	170	ND		0.24	0.029	ND		2.4	0.28	ND		2.2	0.26	0.21	J	0.24	0.028	ND		2.6	0.3
Biphenyl	NA	NA	87	ND		0.42	0.024	ND		4.1	0.24	ND		3.9	0.22	ND		0.41	0.023	0.46	J	4.4	0.25
Atrazine	0.33	NA	220	ND		0.15	0.064	**ND**		**1.4**	**0.63**	**ND**		**1.4**	**0.59**	ND		0.14	0.063	**ND**		**1.6**	**0.68**
1,4-Dioxane	0.067	45	7	ND		0.028	0.0084	**ND**		**0.27**	**0.082**	**ND**		**0.25**	**0.077**	ND		0.027	0.0082	**ND**		**0.29**	**0.089**
Total SVOCs	NA	NA	NA	7.76	-	-	-	56.97	-	-	-	119.06	-	-	-	15.4	-	-	-	222.61	-	-	-
SVOC TICs																							
Total TIC Compounds	NA	NA	NA	2.39	J	0	0	7.09	J	0	0	26.6	J	0	0	6.16	J	0	0	51.8	J	0	0
Pesticides																							
Heptachlor epoxide	0.081	NA	0.076	ND		0.00331	0.00099	ND		0.00322	0.00096	ND		0.00298	0.00089	ND		0.00326	0.00097	0.00229	JIP	0.00343	0.00103
4,4'-DDE	0.47	NA	2	0.00761		0.00176	0.0004	0.0118		0.00172	0.00039	0.0063		0.00159	0.00036	0.039		0.00174	0.0004	0.0141	IP	0.00183	0.00042
4,4'-DDD	0.47	NA	2.3	0.00166	JP	0.00176	0.00062	0.0022	IP	0.00172	0.00061	ND		0.00159	0.00056	0.00502		0.00174	0.00062	ND		0.00183	0.00065
4,4'-DDT	0.67	NA	1.9	0.00587		0.00331	0.00142	0.0174		0.00322	0.00138	0.0204		0.00298	0.00128	0.0606		0.00326	0.0014	0.0383		0.00343	0.00147
cis-Chlordane	1.4	NA	0.27	ND		0.0022	0.00061	0.00148	JIP	0.00214	0.00059	ND		0.00198	0.00055	0.00187	JIP	0.00217	0.0006	ND		0.00229	0.00063
trans-Chlordane	1.4	NA	0.27	ND		0.0022	0.00058	ND		0.00214	0.00056	ND		0.00198	0.00052	0.00079	JIP	0.00217	0.00057	ND		0.00229	0.0006
Polychlorinated Biphenyls (PCBs)																							
Aroclor 1260	1.6	NA	0.25	0.0103	J	0.0372	0.00687	0.0223	J	0.0353	0.00652	0.0343		0.034	0.00629	0.136		0.0351	0.00648	0.0398		0.0373	0.00689
Aroclor 1268	1.6	NA	0.25	0.00465	JP	0.0372	0.00385	0.00547	J	0.0353	0.00365	0.0203	J	0.034	0.00353	ND		0.0351	0.00363	0.0228	J	0.0373	0.00386
PCBs, Total	1.6	NA	0.25	0.015	J	0.0372	0.0033	0.0278	J	0.0353	0.00313	0.0546	J	0.034	0.00302	0.136		0.0351	0.00311	0.0626	J	0.0373	0.00331
Total Metals																							
Aluminum, Total	NA	NA	78000	6430		8.84	2.39	2260		8.61	2.32	3610		8.25	2.23	2190		8.34	2.25	2650		9.04	2.44
Antimony, Total	5.4	NA	31	1.07	J	4.42	0.336	1.31	J	4.3	0.327	3.76	J	4.12	0.313	0.709	J	4.17	0.317	2.89	J	4.52	0.344
Arsenic, Total	19	1100	19	4.33		0.884	0.184	4.58		0.861	0.179	10.1		0.825	0.172	3.83		0.834	0.173	8.77		0.904	0.188
Barium, Total	2100	870000	16000	27.5		0.884	0.154	112		0.861	0.15	304		0.825	0.144	36.9		0.834	0.145	176		0.904	0.157
Beryllium, Total	0.7	2000	160	0.133	J	0.442	0.029	0.155	J	0.43	0.028	0.322	J	0.412	0.027	0.158	J	0.417	0.028	0.253	J	0.452	0.03
Cadmium, Total	1.9	2600	71	0.442	J	0.884	0.087	0.723	J	0.861	0.084	**2.42**		0.825	0.081	0.509	J	0.834	0.082	1.34		0.904	0.089
Calcium, Total	NA	NA	NA	788		8.84	3.09	1720		8.61	3.01	13700		8.25	2.89	1210		8.34	2.92	1390		9.04	3.16
Chromium, Total	NA	NA	NA	12		0.884	0.085	9.05		0.861	0.083	15.6		0.825	0.079	7.6		0.834	0.08	11.9		0.904	0.087
Cobalt, Total	90	520	23	0.778	J	1.77	0.147	1.53	J	1.72	0.143	2.68		1.65	0.137	1.3	J	1.67	0.138	2.6		1.81	0.15
Copper, Total	910	NA	3100	12.4		0.884	0.228	28.4		0.861	0.222	127		0.825	0.213	19.4		0.834	0.215	78.2		0.904	0.233
Iron, Total	NA	NA	NA	9870		4.42	0.798	8380		4.3	0.777	14400		4.12	0.745	5930		4.17	0.753	13200		4.52	0.816
Lead, Total	90	NA	400	33.6		4.42	0.237	**180**		4.3	0.231	**388**		4.12	0.221	56		4.17	0.223	**268**		4.52	0.242
Magnesium, Total	NA	NA	NA	208		8.84	1.36	645		8.61	1.32	1010		8.25	1.27	375		8.34	1.28	443		9.04	1.39
Manganese, Total	NA	87000	1900	21.5		0.884	0.14	77.3		0.861	0.137	197		0.825	0.131	50.3		0.834	0.132	121		0.904	0.144
Mercury, Total	0.1	520000	23	**0.118**		0.073	0.047	**0.17**		0.074	0.048	**0.521**		0.068	0.045	**0.119**		0.07	0.045	**0.284**		0.085	0.055
