

REMOVAL WORK PLAN

366-394 WILSON AVENUE
NEWARK, NJ

GENERAL FACILITY TRACKING IDENTIFICATION # NJN986663052

BLOCK 5038, Lot 97

Docket No. CERCLA-02-2022-2012

Prepared For:

366-394 Wilson Avenue, LLC
Salomone Brothers, Inc.

Prepared By:

ENVOCARE
ENVIRONMENTAL & FACILITY MANAGEMENT

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Approvals Signature (required prior to project start):

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 _____ April Clare, QA Manager	Date: <u>01/09/2023</u>

January 2023

Project Number: 150405

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Revision Log 1.1 Date:1/9/23	
Section	Revision
1.0	Docket Number of AOC included
1.1	EPA RPM and OSC added to table
2.1	Piles labeled consistently in figures and text
2.2	Investigation timeline organized and sample results referenced as Appendices
3.2	Vacuum excavation removed due to it being unnecessary
3.4	Site plan and EPA recommended text included
3.5	Made silt fences necessary
4.1	Expanded on Silt fence maintenance
4.3	Clarified reasoning behind sample frequency
4.4	Further explained how CDM waste class data is being used as basis for sampling and disposal
4.5	Added description to how loadout is anticipated
4.6	Described steps for if additional excavation is necessary
4.7	Alternative disposal provided
4.8	Additional details provided per EPA comments
4.9	Proposed background sampling figure added
4.12	EPA recommended sentence added
5.0	Bullets points revised
6.0	Traffic controls changed
7.2	Added EPA OSC where needed

1.0 INTRODUCTION

Envocare Environmental & Facility Management (ENVOCARE or the Primary Contractor) has prepared this Removal Work Plan (RWP) on behalf of Salomone Brothers Inc. (SBI) and 366-394 Wilson Ave., LLC for the property located at 366-394 Wilson Avenue, Newark, New Jersey (the Site). This RWP should be implemented during all future soil removal activities at the Property.

This RWP is prepared in support of the work to be performed in accordance with the Administrative Settlement Agreement and Order of Consent (ASAOC) For Removal Action (Docket Number CERCLA-02-2022-2012) signed between SBI (Respondent) and the United States Environmental Protection Agency (USEPA) on August 9, 2022 (the Effective Date), as well as the Enforcement Action Memorandum for Oberwil Portion of Pierson's Creek Superfund Site OU1, Newark, Essex County, New Jersey (Action Memorandum) signed by the USEPA on July 22, 2022. This RWP supports the environmental actions to be performed by SBI as approved by and under the oversight of USEPA, as Lead Agency for the Site. SBI's objectives are to ensure that the Site conditions are understood, and appropriate actions are undertaken to protect human health and environment.

1.1 PROJECT TEAM

Table 1				
Project Team	Company	Responsibility	Phone Number	Emails
John Lynch	366-394 Wilson Avenue, LLC	Project Coordinator	973 406-2902	jlynch@salomone.com
Devang R Patel	ENVOCARE	Project Manager	732 253-5740	dpatel@envocarenj.com
	To be Determined	A901 Transporter		
Bob Sims	Clean Earth	Disposal Facility	610 256 -4605	bsims@harsco.com
Pamela Tames	U.S. Environmental Protection Agency	Remedial Program Manager (RPM)	212-637-4255	Tames.Pam@epa.gov
David Rosoff	U.S. Environmental Protection Agency	On-scene Coordinator (OSC)	732-906-6879	Rosoff.David@epa.gov

1.2 PROJECT TASKS AND SCHEDULE

The schedule for planning document preparation, stockpile sampling, post-removal sampling, data review and preparation of final deliverables will conform to the following:

Table 2 - Project Schedule					
Activity	Responsible Party	Planned Start Date	Planned Completion Date	Deliverable(s)	Deliverable due date
Stockpile Survey and Volume Stockpile Soil Volume Verification	ENVOCARE	TBD	TBD	Meeting Notes	Within 10 days
Stockpile Sampling	ENVOCARE	TBD	TBD	Field Notes	Within 10 days
Letter Report Documenting Stockpile Sample Results	ENVOCARE	TBD	TBD	Report of Analyses/Data Package	Within 10 days from receipt of soil analytical results (45 days from date of authorization)
Soil Disposal Removal	ENVOCARE	TBD	TBD	Field Notes	After 60-70 days from date of authorization
Post-removal sampling	ENVOCARE	TBD	TBD	Field Notes	Immediately After Removal of Stockpile
Laboratory analysis and reporting	ENVOCARE	TBD	TBD	Report of Analyses/Data Package, Project-Specific Summary Table	Within 25 days after sample (90-100 days from date of authorization)
Final Removal Action Completion Report	ENVOCARE	TBD	TBD	Project-Specific Report	Within 30 days after receipt of soil analytical results (120-150 days from date of authorization)

2.0 BACKGROUND INVESTIGATIONS

The Site is presently unoccupied; however, it was most recently a scrap metal recycling facility owned and operated by Globe Metals, Inc. The Site occupies 2.392 acres in an industrial area and is bordered by a railroad to the east, a vegetable oil manufacturer to the north, a chemical company to the west, and a commercial trading and hardware store to the south. The Property and surroundings are shown on a Site Location Map ([Figure 1](#)). The Site is improved with an abandoned 2-story structure on the western portion of the subject property and a smaller former building on the southwestern portion of the subject property.

2.1 OPERATIONAL HISTORY

The Site was a former scrapyard and smelter under the previous owner. As a part of due diligence activities in connection with a potential purchase of 366-394 Wilson Avenue Property, excavations and culvert installations were conducted in areas adjacent to the undefined, unnamed tributary (UT) of Pierson's Creek.

Stockpile A was generated from the northern portion of the property, while Stockpile B was generated from areas throughout the Property. Stockpile C was generated from the western boundary of the property, as well as a portion of the stream north of the Property.

2.2 PREVIOUS INVESTIGATION

CDM performed groundwater sampling of the Globes Metals Well in the unnamed tributary (UT) in December 2019. Soil and sediment samples collected in the UT between Globe and Troy adjacent to the east side of the UT were collected in August 2019 (D1, D2, D3 sediment and SO-01, SO-02 and SO-03 soil). Refer to [Appendix E](#) for analytical results.

On September 26, 2019, Salomone Brothers performed their due diligence of the site in a Limited Phase II ESA Site Assessment prior to their drainage activities (drainage activities were completed from September 21, 2019, through September 27, 2019). Activities consisted of advancing four soil borings and soil sampling throughout the property. The initial Phase II investigation in September did not include in-situ soil sampling beneath the main subject building due to accessibility issues caused by flooding, overgrowth and remnant debris. Refer to [Appendix F](#) for site activities and findings.

On December 27, 2019, Salomone Brothers conducted their Supplemental Phase II investigation to further investigate the property based on information obtained from CDM sampling from August 2019. Activities at the subject property involved advancement of twelve soil borings and the collection of eleven soil samples from the soil borings and installation of temporary monitoring wells at three of the soil boring locations plus the collection of three groundwater samples from the wells. Sampling of in-situ soils was completed beneath the main subject building. Their results indicated that in-situ soils including soils beneath the main subject building

identified contaminants above the NJDEP Impact to Ground Water Soil Screening Levels (IGWSSL) and Ground Water Quality Standards (GWQS). Refer to [Appendix C](#) for site activities and findings.

On July 10, 2020, ENVOCARE mobilized to conduct soil sampling on the property. Three total soil samples were collected for waste classification determination and disposal facility-specific parameters. The sampling frequencies were based on the facility requirements. The Clean Earth Facility requires one soil sample for every 700 cubic yards.

Test pits dug in the soil stockpiles were investigated with the use of a Photoionization Detector (PID) and a Jerome 431X (Jerome) meter to measure volatile organic compounds (VOCs) and vapor mercury (Hg), respectively. Soil sampling done in the western portion of Stockpile A identified VOCs of 7 to 9 parts per million (ppm) in the same area as petroleum impacted soil. All other areas of investigation (Stockpiles B and C) found VOCs and Hg at 0.0 ppm and 0 milligram per cubic meter (mg/m³). A soil sample for VOCs was collected from the location with the highest suspected VOC soil contamination (field instrument readings or visual evidence).

The analytical results were evaluated against the NJDEP Residential Direct Contact Soil Remediation Standards and Non-Residential Direct Contact Soil Remediation Standards (RDCSRS and NRDCSRSs), as well as the USEPA Toxicity Characteristic Leaching Procedure (TCLP) regulatory criteria.