Nickel, Total	48	20000	1600	2.72		2.21	0.214	4.32		2.15	0.208	7.94		2.06	0.2	3.01		2.08	0.202	8.92		2.26	0.219
Potassium, Total	NA	NA	NA	173	J	221	12.7	422		215	12.4	368		206	11.9	254		208	12	375		226	13
Selenium, Total	11	NA	390	ND		1.77	0.228	ND		1.72	0.222	0.371	J	1.65	0.213	ND		1.67	0.215	0.262	J	1.81	0.233
Silver, Total	0.5	NA	390	**ND**		**0.884**	**0.25**	**ND**		**0.861**	**0.244**	0.371	J	0.825	0.233	**ND**		**0.834**	**0.236**	0.298	J	0.904	0.256
Sodium, Total	NA	NA	NA	10.3	J	177	2.78	10.1	J	172	2.71	61.8	J	165	2.6	15	J	167	2.63	29.6	J	181	2.85
Vanadium, Total	NA	170000	390	18.2		0.884	0.179	12.9		0.861	0.175	15.9		0.825	0.167	10.4		0.834	0.169	18.3		0.904	0.184
Zinc, Total	930	NA	23000	26.4		4.42	0.259	127		4.3	0.252	390		4.12	0.242	69.2		4.17	0.244	205		4.52	0.265
General Chemistry																							
Solids, Total	NA	NA	NA	88.5		0.1	NA	91.1		0.1	NA	95.6		0.1	NA	90.5		0.1	NA	85.2		0.1	NA
Cyanide, Total	20	NA	47	ND		1.1	0.22	ND		1.1	0.23	0.4	J	1	0.22	ND		1.1	0.23	0.67	J	1.1	0.24

All units are presented in milligrams per kilogram (mg/kg) unless stated otherwise
SS - Sample Specific Standard generated utilizing the 2021 NJDEP EPH Category II, Ingestion/Dermal Calculator
-- - Sample not analyzed for this parameter
J - Designates the concentration is below the Quantitation Limit (RL) but above the Method Detection Limit (MDL); therefore, the concentration is considered estimated.
P - Designates the relative percent difference (RPD) between the two gas chromatography results exceeds the method-specified criteria for this analyte.
NA - Standard not applicable because appropriate toxicological information does not exist, the groundwater remediation standard is a secondary standard, or the calculated health based criterion exceeds one million mg/kg or the soil saturation limit.
ND - Not Detected at the method detection limit (MDL).
RISRS - Residential Inhalation Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
RIDSRS - Residential Ingestion/Dermal Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
MGWSRS - Migration to Groundwater Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
Bold values and highlighted cells indicate the concentration exceeds the more stringent of the RISRS or RIDSRS
Bold and blue colored values indicate the concentration exceeds the MGWSRS
Red Bold values indicate the Method Detection Limit (MDL) is elevated and may exceed the applicable standards.

TABLE NO. 1
SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
17087.006 ROBERT B. JOHNSON PARK - CAP-IN-PLACE ASSESSMENT

SAMPLE ID:				CP-16				CP-17				CP-18				CP-19				CP-20			
LAB ID:				L2237235-16				L2237235-17				L2237235-18				L2237235-19				L2237235-20			
COLLECTION DATE:				7/12/2022				7/12/2022				7/12/2022				7/12/2022				7/12/2022			
SAMPLE DEPTH:				0.5-1.0'				0.5-1.0'				0.5-1.0'				0-0.5'				0-0.5'			
SAMPLE MATRIX:				SOIL				SOIL				SOIL				SOIL				SOIL			
ANALYTE	**MGWSRS**	**RISRS**	**RIDSRS**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
Extractable Petroleum Hydrocarbons (EPH) Cat II																							
Total EPH	NA	NA	5300	116		25	25	304		25.5	25.5	106		25.2	25.2	291		24.8	24.8	625		25.1	25.1
Volatile Organic Compounds (VOCs)																							
Methylene chloride	0.013	1400	50	0.0081		0.0054	0.0025	ND		0.0059	0.0027	ND		0.0055	0.0025	ND		0.0073	0.0033	ND		0.0069	0.0032
Chloroform	0.33	590	780	0.00027	J	0.0016	0.00015	ND		0.0018	0.00016	ND		0.0016	0.00015	ND		0.0022	0.0002	ND		0.0021	0.00019
Tetrachloroethene	0.0086	47	330	0.00082		0.00054	0.00021	ND		0.00059	0.00023	ND		0.00055	0.00021	ND		0.00073	0.00029	ND		0.00069	0.00027
Toluene	7.8	NA	6300	0.0018		0.0011	0.00059	ND		0.0012	0.00064	ND		0.0011	0.00059	ND		0.0014	0.00079	ND		0.0014	0.00075