The analytical results identified Pesticides (4,4-DDD, Chlordane, cis-Chlordane, Dieldrin, trans-Chlordane), PCBs, Semi Volatile Organics, Metals (arsenic, copper, lead, mercury, nickel, zinc) and 1,4-Dichlorobenzene above the RDCSRS/NRDCSRS standards for one or all the samples. All compounds were reported below the USEPA TCLP criteria. Based on the TCLP and Resource Conservation and Recovery Act (RCRA) characteristic analytical results, the stockpile is contaminated but non-hazardous based on chemical characteristics. Refer to [Appendix B](#) for analytical report.

On November 2, 2020, excavated soil was stockpiled into three (3) distinct soil piles during drainage improvement of the property located at both on-site and off-site areas. The stockpiled soil was discovered to contain contaminants as well as general overburden soil from the Property.

CDM Smith followed a sampling protocol based on New Jersey's Fill Material Guidance for SRP Sites (2015) during an investigation in November 2020. Representative soil samples were collected from different locations and depth horizons within each stockpile based on the following criteria: one sample collected every 20 cubic yards (CY) for the first 100 CY of material, and one sample collected every 100 CY for the next 1,000 CY of material. A total of 26 soil samples were collected from all 3 stockpiles: 7 samples from stockpile A, 11 samples from stockpile B, and 8 samples from stockpile C. One duplicate sample was collected from stockpile A for quality control. All samples were analyzed for polychlorinated biphenyls (PCBs), toxicity via Toxicity Characteristic

Leaching Procedure (TCLP), reactivity, ignitability, and corrosivity by Katahdin Analytical Services in Scarborough, Maine.

CDM Smith submitted a report to USEPA summarizing the results of November 2020 soil pile sampling, which notes that seven soil samples from Stockpile B (northeastern portion of the site, larger of the two piles in this area) detected TCLP lead above the hazardous screening criteria of USEPA. The report notes that one soil sample from Stockpile C (western portion of the site, near the unnamed tributary) detected TCLP lead above the hazardous screening criteria. The report notes that five soil samples from Stockpile A (northeastern portion of the site, smaller of the two piles in this area) detected PCBs in soil at concentrations greater than 50 ppm. Refer to [Appendix A](#) for analytical report.

2.3 GEOLOGY & HYDROGEOLOGY

Site soil data was obtained from the online Web Soil Survey application as reported by the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service. The regional soil type is mapped as Urban Land (UR) Bigapple substratum mostly covered by streets, parking lots, buildings, and other structures of urban areas. The regional subsurface is described as up to 12 inches of material underlain up to 14 inches of gravelly sand. Beneath that is up to 12 inches of loamy sand followed by up to 22 inches of gravelly sandy loam material.

Site lithology generally consists of areas of Urban Land, which are areas with highly disturbed land and impervious cover. Site lithology is assumed to be the same as the regional geology. There may be an area of Rikers loamy sand in the southeastern portion of the property for the first 6 inches as the Web Soil Survey shows it just outside that corner of the property. The loamy sand is then underlain by gravelly sand.

In addition to fill, other disturbances within and adjacent to the project areas consist of previous cutting and grading associated with parking lot, road, and underground utility construction. Historic fill consisting of brick, ash, asphalt, glass, or other materials may be present at various depth intervals throughout the Property.

3.0 SITE PREPARATION FOR FIELD WORK

3.1 PROPERTY SURVEY

A survey of the property will be conducted prior to implementation of the RWP. ENVOCARE will use a drone to map the site elevation and collect site photographs, including the stockpiles. ENVOCARE will use photogrammetry software to map the stockpile elevations relative to the site elevations. This information will be used to restore the Site.

3.2 UTILITY IDENTIFICATION AND CLEARANCES

Prior to the initiation of excavation activities to facilitate removal of the soil piles, the New Jersey One Call hotline will be contacted to facilitate the completion of utility clearance mark out at the Site.

Prior to the initiation of post-removal soil sampling under and outside the soil piles, a geophysical survey will be completed to clear the proposed soil sampling locations for the presence of subsurface utilities.

3.3 PROTECTION OF MONITORING WELLS

Caution will be exercised to protect and ensure the integrity of any existing monitoring wells (i.e., MW-14 and MW-15 previously installed on the southwestern portion of the subject property by a neighboring property owner as a part of their environmental investigation efforts).

3.4 SITE PREPARATION

Prior to the beginning of the waste characterization soil sampling and soil pile excavation activities, the Site will be prepared for removal activities. Work zones and staging areas for vehicles and equipment will be identified and delineated. Vehicles and other equipment will be staged away from the work areas (i.e., near the northern portion of the existing building). A decontamination station for personnel and equipment will be established outside of the work zones but adjacent to each excavation area. A Site plan depicting the locations of the work zones and staging areas is appended to this work plan. Refer to [Figure 1](#). Street sweeping will be made available if there is any potential for dirt to be tracked to surrounding thoroughfares and adjacent properties (i.e., Avenue L and Troy Chemical). Appropriate on-site traffic patterns (i.e. ingress and egress routes for work related vehicles) will be identified and conveyed to appropriate personnel involved in, witnessing, overseeing or potentially impacted by the work prior to the beginning of removal efforts, and appropriate Troy Chemical personnel (access agreement is under negotiation). Prior to mobilization of transportation activities, notification and coordination with Troy Chemical and other entities will be communicated with that utilize the right-of-way off of Avenue L.

3.5 SOIL EROSION AND SEDIMENT CONTROL

If required or necessary, Erosion and sediment controls will be installed prior to any soil removal activities. Best management practices (BMPs) will be followed in accordance with the typical conditions of a NJPDES construction site's erosion and stormwater discharge regulation. Silt fences will be placed around the piles prior to intrusive field activities. It is not anticipated that the removal activities will disturb more than one acre of land. However, if necessary, a Construction Activity Stormwater (5G3) General Permit will be obtained from the NJDEP Bureau of Stormwater Permitting prior to the removal activities.

4.0 SITE PREPARATION FOR FIELD WORK

4.1 SOIL PILE COVER MAINTENANCE

Prior to the implementation of field activities, such as waste characterization, soil sampling and soil pile excavation, transportation and disposal, the soil piles will be securely covered to promote protection of human health and the environment. The soil piles will be covered with weather-resistant tarps or similar material. The tarps will be covered with hay bales, sandbags and similar material in order to prevent displacement of the tarps, especially in the event of adverse weather conditions. The existing silt fences will continue to encompass the soil piles. Repair or replacement to the existing silt fences will be completed prior to the onset of field activities. Likewise, the soil pile coverings will be evaluated prior to the onset of field activities and should replacement of any of the coverings be necessary, such will also be completed prior to the onset of field activities. Monitoring of the conditions of the soil pile coverings and silt fences will be completed during the performance of any field activities related to compliance with the ASAO or the minimum, on a monthly basis during the course of work performed pursuant to the ASAO. Additionally, monitoring of the conditions of the soil pile coverings and silt fences will be completed immediately, as reasonably ascertainable, in the aftermath of an adverse weather event (e.g. flooding resulting from a significant storm).

4.2 APPLICABILITY OF REGULATIONS

ENVOCARE reviewed the previous investigation results provided by USEPA consultant CDM Smith. Since Stockpiles A, B, and C are planned for disposal, the following NJDEP and USEPA guidance and regulations will be applied:

- NJDEP Field Sampling Procedure Manual
- NJDEP Technical Guidance for Site Investigation of Soil, Remedial Investigation of Soil, and Remedial Action Verification Sampling for Soil, Version 1.2, March 2015
- NJDEP Technical Requirements for Site Remediation, N.J.A.C 7:26E
- NJDEP Administrative Requirements for the Remediation of Contaminated Sites (ARRCS) N.J.A.C. 7:26C
- NJDEP Remediation Standards, N.J.A.C. 7:26D, May 17, 2021
- NJDEP Coordination of NJDEP and USEPA PCB Remediation Policies, July 2, 2020
- USEPA Toxic Substances Control Act (TSCA)
- USEPA Resource Conservation and Recovery Act (RCRA)
- USEPA Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

The following NJDEP guidance will be applied in the event clean backfill material is brought to the Site (if necessary):

- Fill Material Guidance for SRP Sites, Version 4, October 2021

4.3 WASTE CHARACTERIZATION SOIL SAMPLING

USEPA has indicated that the area of the UT and the soils along the banks of the UT are highly contaminated. Since the soil piles were generated from these locations, they shall be considered highly contaminated for the purposes of actions completed pursuant to this RWP. Due to the potential interaction with highly contaminated soils, waste characterization soil sampling, to the extent practicable, shall be completed atop impervious material such as plastic sheeting (i.e., a decontamination pad). Site personnel conducting waste characterization soil sampling activities should minimize contact with contaminants, to the extent practicable, to reduce the need for extensive decontamination procedures. A HASP, provided under separate cover, includes a synopsis, including PPE and decontamination procedures, should any personnel encounter contaminated soils.