Ethylbenzene	15	10	7800	0.00021	J	0.0011	0.00015	ND		0.0012	0.00016	ND		0.0011	0.00015	ND		0.0014	0.0002	ND		0.0014	0.0002
trans-1,2-Dichloroethene	0.56	NA	1300	0.00023	J	0.0016	0.00015	ND		0.0018	0.00016	ND		0.0016	0.00015	ND		0.0022	0.0002	ND		0.0021	0.00019
Trichloroethene	0.0065	3	15	0.00016	J	0.00054	0.00015	ND		0.00059	0.00016	ND		0.00055	0.00015	ND		0.00073	0.0002	ND		0.00069	0.00019
Xylenes, Total	19	NA	12000	0.00061	J	0.0011	0.00032	ND		0.0012	0.00034	ND		0.0011	0.00032	ND		0.0014	0.00042	ND		0.0014	0.0004
1,2-Dichloroethene, Total	NA	NA	NA	0.00023	J	0.0011	0.00015	ND		0.0012	0.00016	ND		0.0011	0.00015	ND		0.0014	0.0002	ND		0.0014	0.00019
Isopropylbenzene	22	NA	7800	0.00021	J	0.0011	0.00012	ND		0.0012	0.00013	ND		0.0011	0.00012	ND		0.0014	0.00016	ND		0.0014	0.00015
Total VOCs	NA	NA	NA	0.01241	-	-	-	0	-	-	-	0	-	-	-	0	-	-	-	0	-	-	-
VOC TICs																							
Total TIC Compounds	NA	NA	NA	0.009	J	0	0	0		-	-	0		-	-	0		-	-	0.011	J	0	0
Semivolatile Organic Compounds (SVOCs)																							
Acenaphthene	NA	NA	3600	0.29	J	0.71	0.074	0.94	J	1.4	0.15	0.078	J	0.14	0.015	0.13	J	0.14	0.015	1.3	J	1.4	0.14
2,4-Dinitrotoluene	0.27	NA	0.8	ND		0.44	0.15	ND		0.87	0.29	ND		0.091	0.03	ND		0.088	0.029	ND		0.86	0.29
Fluoranthene	NA	NA	2400	8.1		0.53	0.1	18		1	0.2	2.9		0.11	0.021	4.6		0.11	0.02	24		1	0.2
Hexachlorobutadiene	0.17	NA	8.9	ND		0.33	0.11	ND		0.65	0.22	ND		0.068	0.022	ND		0.066	0.022	ND		0.64	0.22
Hexachloroethane	0.17	NA	17	ND		0.43	0.14	ND		0.85	0.28	ND		0.088	0.029	ND		0.086	0.029	ND		0.84	0.28
Naphthalene	19	5.7	2500	0.36	J	0.89	0.11	0.44	J	1.8	0.21	0.17	J	0.18	0.022	0.27		0.18	0.022	0.97	J	1.7	0.21
Nitrobenzene	0.17	7.5	160	ND		0.4	0.13	ND		0.78	0.26	ND		0.081	0.027	ND		0.078	0.026	ND		0.77	0.26
Bis(2-ethylhexyl)phthalate	14	NA	39	0.99		0.89	0.092	0.75	J	1.8	0.18	0.12	J	0.18	0.019	0.17	J	0.18	0.018	0.61	J	1.7	0.18
Butyl benzyl phthalate	29	NA	290	ND		0.89	0.12	1.3	J	1.8	0.23	ND		0.18	0.024	ND		0.18	0.024	ND		1.7	0.23
Benzo(a)anthracene	0.71	78000	5.1	5		0.3	0.1	10		0.59	0.2	1.4		0.061	0.02	2.2		0.059	0.02	13		0.58	0.2
Benzo(a)pyrene	NA	3500	0.51	5.3		0.65	0.22	11		1.3	0.43	1.6		0.13	0.044	2.4		0.13	0.043	14		1.3	0.42
Benzo(b)fluoranthene	NA	78000	5.1	6.3		0.22	0.074	14		0.44	0.15	1.8		0.046	0.015	2.8		0.044	0.015	17		0.44	0.14
Benzo(k)fluoranthene	NA	780000	51	1.8		0.19	0.062	4.4		0.37	0.12	0.69		0.038	0.013	1		0.037	0.012	5.6		0.36	0.12
Chrysene	NA	NA	510	4.8		0.53	0.092	9.3		1	0.18	1.4		0.11	0.019	2.1		0.11	0.018	12		1	0.18
Acenaphthylene	NA	NA	NA	0.57	J	0.71	0.1	1.2	J	1.4	0.2	0.49		0.14	0.02	0.9		0.14	0.02	1.3	J	1.4	0.19
Anthracene	NA	NA	18000	1.2		0.53	0.079	2.9		1	0.16	0.43		0.11	0.016	0.81		0.11	0.016	3.5		1	0.15
Benzo(ghi)perylene	NA	NA		2.6		0.71	0.1	5.8		1.4	0.21	0.91		0.14	0.021	1.5		0.14	0.021	7.3		1.4	0.2
Fluorene	NA	NA	2400	0.42	J	0.89	0.086	1	J	1.8	0.17	0.12	J	0.18	0.018	0.25		0.18	0.017	1.3	J	1.7	0.17
Phenanthrene	NA	NA	NA	4.8		0.53	0.064	11		1	0.12	1.4		0.11	0.013	2.4		0.11	0.013	14		1	0.12
Dibenzo(a,h)anthracene	NA	7800	0.51	0.73		0.31	0.1	1.7		0.61	0.2	0.21		0.063	0.021	0.34		0.062	0.02	2.1		0.6	0.2
Indeno(1,2,3-cd)pyrene	NA	78000	5.1	3		0.37	0.12	7		0.74	0.24	1		0.076	0.025	1.7		0.074	0.025	9		0.73	0.24
Pyrene	NA	NA	1800	7.4		0.53	0.077	15		1	0.15	2.5		0.11	0.016	3.9		0.11	0.015	20		1	0.15
Dibenzofuran	NA	NA	NA	0.2	J	0.89	0.079	0.62	J	1.8	0.15	0.068	J	0.18	0.016	0.14	J	0.18	0.016	0.82	J	1.7	0.15
2-Methylnaphthalene	3.1	NA	240	0.37	J	1.1	0.094	0.25	J	2.1	0.18	0.057	J	0.22	0.019	0.11	J	0.21	0.019	0.49	J	2.1	0.18
2,4-Dichlorophenol	0.19	NA	190	ND		0.43	0.14	ND		0.84	0.28	ND		0.087	0.029	ND		0.085	0.028	ND		0.83	0.28
2,4-Dinitrophenol	0.33	NA	130	ND		1.3	0.42	ND		2.5	0.82	ND		0.26	0.085	ND		0.25	0.082	ND		2.5	0.81