Waste characterization soil samples will be collected in a manner that is specified by requirements of the soil disposal facility (Clean Earth of Kearney). As noted in [Section 4.4](#), soil disposal facilities information will be provided to EPA OSC prior to loading and transporting soil offsite.

The waste classification soil samples collected by CDM Smith from stockpile A through C confirms the stockpile material exceeded hazardous waste criteria published by the EPA. However, CDM Smith only did partial analysis of the disposal requirements of the soil disposal facility. The supplement soil sampling proposed as part of this work plan will be utilized in conjunction with CDM Smith 2020 data to meet the full disposal facility acceptance criteria. All stockpile soil will be disposed of based on CDM Smith Classification of the stockpiles. The waste characterization soil samples will be collected from the stockpiles as outlined in [Table A](#).

Table A – Waste Characterization Sampling						
Stockpile ID	Estimated Volume	Sample Matrix	Sample Method/ Type	Depth (ft BGS)	Estimate Number of Samples	Proposed Laboratory Analysis
Stockpile A	300 cubic yards	Soil	Composite/ Stainless Steel Trowel	TBD	3-5	Full TCLP (minus TCLP VOCs), RCRA Characteristics
		Soil	Grab/ Stainless Steel Trowel	TBD	3-5	Full TCL/TAL CN, Paint Filter. TCLP VO
Stockpile B	700 cubic yards	Soil	Composite/ Stainless Steel Trowel	TBD	7-9	Full TCLP (minus TCLP VOCs), RCRA Characteristics
		Soil	Grab/ Stainless Steel Trowel	TBD	3-5	Full TCL/TAL CN, Paint Filter. TCLP VO
Stockpile C	200 cubic yards	Soil	Composite/ Stainless Steel Trowel	TBD	2-4	Full TCLP (minus TCLP VOCs), RCRA Characteristics
		Soil	Grab/ Stainless Steel Trowel	TBD	3-5	Full TCL/TAL CN, Paint Filter. TCLP VO

TCL – Target Compound List
TAL – Target Analyte List
RCRA – Resources Conservation and Recovery Act
CN – Cyanide by USEPA Method 9010
VOCs – Volatile Organics
TCLP -Toxicity Characteristic Leaching Procedure

The Respondent will ensure that USEPA and State personnel and their authorized representatives are allowed access at reasonable time to all laboratories utilized by Respondents in implementing this RWP. Upon request, Respondents shall provide split or duplicate samples to USEPA or its authorized representatives. Respondents shall notify USEPA not less than 7 days in advance of any sample collection activity unless shorter notice is agreed to by USEPA.

4.4 OFF-SITE DISPOSAL FACILITY COORDINATION

Following the receipt laboratory analytical data for the waste classification soil sampling, the deliverables will be directed in electronic format to the USEPA On-Scene Coordinators (OSC) and Remedial Project Managers (RPM), as specified under Paragraph 31 of the ASAOC. Thereafter, the Project Coordinator (Mr. John Lynch) or Primary Contractor (ENVOCARE) will submit the laboratory analytical data to soil treatment and recycling facilities to coordinate future off-site transportation and disposal activities in relation to the soil piles.

CDM Smith's sampling of the piles in November 2020 indicated that piles B and C yielded hazardous contaminant concentrations for lead and that the results for pile A yielded PCB concentrations indicative of Toxic Substances Control Act (TSCA) waste. As it will be expected that the contaminant concentrations identified during the next round of waste classification soil sampling of the piles will be very similar to CDM Smith's sampling of the piles, ENVOCARE recommends disposal of stockpiles as hazardous waste. Regardless of the results of this round of waste class sampling, it is anticipated that the soils will still be disposed of at the Clean Earth North Jersey facility (Kearny, New Jersey) as hazardous waste based on previously investigated classifications.

Furthermore, if the waste classification samples indicate exceedances to TSCA cleanup levels, as was the case during USEPA's sampling of the piles in November 2020, any such soils may require disposal at a facility that is approved to receive such material. Likewise, if the waste classification soil samples reveal elevated concentrations of mercury, any such soils may require disposal at a facility that is approved to receive such mercury-contaminated soils.

Such determination for the ultimate disposition of the soil piles will be made in consultation with USEPA (i.e., soils to be disposed at USEPA-approved soil disposal facilities) and in accordance with 40 C.F.R. 300.400 (Procedures for planning and implementing off-site response actions), CERCLA

42 U.S.C. 9601-9675 and NCP 300.415(b)2. CERCLA Off-Site Rule (OSR) Request Forms will be completed for all prospective disposal facilities in advance and submitted to EPA for review prior to any off-site soil disposal activities. Shown in [Appendix D](#). Following approval by the appropriate USEPA-approved off-site disposal facility, scheduling of the off-site transportation and disposal activities will proceed. Additionally, should the soil piles constitute waste material that is shipped to an out-of-state waste management facility, written notice will be provided by the Project Coordinator to the appropriate state environmental official in the receiving facility's state and to the OSC and RPM. As noted in Paragraph 37 of the Settlement, the written notice must include the following information, if available: (1) the name and location of the receiving facility, (2) the type and quantity of the Waste Material to be shipped, (3) the schedule for the shipment and (4) the method of transportation.

4.5 SOIL PILE EXCAVATION, TRANSPORTATION AND DISPOSAL

Following approval by the appropriate USEPA-approved off-site disposal facility, excavation of the soil piles will proceed, followed by off-site transportation and disposal of the soil piles at an USEPA-approved off-site disposal facility. Excavation and loading of the soil piles into dump trucks will be completed by SBI under the direction of the Project Coordinator and the USEPA OSC. Excavation and loading of the piles will be completed by utilizing excavators (e.g. John or similar model). The excavators will be used to load soils from piles into plastic lined dump trucks, which will be provided by the approved A901 disposal facility transporter/Clean Earth. The dump trucks will be furnished by the off-site soil disposal facility. Prior to the commencement of the soil excavation activities, soil erosion control measures will be implemented. Health and Safety measures will also be implemented during the excavation activities, which is provided under separate cover. The soil/sediment piles shall be removed using appropriate techniques without creating unacceptable releases into the environment. The Time Critical Removal Action (TCRA) shall be consistent with the requirement of Section 104(a)(2) of CERCLA, which states "any removal action should, to the extent practicable, contribute to the efficient performance of any long-term remedial action with respect to the release or the threatened release concerned."

The Project Coordinator will reinforce to the facility trucking firm that is contracted to transport the soil pile material off-site that their drivers are to demonstrate BMPs in order to minimize/eliminate idling of their trucks. In addition, a representative of the Respondent or the Prime Contractor will be on-site to monitor truck idling and to ensure that there is no backlog of trucks waiting to enter the work area off of Avenue L. Thereafter and once the trucks mobilize off-site, they will be instructed to avoid routes proximal to areas with an abundance of sensitive populations (i.e., residential areas, commercial corridors with existing childcare facilities, etc.)

Following receipt of the soil manifests and weight tickets, they will be maintained for future reference in the final report that will be prepared pursuant to this Settlement. The soil manifests and weight tickets, along with all records in connection with actions completed in relation to the Settlement, will be maintained for a period of at least ten years after USEPA provides Respondents

with notice that all Work has been fully performed in accordance with the Settlement. The soil manifests and weight tickets will also be provided to the USEPA OSC, and RPM as warranted.

4.6 EXTENT OF REMOVAL AND POST-REMOVAL SAMPLING

The extent of activities will be limited to the removal and off-site disposal of the three soil piles, which are currently situated above grade on the northeastern and southwestern portions of the Site. Following removal of the soil piles, post-removal sampling will be completed under and around the peripheral of the piles. It is anticipated that post-removal soil sampling laboratory analytical protocol will be based on the laboratory results for the waste classification soil sampling described in the Sampling and Analysis Plan (SAP). Post-removal soil sampling protocol will also be implemented after approval of stockpiles. The ENVOCARE project manager in consultation with USEPA OSC will be the decision maker regarding determining if sufficient soil removal is completed after review of post-excavation soil sample results. Additional excavation may be necessary, if soil sample results do not meet the EPA RMLs and/or background sample results. ENVOCARE will also use the site characterization results from the NPL site to establish the background compounds of concern concentrations. The applicability determination will be done in consultation with USEPA OSC.