Pentachlorophenol	0.33	NA	1	ND		0.59	0.2	ND		1.2	0.38	ND		0.12	0.04	ND		0.12	0.039	ND		1.1	0.38
3-Methylphenol/4-Methylphenol	0.75	NA	630	ND		1.3	0.13	ND		2.5	0.25	ND		0.26	0.026	ND		0.25	0.026	0.37	J	2.5	0.25
Carbazole	NA	NA	NA	0.37	J	0.89	0.057	1.2	J	1.8	0.11	0.13	J	0.18	0.012	0.19		0.18	0.011	1.7		1.7	0.11
Benzaldehyde	NA	NA	170	0.2	J	1.2	0.14	ND		2.3	0.27	ND		0.24	0.028	0.17	J	0.23	0.028	ND		2.3	0.27
Biphenyl	NA	NA	87	0.16	J	2	0.12	ND		4	0.23	ND		0.41	0.024	0.027	J	0.4	0.023	ND		4	0.22
Atrazine	0.33	NA	220	ND		0.71	0.31	ND		1.4	0.61	ND		0.14	0.064	ND		0.14	0.062	ND		1.4	0.61
1,4-Dioxane	0.067	45	7	ND		0.13	0.041	ND		0.26	0.08	ND		0.027	0.0083	ND		0.026	0.0081	ND		0.26	0.079
Total SVOCs	NA	NA	NA	54.96	-	-	-	117.8	-	-	-	17.473	-	-	-	28.107	-	-	-	153.56	-	-	-
SVOC TICs																							
Total TIC Compounds	NA	NA	NA	14.6	J	0	0	25.8	J	0	0	4.18	J	0	0	11.4	J	0	0	43.8	J	0	0
Pesticides																							
Beta-BHC	0.0046	NA	0.3	ND		0.00168	0.00063	ND		0.00162	0.00061	ND		0.00172	0.00065	ND		0.0017	0.00064	ND		0.0162	0.00614
4,4'-DDE	0.47	NA	2	0.00428		0.00168	0.00039	0.0173	P	0.00162	0.00037	0.0364		0.00172	0.00039	0.0134		0.0017	0.00039	ND		0.0162	0.00374
4,4'-DDD	0.47	NA	2.3	ND		0.00168	0.0006	ND		0.00162	0.00057	0.0049		0.00172	0.00061	0.00176	IP	0.0017	0.0006	ND		0.0162	0.00577
4,4'-DDT	0.67	NA	1.9	ND		0.00316	0.00135	0.0359		0.00303	0.0013	0.0313		0.00323	0.00138	0.0224		0.0032	0.00137	0.054		0.0303	0.013
cis-Chlordane	1.4	NA	0.27	ND		0.00211	0.00058	ND		0.00202	0.00056	ND		0.00215	0.0006	0.00246	IP	0.00213	0.00059	ND		0.0202	0.00564
Polychlorinated Biphenyls (PCBs)																							
Aroclor 1260	1.6	NA	0.25	0.0206	J	0.0356	0.00657	0.0377		0.0343	0.00634	0.0436		0.035	0.00647	0.0327	J	0.0346	0.00639	0.0202	J	0.0349	0.00644
Aroclor 1268	1.6	NA	0.25	0.00633	J	0.0356	0.00368	0.0133	J	0.0343	0.00355	0.0159	J	0.035	0.00362	0.0111	J	0.0346	0.00358	0.0179	J	0.0349	0.00361
PCBs, Total	1.6	NA	0.25	0.0269	J	0.0356	0.00316	0.051	J	0.0343	0.00304	0.0595	J	0.035	0.00311	0.0438	J	0.0346	0.00307	0.0381	J	0.0349	0.0031
Total Metals																							
Aluminum, Total	NA	NA	78000	4490		8.49	2.29	3760		8.42	2.27	3510		8.47	2.29	2710		8.16	2.2	4260		8.33	2.25
Antimony, Total	5.4	NA	31	2.29	J	4.24	0.322	2.26	J	4.21	0.32	1.74	J	4.23	0.322	0.914	J	4.08	0.31	1.42	J	4.16	0.316
Arsenic, Total	19	1100	19	13.3		0.849	0.176	8.23		0.842	0.175	7.81		0.847	0.176	5.69		0.816	0.17	7.86		0.833	0.173
Barium, Total	2100	870000	16000	202		0.849	0.148	208		0.842	0.146	120		0.847	0.147	97.7		0.816	0.142	446		0.833	0.145
Beryllium, Total	0.7	2000	160	0.263	J	0.424	0.028	0.295	J	0.421	0.028	0.229	J	0.423	0.028	0.212	J	0.408	0.027	0.358	J	0.416	0.028
Cadmium, Total	1.9	2600	71	1.2		0.849	0.083	1.68		0.842	0.083	0.999		0.847	0.083	0.898		0.816	0.08	1.49		0.833	0.082
Calcium, Total	NA	NA	NA	23100		8.49	2.97	15000		8.42	2.95	1610		8.47	2.96	2500		8.16	2.86	8840		8.33	2.92
Chromium, Total	NA	NA	NA	13.9		0.849	0.082	13.3		0.842	0.081	21.6		0.847	0.081	12.6		0.816	0.078	17.5		0.833	0.08
Cobalt, Total	90	520	23	2.97		1.7	0.141	2.86		1.68	0.14	1.98		1.69	0.14	2.6		1.63	0.136	3.61		1.66	0.138
Copper, Total	910	NA	3100	53.6		0.849	0.219	79.4		0.842	0.217	75.4		0.847	0.218	42.9		0.816	0.211	93		0.833	0.215
Iron, Total	NA	NA	NA	12000		4.24	0.766	14100		21	3.8	10100		4.23	0.765	9490		4.08	0.737	12400		4.16	0.752
Lead, Total	90	NA	400	206		4.24	0.228	349		4.21	0.226	164		4.23	0.227	126		4.08	0.219	440		4.16	0.223
Magnesium, Total	NA	NA	NA	767		8.49	1.31	1490		8.42	1.3	519		8.47	1.3	854		8.16	1.26	1290		8.33	1.28
Manganese, Total		87000	1900	124		0.849	0.135	220		0.842	0.134	79.2		0.847	0.135	79.4		0.816	0.13	188		0.833	0.132
Mercury, Total	0.1	520000	23	0.391		0.077	0.05	0.64		0.076	0.05	0.338		0.071	0.046	0.306		0.079	0.052	0.879		0.073	0.048
Nickel, Total	48	20000	1600	6.57		2.12	0.205	8.7		2.1	0.204	6.89		2.12	0.205	6.09		2.04	0.198	9.48		2.08	0.202
Potassium, Total	NA	NA	NA	354		212	12.2	429		210	12.1	463		212	12.2	493		204	11.8	403		208	12
Selenium, Total	11	NA	390	0.713	J	1.7	0.219	ND		1.68	0.217	0.246	J	1.69	0.218	ND		1.63	0.211	0.341	J	1.66	0.215
Silver, Total	0.5	NA	390	0.688	J	0.849	0.24	0.505	J	0.842	0.238	0.364	J	0.847	0.24	ND		0.816	0.231	0.325	J	0.833	0.236
Sodium, Total	NA	NA	NA	338		170	2.67	84.6	J	168	2.65	36.2	J	169	2.67	61.9	J	163	2.57	86.5	J	166	2.62
Vanadium, Total	NA	170000	390	18.6		0.849	0.172	16.2		0.842	0.171	18.9		0.847	0.172	16		0.816	0.166	16.8		0.833	0.169
Zinc, Total	930	NA	23000	224		4.24	0.249	345		4.21	0.247	163		4.23	0.248	124		4.08	0.239	331		4.16	0.244
General Chemistry																							
Solids, Total	NA	NA	NA	91.6		0.1	NA	93.7		0.1	NA	90.9		0.1	NA	92.1		0.1	NA	93.8		0.1	NA
Cyanide, Total	20	NA	47	0.24	J	1.1	0.23	ND		1	0.22	ND		1	0.22	ND		1.1	0.23	0.66	J	1	0.21

All units are presented in milligrams per kilogram (mg/kg) unless stated otherwise
SS - Sample Specific Standard generated utilizing the 2021 NJDEP EPH Category II, Ingestion/Dermal Calculator
-- - Sample not analyzed for this parameter
J - Designates the concentration is below the Quantitation Limit (RL) but above the Method Detection Limit (MDL); therefore, the concentration is considered estimated.
P - Designates the relative percent difference (RPD) between the two gas chromatography results exceeds the method-specified criteria for this analyte.
NA - Standard not applicable because appropriate toxicological information does not exist, the groundwater remediation standard is a secondary standard, or the calculated health based criterion exceeds one million mg/kg or the soil saturation limit.
ND - Not Detected at the method detection limit (MDL).
RISRS - Residential Inhalation Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
RIDSRS - Residential Ingestion/Dermal Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
MGWSRS - Migration to Groundwater Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
Bold values and highlighted cells indicate the concentration exceeds the more stringent of the RISRS or RIDSRS
Bold and blue colored values indicate the concentration exceeds the MGWSRS
Red Bold values indicate the Method Detection Limit (MDL) is elevated and may exceed the applicable standards.

TABLE NO. 1
SOIL SAMPLE ANALYTICAL RESULTS SUMMARY
17087.006 ROBERT B. JOHNSON PARK - CAP-IN-PLACE ASSESSMENT

SAMPLE ID:				CP-21				CP-22				CP-23				CP-24				CP-25				CP-26			
LAB ID:				L2237235-21				L2237235-22				L2237235-23				L2237235-24				L2237235-25				L2237235-26			
COLLECTION DATE:				7/12/2022				7/12/2022				7/12/2022				7/12/2022				7/12/2022				7/12/2022			
SAMPLE DEPTH:				0.5-1.0'				0.5-1.0'				0-0.5'				0-0.5'				0-0.5'				0-0.5'			
SAMPLE MATRIX:				SOIL				SOIL				SOIL				SOIL				SOIL				SOIL			
ANALYTE	**MGWSRS**	**RISRS**	**RIDSRS**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**	**Conc**	**Q**	**RL**	**MDL**
Extractable Petroleum Hydrocarbons (EPH) Cat II																											
Total EPH	NA	NA	5300	1180		26.1	26.1	89.8		24.7	24.7	389		27	27	915		25.1	25.1	97.9		25.6	25.6	268		25.6	25.6
Volatile Organic Compounds (VOCs)																											
Total VOCs	NA	NA	NA	0	-	-	-	0	-	-	-	0	-	-	-	0	-	-	-	0	-	-	-	0	-	-	-
VOC TICS																											
No Tentatively Identified Compounds	NA	NA	NA	ND		0	0	ND		0	0	ND		0	0	ND		0	0	ND		0	0	ND		0	0
Semivolatile Organic Compounds (SVOCs)																											
Acenaphthene	NA	NA	3600	1.5		1.5	0.16	0.67		0.14	0.014	0.24		0.16	0.016	0.79	J	1.4	0.14	ND		0.14	0.015	0.04	J	0.14	0.015