NJDEP guidance provides for one soil sample per 900 square feet (ft²) to demonstrate remediation compliance plus one soil sample every 30 liner feet. To make sure enough soil samples were taken to verify we have no impact on the property, ENVOCARE recommends increasing sampling frequency to one soil sample per 400 ft² of stockpile material. One soil sample per 30 liner feet will be collected. Reference [Table B](#) for post removal sampling.

Table B - Post Removal Sampling						
Stockpile ID	Estimated Area	Sample Matrix	Sample Method/ Type	Depth (ft BGS)	Estimated Number of Samples	Proposed Laboratory Analysis
Stockpile A	1,500 Ft ²	Soil	Grab/ Stainless steel Trowel	0.5 - 1	5 – 7*	PCBs, Lead, Mercury and additional analysis based on the Full TCL/TAL stockpile soil sample results
Stockpile B	1,000 Ft ²	Soil	Grab/ Stainless Steel Trowel	0.5 - 1	5 – 7*	PCBs, Lead, Mercury and additional analysis based on the Full TCL/TAL stockpile soil sample results
Stockpile C	1,000 Ft ²	Soil	Grab/ Stainless Steel Trowel	0.5 - 1	5 – 7*	PCBs, Lead, Mercury and additional analysis based on the Full TCL/TAL stockpile soil sample results

4.7 POST-REMOVAL SITE CONTROL PROVISIONS

This RWP assumes that the soil piles will be disposed off-site. Paragraph 35 of the ASAO indicates “if USEPA determines that the excavated soil/sediment currently in piles on the Owner Respondent’s Affected Property cannot be disposed of off-Site, Respondents shall submit a proposal for Post-Removal Site Control.” These Post-Removal Site Controls shall include, but not be limited to, placement of the soil/sediment in roll-off containers, inspection of the roll-off containers every 6 months (and after major storm events for rust, damage, or leakage). Upon USEPA approval of the proposal, Respondents shall either conduct Post-Removal Site Control activities, or obtain a written commitment from another party for conduct of such activities, until such time as USEPA determines that no further Post-Removal Site Control is necessary. Respondents shall provide USEPA with documentation of all Post-Removal Site Control commitments.

Thus, if the USEPA determines that soil piles cannot be disposed off-site, a proposal for Post-Removal Site Control will be submitted to the USEPA. Please note Post-Removal Site Control methods of placing the soil/sediment from the piles into dumpsters may not be viable at the present time due to logistical constraints (supply chain issues inhibiting the number of dumpsters required to store the soil/sediment material). Such may also be an issue with the current property owner as the number of dumpsters needed would likely encompass a significant portion of the subject property and may restrict overall functional use of the Site.

If storage of the soil within dumpsters is determined not be a reasonably ascertain option, the alternative disposal option will be treatment of the soil onsite or selecting EPA approved RCRA facility. Prior to final determination ENVOCARE will discussed with USEPA OSC for alternative options.

4.8 SITE RESTORATION

Following the removal of the soil piles, the completion of post-removal soil sampling and any potential additional excavation that may be required to confirm that the extent of soil contamination associated with the piles has been removed; the areas beneath and just outside the limits of the former piles will be regraded. Such site restoration methodology will be completed to promote positive drainage away from the footprint of the former piles and to minimize erosion. If required or necessary, stabilization and re-vegetation measures will be implemented pursuant to the direction and requirements from the USEPA. If backfill is required in connection with site restoration activities, all backfill activities shall be completed pursuant to applicable NJDEP Fill Guidance and with approval from the USEPA.

The two piles of stone and gravel and the pile of stone mixed with soil are site related and were generated during the 2019 drainage work. Refer to [Appendix C](#). The stone/soil pile will be sampled for full TCL/TAL, full TCLP, RCRA characteristics, and total cyanide to fulfill soil disposal facility requirements. A minimum of three grab soil sample per pile will be collected. The location of

sampling will be discussed with the EPA OSC. The results will be compared to the applicable EPA RMLs or Remedial Cleanup standards for NPL and submitted to the USEPA OSC. The ENVOCARE project manager in consultation with the USEPA OSC will be the decision maker pertaining to the stone/soil pile disposal options.

4.9 BACKGROUND SOIL SAMPLING

The NJDEP typically requires 9 or more soil samples to establish the background contaminants of concern concentrations. A total of 10 to 12 samples are proposed outside the stockpiled area to establish background conditions. If any stone or DGA is encountered during background soil sampling, this material will not be sampled, and native soils located beneath such material would be sampled (e.g., 0.5 - 1.0 feet below ground surface). Locations will be selected based on professional judgment and in consultation with the USEPA OSC. Background sample standards will be developed with the EPA OSC after samples are collected. The background standard will be partitioned and chosen based on the respective sample location to the stockpiles on the property. Refer to [Figure 2](#) for proposed background sample locations.

Previously collected soil sampling data will also be used to develop background soil concentrations. Refer to the Sampling and Analysis Plan (SAP) cover for further information on background soil sampling.

4.10 AIR MONITORING

Refer to the Community Air Monitoring Plan (CAMP) provided under separate cover for additional information regarding air monitoring protocol in association with this project.

During TCRA activities, air quality field screening will be accomplished via the use of a PID and a Jerome® 431X (Jerome) to measure VOCs and vapor mercury in air, respectively.

The field screening will occur within the work zone and downwind of the work zone to evaluate exposure to workers and other personnel present at the site. The frequency of the monitoring will depend on the wind velocity and predominant wind direction at the time of TCRA. The area quality would then be monitored with measurements of total particulate concentration, date, time, and wind direction recorded on air monitoring logs or within a field logbook.

4.11 VEHICLE AND EQUIPMENT DECONTAMINATION

The equipment used in the handling of the soil pile materials will be decontaminated prior to leaving the Site or moving from a work zone to an area considered clean. A decontamination pad will be established on-site. The equipment that has been decontaminated will be inspected upon completion to ensure the adequacy of the process and to document the process to ensure quality control prior to the transport vehicle leaving the Site.

Decontamination will consist of one or a combination of brushing, vacuuming, or washing methods. The goal of the decontamination is to remove potential contaminants of concern (COC)-containing materials from the areas of the equipment that contact the soil piles. Transport

vehicles will be inspected to ensure that truck beds and gates are properly sealed and that there is no debris build up on them.

4.12 PRE-FINAL INSPECTION

The pre-final inspection will consist of a walkthrough of the area of the former soil piles and immediately surrounding areas, areas along the UT within the Site and the areas used for ingress and egress to facilitate the TCRA. The pre-final inspection walkthrough will be conducted by the Project Coordinator, Primary Contractor, and the USEPA OSC at his or her discretion. The purpose of the pre-final inspection will be to determine whether the provisions of the ASAO and this RWP have been fulfilled by the removal, post-removal sampling, and potential additional removal.

Materials leftover from the respondent's drainage project shall also be removed (e.g. leftover piping, etc.).

5.0 DISPOSAL OF INVESTIGATION DERIVED WASTE (IDW)

During the course of environmental sample collection, the sampling personnel will generate various types of potentially contaminated investigation-derived waste (IDW) that may include the following:

- Used PPE and disposable equipment will be bagged and placed in a drum and shipped with hazardous stockpile soil. PPE material will be sampled for hazardous waste classification prior to shipping to the non-hazardous waste at the municipal landfill if approved by the USEPA OSC.
- All decontamination liquid generated during the project (e.g. sampling apparatuses, excavation equipment) will be drummed and disposed of at the USEPA approved disposal facility. Decontamination liquid will be sampled for hazardous waste classification prior to shipping to a state/federally approved facility. Any IDW shipped from the Site to an off-site facility will be done so in accordance with applicable regulations and requirements, and in compliance with Section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3), 40 C.F.R. § 300.440, USEPA's "Guide to Management of Investigation Derived Waste," OSWER 9345.3-03FS (Jan. 1992).

The USEPA's National Contingency Plan (NCP) requires that management of IDW generated during sampling comply with all applicable or relevant and appropriate requirements (ARARs) to the extent practicable. The sampling plan will follow the Office of Emergency and Remedial Response (OERR) Directive 9345.3-02 (May 1991), which provides the guidance for the management of IDW. In addition, other legal and practical considerations that may affect the handling of IDW will be considered.

6.0 HEALTH AND SAFETY

All contractors are required to prepare a project-specific health and safety plan (HASP) that is in general accordance with the overall project health and safety and applicable Occupation and Health Safety Administration (OSHA) Requirements. All site contractors are required to maintain a copy of their health and safety plan in the field available for the Owner's inspection. The HASP will detail the minimum requirements and standard operating procedures to be implemented by personnel handling soil and working on-site operations. The HASP will address the health and safety issues associated with the contamination identified in the on-site, health and safety practices, procedures, and PPE requirements.