2,4-Dinitrotoluene	0.27	NA	0.8	**ND**		**0.92**	**0.31**	ND		0.086	0.029	ND		0.099	0.033	**ND**		**0.86**	**0.29**	ND		0.088	0.029	ND		0.09	0.03
Fluoranthene	NA	NA	2400	41		1.1	0.21	4.5		0.1	0.02	12		1.2	0.23	34		1	0.2	0.43		0.11	0.02	1.6		0.11	0.021
Hexachlorobutadiene	0.17	NA	8.9	**ND**		**0.69**	**0.23**	ND		0.064	0.022	ND		0.074	0.024	**ND**		**0.64**	**0.21**	ND		0.066	0.022	ND		0.068	0.022
Hexachloroethane	0.17	NA	17	**ND**		**0.9**	**0.3**	ND		0.084	0.028	ND		0.096	0.032	**ND**		**0.84**	**0.28**	ND		0.086	0.029	ND		0.088	0.029
Naphthalene	19	5.7	2500	2.8		1.8	0.23	0.63		0.17	0.021	0.57		0.2	0.024	4.6		1.7	0.21	0.035	J	0.18	0.022	0.1	J	0.18	0.022
Nitrobenzene	0.17	7.5	160	**ND**		**0.82**	**0.28**	ND		0.077	0.026	ND		0.088	0.029	**ND**		**0.77**	**0.26**	ND		0.079	0.026	ND		0.081	0.027
Bis(2-ethylhexyl)phthalate	14	NA	39	0.66	J	1.8	0.19	ND		0.17	0.018	0.11	J	0.2	0.02	0.64	J	1.7	0.18	0.41		0.18	0.018	0.24		0.18	0.019
Butyl benzyl phthalate	29	NA	290	ND		1.8	0.25	0.12	J	0.17	0.023	ND		0.2	0.026	ND		1.7	0.23	0.08	J	0.18	0.024	0.083	J	0.18	0.024
Di-n-octylphthalate	NA	NA	630	ND		1.8	0.58	ND		0.17	0.054	ND		0.2	0.062	ND		1.7	0.54	ND		0.18	0.055	0.079	J	0.18	0.057
Benzo(a)anthracene	0.71	78000	5.1	**21**		0.62	0.21	**2.6**		0.058	0.02	**5.8**		0.066	0.022	**17**		0.58	0.19	0.3		0.06	0.02	**0.98**		0.061	0.02
Benzo(a)pyrene	NA	3500	0.51	**22**		1.4	0.45	**1.9**		0.13	0.042	**5.3**		0.14	0.048	**20**		1.3	0.42	**0.34**		0.13	0.043	**1.1**		0.13	0.044
Benzo(b)fluoranthene	NA	78000	5.1	**26**		0.47	0.16	**2.4**		0.044	0.014	**6.4**		0.05	0.016	**23**		0.44	0.14	0.4		0.045	0.015	1.4		0.046	0.015
Benzo(k)fluoranthene	NA	780000	51	8		0.39	0.13	0.66		0.036	0.012	1.8		0.042	0.014	6.3		0.36	0.12	0.12		0.037	0.012	0.46		0.038	0.013
Chrysene	NA	NA	510	18		1.1	0.19	2.3		0.1	0.018	4.7		0.12	0.02	15		1	0.18	0.25		0.11	0.018	0.88		0.11	0.019
Acenaphthylene	NA	NA	NA	6.1		1.5	0.21	0.38		0.14	0.019	2.1		0.16	0.022	5.6		1.4	0.19	0.1	J	0.14	0.02	0.34		0.14	0.02
Anthracene	NA	NA	18000	9.2		1.1	0.16	1.8		0.1	0.015	2.2		0.12	0.018	7.8		1	0.15	0.08	J	0.11	0.016	0.3		0.11	0.016
Benzo(ghi)perylene	NA	NA	NA	11		1.5	0.22	0.75		0.14	0.02	2.9		0.16	0.023	11		1.4	0.2	0.2		0.14	0.021	0.71		0.14	0.021
Fluorene	NA	NA	2400	4.5		1.8	0.18	0.92		0.17	0.017	0.83		0.2	0.019	4		1.7	0.17	0.02	J	0.18	0.017	0.073	J	0.18	0.017
Phenanthrene	NA	NA	NA	33		1.1	0.13	5.7		0.1	0.012	7.1		0.12	0.014	27		1	0.12	0.19		0.11	0.013	0.73		0.11	0.013
Dibenzo(a,h)anthracene	NA	7800	0.51	**3**		0.65	0.21	0.27		0.06	0.02	**0.73**		0.069	0.023	**2.5**		0.6	0.2	0.051	J	0.062	0.02	0.17		0.063	0.021
Indeno(1,2,3-cd)pyrene	NA	78000	5.1	**13**		0.78	0.26	0.98		0.073	0.024	3.6		0.083	0.028	**12**		0.73	0.24	0.24		0.075	0.025	0.84		0.076	0.025
Pyrene	NA	NA	1800	32		1.1	0.16	3.6		0.1	0.015	9.4		1.2	0.17	28		1	0.15	0.4		0.11	0.015	1.5		0.11	0.016
Dibenzofuran	NA	NA	NA	3.3		1.8	0.16	0.75		0.17	0.015	0.37		0.2	0.017	2.6		1.7	0.15	ND		0.18	0.016	0.044	J	0.18	0.016
2-Methylnaphthalene	3.1	NA	240	1.2	J	2.2	0.2	0.45		0.21	0.018	0.16	J	0.24	0.021	1.5	J	2.1	0.18	ND		0.21	0.019	0.047	J	0.22	0.019
2,4-Dichlorophenol	0.19	NA	190	**ND**		**0.89**	**0.3**	ND		0.083	0.028	ND		0.095	0.032	**ND**		**0.83**	**0.28**	ND		0.085	0.028	ND		0.087	0.029
2,4-Dimethylphenol	2.3	NA	1300	**ND**		**1.8**	**0.59**	ND		0.16	0.055	ND		0.19	0.063	**ND**		**1.6**	**0.55**	ND		0.17	0.056	ND		0.17	0.058
2,4-Dinitrophenol	0.33	NA	130	**ND**		**2.7**	**0.87**	ND		0.25	0.081	ND		0.28	0.092	**ND**		**2.5**	**0.81**	ND		0.26	0.083	ND		0.26	0.085
Pentachlorophenol	0.33	NA	1	**ND**		**1.2**	**0.41**	ND		0.11	0.038	ND		0.13	0.044	**ND**		**1.1**	**0.38**	ND		0.12	0.039	0.081	J	0.12	0.04
Phenol	21	39000	19000	0.23	J	1.8	0.22	0.064	J	0.17	0.02	0.067	J	0.2	0.023	ND		1.7	0.2	ND		0.18	0.021	ND		0.18	0.022
2-Methylphenol	0.77	NA	320	**ND**		**1.8**	**0.29**	0.037	J	0.17	0.027	ND		0.2	0.031	**ND**		**1.7**	**0.27**	ND		0.18	0.028	ND		0.18	0.028
3-Methylphenol/4-Methylphenol	0.75	NA	630	**ND**		**2.7**	**0.27**	0.11	J	0.25	0.025	0.045	J	0.28	0.028	**ND**		**2.5**	**0.25**	ND		0.26	0.026	ND		0.26	0.026
Carbazole	NA	NA	NA	3.2		1.8	0.12	0.84		0.17	0.011	0.4		0.2	0.013	3.1		1.7	0.11	0.021	J	0.18	0.011	0.075	J	0.18	0.012
Benzaldehyde	NA	NA	170	ND		2.4	0.29	ND		0.23	0.027	ND		0.26	0.031	ND		2.3	0.27	ND		0.23	0.028	0.031	J	0.24	0.028
Biphenyl	NA	NA	87	0.36	J	4.2	0.24	0.089	J	0.4	0.022	0.057	J	0.45	0.026	0.49	J	3.9	0.22	ND		0.4	0.023	ND		0.41	0.024
Atrazine	0.33	NA	220	**ND**		**1.5**	**0.65**	ND		0.14	0.061	ND		0.16	0.069	**ND**		**1.4**	**0.6**	ND		0.14	0.062	ND		0.14	0.064
1,4-Dioxane	0.067	45	7	**ND**		**0.28**	**0.085**	ND		0.026	0.0079	ND		0.03	0.009	**ND**		**0.26**	**0.079**	ND		0.027	0.0081	ND		0.027	0.0083
Total SVOCs	NA	NA	NA	261.05	-	-	-	32.52	-	-	-	63.979	-	-	-	226.92	-	-	-	3.667	-	-	-	11.903	-	-	-
SVOC TICs																											
Total TIC Compounds	NA	NA	NA	58.9	J	0	0	11.3	J	0	0	17.4	J	0	0	57.6	J	0	0	2.02	J	0	0	6.68	J	0	0
Pesticides																											
Beta-BHC	0.0046	NA	0.3	**ND**		**0.0181**	**0.00687**	ND		0.00169	0.00064	**ND**		**0.00927**	**0.00351**	**ND**		**0.0162**	**0.00613**	**ND**		**0.00824**	**0.00312**	**ND**		**0.0169**	**0.00642**
Dieldrin	0.024	NA	0.034	**ND**		**0.0113**	**0.00566**	0.00071	J	0.00105	0.00052	0.0189		0.00579	0.0029	**ND**		**0.0101**	**0.00505**	**ND**		**0.00515**	**0.00258**	**ND**		**0.0106**	**0.00529**
4,4'-DDE	0.47	NA	2	0.0348	IP	0.0181	0.00419	0.0131		0.00169	0.00039	0.00947		0.00927	0.00214	0.0247	IP	0.0162	0.00374	0.0336		0.00824	0.0019	0.0469		0.0169	0.00392
4,4'-DDD	0.47	NA	2.3	ND		0.0181	0.00646	0.00125	J	0.00169	0.0006	ND		0.00927	0.0033	ND		0.0162	0.00577	0.00478	J	0.00824	0.00294	0.00781	JIP	0.0169	0.00604
4,4'-DDT	0.67	NA	1.9	0.0807		0.034	0.0146	0.00999		0.00316	0.00136	0.0125	JIP	0.0174	0.00745	0.0908		0.0303	0.013	0.0247		0.0154	0.00663	0.0325	IP	0.0318	0.0136
cis-Chlordane	1.4	NA	0.27	ND		0.0226	0.00631	0.00128	JIP	0.00211	0.00058	0.00836	JIP	0.0116	0.00323	0.0117	J	0.0202	0.00563	ND		0.0103	0.00287	0.00955	JIP	0.0212	0.0059
trans-Chlordane	1.4	NA	0.27	ND		0.0226	0.00598	0.00142	JIP	0.00211	0.00055	0.0102	J	0.0116	0.00306	0.0124	J	0.0202	0.00533	ND		0.0103	0.00272	0.0128	J	0.0212	0.00559
Polychlorinated Biphenyls (PCBs)																											
Aroclor 1260	1.6	NA	0.25	**0.566**		0.19	0.0351	ND		0.0352	0.0065	0.0577		0.0392	0.00725	0.0922		0.0348	0.00644	0.00719	J	0.0351	0.0065	**0.205**		0.0345	0.00637
Aroclor 1268	1.6	NA	0.25	0.115	J	0.19	0.0197	ND		0.0352	0.00365	0.0202	J	0.0392	0.00406	0.0436		0.0348	0.00361	ND		0.0351	0.00364	ND		0.0345	0.00357
PCBs, Total	1.6	NA	0.25	**0.681**	J	0.19	0.0169	ND		0.0352	0.00312	0.0779	J	0.0392	0.00348	0.136		0.0348	0.00309	0.00719	J	0.0351	0.00312	**0.205**		0.0345	0.00306
Total Metals																											
Aluminum, Total	NA	NA	78000	2770		8.78	2.37	4000		8.19	2.21	3870		9.29	2.51	2740		8	2.16	5200		8.22	2.22	4160		8.51	2.3
Antimony, Total	5.4	NA	31	4.47		4.39	0.334	ND		4.1	0.311	3.01	J	4.65	0.353	**8.86**		4	0.304	1.49	J	4.11	0.312	1.21	J	4.26	0.324
Arsenic, Total	19	1100	19	12.5		0.878	0.183	4.34		0.819	0.17	9.92		0.929	0.193	7.06		0.8	0.166	8.47		0.822	0.171	8.04		0.851	0.177
Barium, Total	2100	870000	16000	197		0.878	0.153	34.7		0.819	0.142	291		0.929	0.162	468		0.8	0.139	134		0.822	0.143	215		0.851	0.148
Beryllium, Total	0.7	2000	160	0.246	J	0.439	0.029	0.27	J	0.41	0.027	0.316	J	0.465	0.031	0.24	J	0.4	0.026	0.321	J	0.411	0.027	0.451		0.426	0.028
Cadmium, Total	1.9	2600	71	**2.68**		0.878	0.086	0.483	J	0.819	0.08	**1.99**		0.929	0.091	**2.78**		0.8	0.078	1.01		0.822	0.081	1.13		0.851	0.083