Traffic control will likely be necessary when utilizing the right-of-way traversing the Troy Chemical Property. Prior to mobilization of transportation activities, notification and coordination with Troy Chemical and other entities will be communicated with that utilize the right-of-way off of Avenue L.

7.0 REPORTING

7.1 WEEKLY PROGRESS REPORTS

Per Paragraph 36 of the ASAOC, written weekly progress reports will be prepared and submitted to the USEPA from the date of receipt of USEPA's approval of this RWP until the issuance of the Notice of Completion of Work by the USEPA. The weekly progress report shall describe all significant developments during the preceding period, including the actions performed and any problems encountered, analytical data received during the reporting period, and the developments anticipated during the next reporting period, including a schedule of actions to be performed, anticipated problems, and planned resolutions of past or anticipated problems. The written weekly progress reports will be provided to the USEPA OSC and/or RPM as directed.

7.2 PROBLEM OR WORK DEFICIENCY MEETINGS

If necessary, a special meeting will be held when and if a problem or deficiency is present or likely to occur. At a minimum, the meeting attendees will include the Project Coordinator and the Primary Contractor and the EPA OSC. The purposes of the meeting would be to resolve the problem as expeditiously as possible. Such would include:

- Defining and discussing the problem or deficient item
- Reviewing alternate solutions
- Implementing an action plan to resolve the problem or deficiency

The meeting would be documented and if warranted, the meeting minutes will be distributed to all appropriate parties.

A problem is defined as a material or workmanship that does not meet the requirements of the plans or specifications for the project or any obvious defect in material or workmanship. If the problem is identified, it shall be documented as follows:

- The location and applicable area or volume of the problem
- A description of the problem with sufficient detail and supporting sketches or photographic documentation to adequately describe the problem
- When and by whom the problem was located with reference to applicable inspections
- Corrective measures undertaken
- Entity and person approving and corrective measure

7.3 CLOSEOUT SUBMITTALS

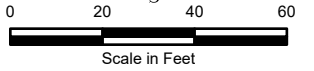
Following the completion of the items pursuant to this RWP and the ASAOC, the Primary Contractor will provide project records (e.g., manifests, invoices, bills, contracts, and permits) generated during the TCRA to the Respondent and the USEPA. These will ultimately be memorialized in a Final Report or a Removal Action Completion Report.

7.4 REMOVAL ACTION COMPLETION REPORT

A Removal Action Completion Report or Final Report will be submitted to the USEPA once all the removal actions and work set forth in this RWP are completed. The Final Report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports." This includes a complete report on the removal operation and the actions taken and the recording of any situation as it developed, the actions taken, the resources committed, and the problems encountered. Additionally, the report shall also include a good faith estimate of total costs or a statement of actual costs incurred in complying with the ASAO, a listing of quantities and types of materials removed off-site or handled on-site, a discussion of removal and disposal options considered for those materials, a listing of the ultimate destination(s) of those materials, a presentation of the analytical results of all sampling and analyses performed, and accompanying appendices containing all relevant documentation generated during the TCRA period. The report will also include a certification page signed by a responsible corporate official of a Respondent or the Project Coordinator.

8.0 REFERENCES

- USEPA, Requirements for Quality Assurance Project Plans (QA/R-5)" USEPA 240/B-01/003 (March 2001, reissued May 2006)
- USEPA, *USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review-Final*. USEPA-540-R-20-005. November 2020
- NJDEP *Hazsite Electronic Data Submittal Application*, Version 7.1.5, September 2016
- USEPA, *Uniform Federal Policy for Quality Assurance Project Plans, Parts 1-3*, USEPA/505/B-04/900A-900C (March 2005)
- NJDEP Field Sampling Procedure Manual, Chapters 1 through 4, 2021
- NJDEP Field Sampling Procedure Manual, Chapters 5 through 14, 2005
- NJDEP Technical Requirements for Site Remediation N.J.A.C 7:26E
- NJDEP Administrative Requirements for the Remediation of Contaminated Sites (ARRCS) N.J.A.C. 7:26C
- N.J.A.C. 7:26D, Remediation Standards, May 17, 2021
- NJDEP Background Investigation Guidance Document
- NJDEP *Hazsite Electronic Data Submittal Application*, Version 7.1.5, September 2016
- USEPA Toxic Substances Control Act (TSCA)
- NJDEP Coordination of NJDEP and USEPA PCB Remediation Policies Updated July 2, 2020
- USEPA Resource Conservation and Recovery Act (RCRA)
- USEPA Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- NJDEP Technical Guidance for Site Investigation of Soil, Remedial Investigation of Soil, and Remedial Action Verification Sampling for Soil, Version 1.2, March 2015



Legend

- ★ Site Location
- Property Boundary
- Pile Location

NOTES:
1. PARCEL DATA OBTAINED FROM NEW JERSEY
GEOGRAPHIC INFORMATION NETWORK (NJGIN)
2. PARCEL DATA IS NOT FROM A LICENSED
SURVEYOR... AERIAL AND PROPERTY LINE MAY NOT ALIGN
3. SERVICE LAYER CREDITS: COPYRIGHT NEARMAP



1 " = 160 miles

Figure 1
Site Map

366-394 Wilson Avenue
(Block: 5038, Lot: 97)
Newark, New Jersey

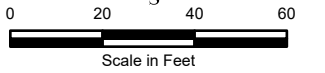
Project No: 150405

Date: July 2020

Drawn By: K. Starkes

Checked By: DP





Legend

- ★ Site Location
- Property Boundary
- Pile Location
- Proposed Background Locations
- Proposed Sectioning of Background locations

NOTES:
1. PARCEL DATA OBTAINED FROM NEW JERSEY GEOGRAPHIC INFORMATION NETWORK (NJGIN)
2. PARCEL DATA IS NOT FROM A LICENSED SURVEYOR... AERIAL AND PROPERTY LINE MAY NOT ALIGN
3. SERVICE LAYER CREDITS: COPYRIGHT NEARMAP



1" = 160 miles

Figure 2

Proposed Background
Location Map

366-394 Wilson Avenue
(Block: 5038, Lot: 97)
Newark, New Jersey

Project No: 150405

Date: July 2020

Drawn By: K. Starkes

Checked By: DP

Appendix A

CDM Smith's Stockpile Sample Report



14 Wall Street, Suite 1702
New York, New York 10005
tel: 212 785 9123

December 15, 2020

Ms. Pamela Tames
U.S. Environmental Protection Agency
290 Broadway - 20th Floor
New York, NY 10007-1866

PROJECT: EPA Region 2 RAC2 Contract No.: EP-W-09-002
Work Assignment No.: 060-RICO-02MV

DOC. CONTROL NO.: 3323-060-04398

SUBJECT: Summary of Globe Metals Property Soil Stockpile
Sampling and Soil Erosion and Sediment Controls
Pierson's Creek Site, Operable Unit 1
Remedial Investigation/Feasibility Study
Newark, New Jersey

Dear Ms. Tames:

CDM Federal Programs Corporation (CDM Smith) is pleased to submit the Summary of Globe Metals Property Soil Stockpile Sampling and Soil Erosion and Sediment Controls, for the Pierson's Creek Site Operable Unit 1, Remedial Investigation/ Feasibility Study in Newark, New Jersey.

If you have any questions regarding this work plan, please contact me at your earliest convenience at (732) 590-4695.

Very truly yours,
CDM FEDERAL PROGRAMS CORPORATION

Edward Leonard, CHMM
Site Manager

PSO: KS

Enclosure

cc:	B. MacDonald, CDM Smith (letter only)	F. Rosado, EPA Region 2 (letter only)
	C. Zielinski, NJDEP (electronic copy)	J. Button, CDM Smith (electronic copy)
	K. Subramaniam, CDM Smith (letter only)	RAC2 Document Control





Memorandum

To: Pamela Tames, EPA Region 2

From: Edward Leonard, CHMM
Joseph Button, PG, PMP, CDM Smith

Date: 12/15/2020

Subject: Summary of Globe Metals Property
Soil Stockpile Sampling and Soil Erosion and Sediment Controls
November 2-4, 2020
Pierson's Creek Superfund Site, OU1

Introduction

This memorandum briefly summarizes the field events performed by CDM Federal Programs Corporation (CDM Smith) on behalf of the United States Environmental Protection Agency (EPA) between November 2 and 4, 2020 at the Globe Metals property of Pierson's Creek Superfund Site, Operable Unit 1, in Newark, New Jersey.

In September 2019, the former prospective buyers of the Globe Metals property constructed drainage and site improvements on the property which included excavating and culverting the southern portion of the Upper Creek tributary on the property. As a result of this work, soil/sediment, vegetative matter, and other debris were stockpiled for storage in several piles on the northern and eastern side of the property. A total of eight stockpiles were identified on the property during the field activities; three of which contained soils, sediments and other debris that were removed from the tributary and surrounding soils. Sample results from previous investigations of the tributary and adjacent soils indicated that these stockpiles likely contained materials that were highly contaminated. The locations of the three stockpiles (Stockpiles A, B, and C) are shown on **(Figure 1)**. Based on this information, stockpile sampling and characterization of these three stockpiles was requested by EPA.

CDM Smith collected samples from the stockpiles for waste characterization. These samples were analyzed by Katahdin Analytical Services for polychlorinated biphenyls (PCBs), toxicity via the Toxicity Characteristic Leaching Procedure (TCLP), reactivity, ignitability, and corrosivity analysis. Additionally, CDM Smith oversaw implementation of proper soil erosion and sediment controls. Details of the field activities are provided below.

Field Activities

Stockpiles A, B, and C have remained relatively unchanged from the last site visit in May 2020. The three stockpiles were mostly covered with tarps upon arrival at the site on November 2, 2020. Field observations indicate that stockpiles A and B primarily contain dry soils intermixed with various types of fill, construction, debris, and organic matter. Based on field observations, stockpile C is assumed to contain excavated material, similar to that found in A and B. **Table 1** presents a description of stockpile contents and the sampling rationale for each pile.

Soil sampling of stockpiles A, B, and C was conducted on November 2, 2020. Photographs of field activities are provided in **Attachment 1**. Sampling procedures followed sampling protocol based on New Jersey's Fill Material Guidance for SRP Sites (2015). Representative soil samples were collected from different locations and depth horizons within each stockpile, based on the following criteria: one sample collected every 20 cubic yards (CY) for the first 100 CY of material, and one sample collected every 100 CY for the next 1,000 CY of material. A total of 26 soil samples were collected from all 3 stockpiles: 7 samples from stockpile A, 11 samples from stockpile B, and 8 samples from stockpile C. One duplicate sample was collected from stockpile A for quality control. All samples were analyzed for PCBs, toxicity via TCLP, reactivity, ignitability, and corrosivity by Katahdin Analytical Services in Scarborough, Maine.

To minimize migration of contaminated stockpile material, soil erosion and sediment controls were implemented for the stockpiles in accordance with New Jersey's Standards for Soil Erosion and Sediment Control in New Jersey (2017). CDM Smith reviewed the specifications of the silt fence and tarp material brought onsite prior to installation. Stockpiles were covered and properly anchored with 6-millimeter-thick heavy grade sheets of polyethylene on November 3, 2020. A silt fence was installed around the toe of each stockpile slope to contain movement of the stockpiled material on November 4, 2020. Silt fence and tarp installation was completed by Innovative Recycling Technologies (IRT) on November 3 and 4, 2020 with oversight provided by CDM Smith personnel. After cover and silt fence installation, CDM Smith personnel inspected the cover to be sure properly anchored and the silt fence to ensure the bottom portion of the fence was securely placed 6 inches below ground surface.

Results and Analysis

The detected results for stockpile A, B, and C are presented in **Table 2a**, **Table 2b**, and **Table 2c**, respectively. TCLP results are compared to the Maximum Concentration of Contaminants for the Toxicity Characteristic (40 CFR 261.24). Corrosivity is evaluated by comparing pH concentrations to guidance values (40 CFR 261.22). Soil PCB concentrations are compared to 50 mg/kg of total PCBs to determine whether the materials are regulated under the Toxic Substances and Control Act (TSCA) (40 CFR 761.20). Notable results are:

- Five soil samples (and one duplicate sample) collected from stockpile A contained PCB concentrations in soil greater than 50 mg/kg.
- Leachate from seven soil samples collected from stockpile B contained lead concentrations greater than the Maximum Concentration of Contaminants for the Toxicity Characteristic.
- Leachate from one soil sample collected from stockpile C contained a lead concentration greater than the Maximum Concentration of Contaminants for the Toxicity Characteristic.

References

New Jersey Department of Agriculture. 2017. The Standards for Soil Erosion and Sediment Control in New Jersey, 7th Edition. January 2014, Revised July 2017.

New Jersey Department of Environmental Protection. 2015. Fill Material Guidance for SRP Sites, Version 3.0. April.

40 CFR 261.22. 2005. Characteristic of corrosivity. June 14. Viewed at:
<https://www.law.cornell.edu/cfr/text/40/261.22>

40 CFR 261.24. 2006. Toxicity Characteristic. July 14. Viewed at:
<https://www.law.cornell.edu/cfr/text/40/261.24>

40 CFR 761.20. 1999. Prohibitions and exceptions. June 24. Viewed at:
<https://www.law.cornell.edu/cfr/text/40/761.20>

Tables

Table 1
Stockpile Contents and Sampling Rationale
Pierson's Creek Superfund Site
Newark, New Jersey

Stock Pile ID	General Dimensions	Approximate Volume (cubic yards)	General Makeup of Debris Pile	Waste Characterization Samples (TCLP full, reactivity, corrosivity, and ignitability)
A	55' long x 35' wide x 3' high	215	Excavated materials. 50% soil/sediment, 25% general fill, 25% phragmites and other debris (based on material at base – pile was mostly covered)	7 samples
B	55' long x 30' wide x 10' high	610	Excavated materials. 50% soil/sediment, 25% general fill, 25% phragmites and other debris	11 samples
C	50' long x 40' wide x 5' high	370	Excavated materials. 50% soil/sediment, 25% general fill, 25% phragmites and other debris (based on material at base – pile was mostly covered)	8 samples

Notes:

1. The sampling scope is based on guidance provided in the New Jersey Fill Material Guidance for SRP Sites, April 2015. Version 3.
2. One sample was collected every 20 cubic yards for the first 100 cubic yards of material, and one sample was collected every 100 cubic yards for the next 1,000 cubic yards of material.

Acronyms:

ID - identification

SRP - Site Remediation Program

TCLP - Toxicity Characteristic Leaching Procedure

Table 2a
Stockpile A Sample Results
Pierson's Creek Superfund Site
Newark, New Jersey

Sample ID				SP-A-1		SP-A-2		SP-A-3		SP-A-4		SP-A-5		SP-A-6		SP-A-7		SP-A-900	
Analyte	CAS Number	Screening Criteria	Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
TCLP Leachate Concentrations																			
1,4-Dichlorobenzene	106-46-7	7.5	mg/L	0.083		0.045	J	0.062		0.054			U		U	0.04	J	0.059	
Arsenic	7440-38-2	5	mg/L	1.57		0.33	N	0.766		0.624			U		U	0.874		1.39	
Barium	7440-39-3	100	mg/L	3.28		2.25		2.98		2.97		1.48		1.91		3.78		3.28	
Benzene	71-43-2	0.5	mg/L	0.12		0.044	J	0.11		0.059	J		U		U	0.11		0.13	
Cadmium	7440-43-9	1	mg/L	0.0454		0.24		0.0123	J	0.0686		0.129		0.136		0.181		0.00752	J
Chlorobenzene	108-90-7	100	mg/L	0.35		0.11		0.19		0.12			U		U	0.14		0.17	
Chromium	7440-47-3	5	mg/L	0.05	J	0.0079	J	0.015	J	0.01	J	0.0077	J	0.0078	J	0.022	J	0.012	J
Endrin	72-20-8	0.02	mg/L		U		U	0.000053	J	0.000057	J		U		U	0.000087	JJ	0.000059	J
Lead	7439-92-1	5	mg/L	1.47		1.12	N	0.581		0.674		4.94		2.67		1.95		0.413	
Mercury	7439-97-6	0.2	mg/L	0.000612		0.00555	EA	0.000499		0.00121		0.000761		0.00189		0.0014		0.000937	
Methoxychlor	72-43-5	10	mg/L		U		U		U		U		U		U	0.094	JJ		U
Other Waste Characteristics Results																			
Sulfide Reactive	SREAC	*	mg/kg	45	J	21	J	45	J	32	J	32	J		U		U	33	J
Total Cyanide	57-12-5	*	mg/kg	2.5		2		2.2			U	0.9	J		U	3		2.2	
pH	pH	<2 or >12.5	pH units	7.7		8		7.9		7.6		8		8.1		7.7		7.7	
Soil PCB Concentrations																			
Aroclor-1242	53469-21-9	N/A	mg/kg	12	J	12		15		13		0.33		0.44		11		14	
Aroclor-1254	11097-69-1	N/A	mg/kg	35	J	27	J	35	J	39	J	1.7		2.4	J	28	J	35	J
Acroclor-1260	11096-82-5	N/A	mg/kg	14		12		13		15		0.76		0.96		12		15	
Total PCBs		50	mg/kg	61		51		63		67		2.79		3.8		51		64	
Other Results																			
Total Solids	TSOLIDS	N/A	%	55		66		71		63		77		56		72		63	

Notes:

1. All samples were collected on 11/2/2020.
 2. Only analytes that were detected in at least one sample are included in this table.
 3. The screening criteria for the TCLP leachate concentrations are the maximum concentration of contaminants for the toxicity characteristics listed in Table 1 of 40 CFR § 261.24. The screening criteria for total PCBs is based on the Toxic Substances Control Act (TSCA).
 4. Total PCBs are calculated as the sum of all Aroclor results
 5. Results that are highlighted have concentrations greater than the screening criteria.
- * EPA currently does not have guidance threshold levels for determining whether a waste is cyanide-bearing or sulfide-bearing.