Calcium, Total	NA	NA	NA	1960		8.78	3.07	8050		8.19	2.87	8210		9.29	3.25	3720		8	2.8	3620		8.22	2.88	4630		8.51	2.98
Chromium, Total	NA	NA	NA	18.2		0.878	0.084	10.9		0.819	0.079	23.9		0.929	0.089	21.3		0.8	0.077	20.5		0.822	0.079	14.7		0.851	0.082
Cobalt, Total	90	520	23	3.46		1.76	0.146	3.04		1.64	0.136	4.23		1.86	0.154	3.22		1.6	0.133	5.23		1.64	0.136	5.51		1.7	0.141
Copper, Total	910	NA	3100	154		0.878	0.227	11.5		0.819	0.211	94.3		0.929	0.24	350		0.8	0.206	121		0.822	0.212	65.7		0.851	0.22
Iron, Total	NA	NA	NA	21700		4.39	0.793	8890		4.1	0.74	16100		4.65	0.839	16800		4	0.722	13400		4.11	0.743	12500		4.26	0.769
Lead, Total	90	NA	400	**386**		4.39	0.235	69.9		4.1	0.22	**269**		4.65	0.249	**613**		4	0.214	**155**		4.11	0.22	**184**		4.26	0.228
Magnesium, Total	NA	NA	NA	745		8.78	1.35	1330		8.19	1.26	1070		9.29	1.43	616		8	1.23	2160		8.22	1.27	2230		8.51	1.31
Manganese, Total	NA	87000	1900	126		0.878	0.14	81.7		0.819	0.13	224		0.929	0.148	250		0.8	0.127	142		0.822	0.131	99.2		0.851	0.135
Mercury, Total	0.1	520000	23	**0.829**		0.083	0.054	**0.165**		0.07	0.046	**0.488**		0.075	0.049	**0.94**		0.076	0.049	**0.274**		0.07	0.046	**0.228**		0.073	0.048
Nickel, Total	48	20000	1600	17.7		2.2	0.212	5.11		2.05	0.198	14.1		2.32	0.225	18.3		2	0.194	14.2		2.06	0.199	7.86		2.13	0.206
Potassium, Total	NA	NA	NA	401		220	12.6	530		205	11.8	587		232	13.4	255		200	11.5	1060		206	11.8	604		213	12.3
Selenium, Total	11	NA	390	ND		1.76	0.227	ND		1.64	0.211	ND		1.86	0.24	3.6		1.6	0.206	0.329	J	1.64	0.212	0.298	J	1.7	0.22
Silver, Total	0.5	NA	390	**0.536**	J	0.878	0.248	**ND**		**0.819**	**0.232**	**0.613**	J	0.929	0.263	**2.35**		0.8	0.226	**0.699**	J	0.822	0.233	0.383	J	0.851	0.241
Sodium, Total	NA	NA	NA	29.6	J	176	2.77	26.2	J	164	2.58	39.7	J	186	2.93	45.7	J	160	2.52	64.5	J	164	2.59	92.4	J	170	2.68
Vanadium, Total	NA	170000	390	18.8		0.878	0.178	14.4		0.819	0.166	21.6		0.929	0.189	13.2		0.8	0.162	26.9		0.822	0.167	18.5		0.851	0.173
Zinc, Total	930	NA	23000	443		4.39	0.257	52.8		4.1	0.24	510		4.65	0.272	649		4	0.234	229		4.11	0.241	212		4.26	0.249
General Chemistry																											
Solids, Total	NA	NA	NA	87.1		0.1	NA	93.1		0.1	NA	83.6		0.1	NA	93.9		0.1	NA	92.8		0.1	NA	90.9		0.1	NA
Cyanide, Total	20	NA	47	1.8		1	0.22	ND		1	0.22	0.39	J	1.2	0.25	1.6		1	0.22	ND		1.1	0.23	ND		1.1	0.22

All units are presented in milligrams per kilogram (mg/kg) unless stated otherwise
SS - Sample Specific Standard generated utilizing the 2021 NJDEP EPH Category II, Ingestion/Dermal Calculator
-- - Sample not analyzed for this parameter
J - Designates the concentration is below the Quantitation Limit (RL) but above the Method Detection Limit (MDL); therefore, the concentration is considered estimated.
P - Designates the relative percent difference (RPD) between the two gas chromatography results exceeds the method-specified criteria for this analyte.
NA - Standard not applicable because appropriate toxicological information does not exist, the groundwater remediation standard is a secondary standard, or the calculated health based criterion exceeds one million mg/kg or the soil saturation limit.
ND - Not Detected at the method detection limit (MDL).
RISRS - Residential Inhalation Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
RIDSRS - Residential Ingestion/Dermal Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
MGWSRS - Migration to Groundwater Soil Remediation Standards, per N.J.A.C. 7:26D last amended May 17, 2021
Bold values and highlighted cells indicate the concentration exceeds the more stringent of the RISRS or RIDSRS
Bold and blue colored values indicate the concentration exceeds the MGWSRS
Red Bold values indicate the Method Detection Limit (MDL) is elevated and may exceed the applicable standards.

END OF REPORT