Acronyms:

CAS - Chemical Abstract Services
EA - estimated value, result exceeded the upper level of calibration
ID - identification
J - estimated value
mg/kg - milligram per kilogram
mg/L - milligram per liter
N - presumptive evidence of a compound based on mass spectral library search

PCB - polychlorinated biphenyl
ppm - parts per million
Q - qualifier
TCLP - Toxicity Characteristic Leaching Procedure
U - compound was analyzed for but not detected
N/A - not applicable

Table 2b
Stockpile B Sample Results
Pierson's Creek Superfund Site
Newark, New Jersey

Sample ID				SP-B-1		SP-B-2		SP-B-3		SP-B-4		SP-B-5		SP-B-6		SP-B-7		SP-B-8		SP-B-9		SP-B-10		SP-B-11	
Analyte	CAS Number	Screening Criteria	Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
TCLP Leachate Concentrations																									
Barium	7440-39-3	100	mg/L	1.64		1.74		1.33		0.874		0.687		1.38		0.874		0.92		1.54		2.28		1.54	
Cadmium	7440-43-9	1	mg/L	0.217		0.183		0.245		0.189		0.346		0.169		0.234		0.233		0.167		0.145		0.241	
Chromium	7440-47-3	5	mg/L	0.036	J	0.139		0.02	J	0.0083	J	0.011	J	0.0058	J	0.012	J	0.0068	J	0.0068	J		U	0.022	J
Lead	7439-92-1	5	mg/L	6.88		13.6		17.4		2.64		5.08		17.7	N	2.43		2.5		9.73		0.788		5.42	
Mercury	7439-97-6	0.2	mg/L	0.0011		0.0013		0.00135		0.00203		0.00493		0.00172	NEA	0.00314		0.00274		0.00164		0.000772		0.00105	
Tetrachloroethene	127-18-4	0.7	mg/L		U		U		U	0.16		0.02	J		U		U		U		U		U		U
Other Waste Characteristics Results																									
Sulfide Reactive	SREAC	*	mg/kg		U	28	J		U		U	32	J	29	J	29	J	42	J	19	J	54		34	J
Total Cyanide	57-12-5	*	mg/kg		U	0.78	J		U	2.2		0.95	J		U	2.1	J	1.6	J	0.96	J	1.1			U
pH	pH	<2 or >12.5	pH units	7.7		8		7.6		7.8		6.9		7.9		7.5		7.5		7.8		7.7		7.9	
Soil PCB Concentrations																									
Aroclor-1242	53469-21-9	N/A	mg/kg	0.96		0.2		1.3		1.4		2.4		0.51	J	1.1		1.6		0.4		0.95		1.1	
Aroclor-1254	11097-69-1	N/A	mg/kg	2		1.5		2.7		5	J	4.1		0.99		2.8		3.2		2.4		3.5	J	32	
Aroclor-1260	11096-82-5	N/A	mg/kg	0.89		0.73		1.4		2		2.2		0.4	MM	1.3		1.3	J	1		1.2		3.8	
Total PCBs		50		3.85		2.43		5.4		8.4		8.7		1.9		5.2		6.1		3.8		5.65		36.9	
Other Results																									
Total Solids	TSOLIDS	N/A	%	65		85		69		82		60		74		58		76		79		75		77	

Notes:

1. All samples were collected on 11/2/2020.
2. Only analytes that were detected in at least one sample are included in this table.
3. The screening criteria for the TCLP leachate concentrations are the maximum concentration of contaminants for the toxicity characteristics listed in Table 1 of 40 CFR § 261.24.
The screening criteria for total PCBs is based on the Toxic Substances Control Act (TSCA).
4. Total PCBs are calculated as the sum of all Aroclor results
5. Results that are highlighted have concentrations greater than the screening criteria.

* EPA currently does not have guidance threshold levels for determining whether a waste is cyanide-bearing or sulfide-bearing.

Acronyms:

CAS - Chemical Abstract Services

EA - estimated value, result exceeded the upper level of calibration

ID - identification

J - estimated value

M - indicates that the flagged compound did not meet criteria in the matrix spike/matrix spike duplicate

mg/kg - milligram per kilogram

mg/L - milligram per liter

N - presumptive evidence of a compound based on mass spectral library search

PCB - polychlorinated biphenyl

ppm - parts per million

Q - qualifier

TCLP - Toxicity Characteristic Leaching Procedure

U - compound was analyzed for but not detected

N/A - not applicable

Table 2c
Stockpile C Sample Results
Pierson's Creek Superfund Site
Newark, New Jersey

Sample ID				SP-C-1		SP-C-2		SP-C-3		SP-C-4		SP-C-5		SP-C-6		SP-C-7		SP-C-8	
Analyte	CAS Number	Screening Criteria	Unit	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
TCLP Leachate Concentrations																			
Arsenic	7440-38-2	5	mg/L	0.1	J	0.19			U	0.53		0.951		0.26		3.07		0.561	
Barium	7440-39-3	100	mg/L	0.166		0.456		0.111		0.358		0.148		0.166		0.965		0.694	
Cadmium	7440-43-9	1	mg/L	0.266		0.139		0.186		0.203		0.165		0.203		0.121		0.148	
Chromium	7440-47-3	5	mg/L	0.015	J	0.0089	J	0.0619	J	0.012	J	0.044	J	0.02	J	0.0084	J	0.006	J
Lead	7439-92-1	5	mg/L	1.53		0.779		15.6		0.946		5.41		4.72		0.853		0.825	
Mercury	7439-97-6	0.2	mg/L	0.0126		0.00141		0.00413		0.00015	JA	0.00145		0.00156		0.00537		0.00469	
Selenium	7782-49-2	1	mg/L		U		U		U	0.022	J		U		U		U		U
Other Waste Characteristics Results																			
Sulfide Reactive	SREAC	*	mg/kg	32	J		U		U	33	J		U		U		U	40	J
Total Cyanide	57-12-5	*	mg/kg		U	0.71	J	4.9		1.8		5.1		3.4		1	J		U
pH	pH	<2 or >12.5	pH units	5.8		7.4		3.7		5.5		4		4.6		7.4		7.2	
Soil PCB Concentrations																			
Aroclor-1242	53469-21-9	N/A	mg/kg	6.2		2.6		21		2		13		6.2		1.5		2.2	
Aroclor-1254	11097-69-1	N/A	mg/kg	9.7	J	6.2		14		1.7		6.5		5		3.7		3.4	
Aroclor-1260	11096-82-5	N/A	mg/kg	3.4		3		5.5		0.67		2.5		2		1.4		1.3	
Total PCBs		50		19.3		11.8		40.5		4.37		22		13.2		6.6		6.9	
Other Information																			
Total Solids	TSOLIDS		%	58		61		50		71		58		67		77		61	

Notes:

1. All samples were collected on 11/2/2020.
 2. Only analytes that were detected in at least one sample are included in this table.
 3. The screening criteria for the TCLP leachate concentrations are the maximum concentration of contaminants for the toxicity characteristics listed in Table 1 of 40 CFR § 261.24. The screening criteria for total PCBs is based on the Toxic Substances Control Act (TSCA).
 4. Total PCBs are calculated as the sum of all Aroclor results
 5. Results that are highlighted have concentrations greater than the screening criteria.
- * EPA currently does not have guidance threshold levels for determining whether a waste is cyanide-bearing or sulfide-bearing.

Acronyms:

A - indicated that a tentatively identified compound is a suspected aldol-condensation product
CAS - Chemical Abstract Services
EA - estimated value, result exceeded the upper level of calibration
ID - identification
J - estimated value
mg/kg - milligram per kilogram
mg/L - milligram per liter

N - presumptive evidence of a compound based on mass spectral library search
PCB - polychlorinated biphenyl
ppm - parts per million
Q - qualifier
TCLP - Toxicity Characteristic Leaching Procedure
U - compound was analyzed for but not detected
N/A - not applicable

Figures

Attachment 1

Photographs of Field Activities

Globe Metals Property – Pierson's Creek Superfund Site, OU1



Photo #1: Looking northeast at Pile A (being covered to the left) and Pile B (larger on the right).



Photo #2: Looking east at Pile A (covered).

Globe Metals Property – Pierson's Creek Superfund Site, OU1



Photo #3: Looking east at southern side of Pile B (covered).



Photo #4: Looking NE at northern side of Pile A with silt fence installed.

Globe Metals Property – Pierson's Creek Superfund Site, OU1



Photo #5: Looking SE at western side of Pile B with silt fence installed.



Photo #6: Looking east along southern end of Pile B with silt fence installed.

Globe Metals Property – Pierson's Creek Superfund Site, OU1



Photo #7: Looking south at Pile C (uncovered).



Photo #8: Looking south at Pile C (covered) with silt fence installed.

Appendix B
ENVO CARE Waste Classification Report

July 20, 2020

Delivered via e-mail: jlynch@salomone.com

John Lynch
Salomone Bros., Inc.
17 Demarest Drive
Wayne, NJ 07470

Re: Waste Classification Sampling Results
366-394 Wilson Avenue, Newark, NJ
General Facility Tracking Identification # NJN986663052

Dear Mr. Lynch:

Envocare Environmental & Facility Management Inc. (ENVO CARE) was retained to conduct waste classification soil sampling from the soil piles located at 366-394 Wilson Avenue, Newark, NJ (the Property/Site). The Property is owned by Oberwill Corp. Salomone Bros. Inc (the Client) is the responsible party.

Background

Excavated soil was stockpiled into three (3) distinct soil pile during drainage improvement of the property located at both onsite and offsite area. The stockpiled soil contains contaminants migrated from the Pierson's Creek Superfund Site as well as general overburden soil from the Property. And previously collected soil samples identified metals (arsenic, chromium, lead, mercury, nickel and cadmium), Semi volatile Compounds (SVOCs), Extractable Petroleum Hydrocarbon (EPH), and Polychlorinated Biphenyl (PCBs) above the Residential Direct Contact Soil Remediation Standards (RDCSRs). The New Jersey Department of Environmental Protection (NJDEP) requires soil disposal of this material.

Based on the review of the analytical results provided by the Client, ENVO CARE reached out to Clean Earth of North Jersey (CENJ) to determine if the facility can treat the stockpile soil. Following the confirmation, ENVO CARE proposed collection of composite samples from each of the soil pile and analyze the soil sample for TCL/TAL+30, TCLP Full, RCRA characteristics, Paint Filter and EPH analysis so that a disposal approval can be obtained from CENJ.

Investigation

On July 10, 2020 ENVO CARE and the Client mobilized on the Property to conduct soil sampling. ENVO CARE observed three stock piles with two located in the north east portion of the Property and one stockpile located in the south west portion of the Property. The soil piles were labelled as SP1 through SP3 in north to west direction. [Figure 1](#) presents the Soil Pile locations.

The Client informed ENVO CARE that SP1 pile was generated from northern portion of the drainage improvement, while SP2 was generated from drainage improvement throughout the Property and SP3 was generated from drainage improvement along the Troy Chemical side, as well as portion of the Stream north of the Property.

Based on the proposed sampling plan, Salomone bros. provided assistance to collect representative soil sample for disposal. Five locations at equally spaced interval were selected for test pit excavation. Except for

SP1, where only three test pits were advanced due to lack of access to the rear of the pile by the machine. The rear of the stock pile was sampled with hand at 0.5-1.0 feet into the pile. The visual inspection of the stockpile identified the presence of vegetation debris, some stones, black silt, construction debris and fill material. Photo documentation is presented as [Exhibit A](#).

Each test pits and other portions of the soil piles were investigated with the use of Photoionization Detector (PID) and Jerome 431X (Jerome) to measure volatile organic compounds (VOCs) and vapor mercury (Hg) respectively. All locations investigated identified VOCs of 7 to 9 parts per million (ppm) in the western portion of SP1, in same area with petroleum impacted soil. All other areas of investigation found VOCs and Hg at 0.0 ppm and 0 milligram per cubic meter (mg/m³). Soil sample for VOCs was collected from highest suspected soil contamination (field instrument readings or visual evidence).

Five points composite sampling method was utilized subsequently samples were collected directly into sample containers, placed in shipping coolers, and maintained at approximately 4 ± 2 degrees Celsius. The coolers were hand-delivered to the analytical laboratory according to chain-of-custody procedures.

Findings and Recommendations

The analytical results were evaluated against the NJDEP RDCSRS and Non Residential Direct Contact Soil Remediation Standards (NRDCSRs) as well as the EPA TCLP regulatory criteria.

The analytical results identified Pesticides (4,4-DDD, Chlordane, cis-Chlordane, Dieldrin, trans-Chlorodane), PCBs, Semi Volatile Organics, Metals (arsenic, copper, lead, mercury, nickel, zinc) and 1,4-Dichlorobenzene above the RDCSRS/NRDCSRs standards for one or all the samples. The analytical results are provided on [Table 1](#). All compounds were reported below the EPA TCLP criteria. Based on the TCLP and RCRA analytical results the stockpile soil is considered to be non-hazardous based on chemical characteristics.

Based on the review of the analytical the onsite material is impacted with various compounds above the NJDEP criteria. Therefore, ENVOCARE recommends conducting off-site disposal at a regulated facility.

The stockpile soil treatment may be required onsite or offsite, based on the transportation method and/or disposal facility requirements.

Please contact the undersigned at (732) 208-0928 if you require further information or clarification.

Kind Regards,

Mayur Patel

Mayur Patel
Project Manager

Enclosed:

Figure 1

Table 1

Exhibit A - Photo Documentation



0 20 40 60
Scale in Feet

1:500

Legend

- ★ Site Location
- Property Boundary
- Pile Location

NOTES:
1. PARCEL DATA OBTAINED FROM NEW JERSEY
GEOGRAPHIC INFORMATION NETWORK (NJGIN)
2. PARCEL DATA IS NOT FROM A LICENSED
SURVEYOR... AERIAL AND PROPERTY LINE MAY NOT ALIGN
3. SERVICE LAYER CREDITS: COPYRIGHT NEARMAP



1 " = 160 miles

Figure 1 WASTE CLASSIFICATION SAMPLE MAP

366-394 Wilson Avenue
(Block: 5038, Lot: 97)
Newark, New Jersey

Project No: 150405

Date: July 2020

Drawn By: K. Starkes

Checked By: DP

ENVOCARE
ENVIRONMENTAL & FACILITY MANAGEMENT

Table 1 Soil Analytical Results
366-394 Wilson Avenue, Newark, NJ

LOCATION						WL-SP1		WL-SP1		WL-SP2		WL-SP3		WL-SP3	
SAMPLING DATE						7/10/2020		7/10/2020		7/10/2020		7/10/2020		7/10/2020	
LAB SAMPLE ID	CasNum	EPA-TCLP	NJ-NRDCSRS	NJ-RDCSRS	Units	L2029228-01		L2029228-01 R1		L2029228-02		L2029228-03		L2029228-03 R1	
SAMPLE TYPE						SOIL		SOIL		SOIL		SOIL		SOIL	
						Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
General Chemistry															
Cyanide, Reactive	57-12-5				mg/kg	10	U	-	-	10	U	10	U	-	-
Cyanide, Total	57-12-5		680	47	mg/kg	3.1		-	-	1.3	J	1.4		-	-
Paint Filter Liquid	PFLT				-	NEGATIVE		-	-	NEGATIVE		NEGATIVE		-	-
pH (H)	12408-02-5				SU	7.4		-	-	7.2		6.5		-	-
Solids, Total	NONE				%	80.5		-	-	67		68.3		-	-
Sulfide, Reactive	NONE				mg/kg	10	U	-	-	10	U	10	U	-	-
Ignitability	NONE					NI		-	-	NI		NI		-	-
Chromium, Hexavalent	18540-29-9				mg/kg	0.994	U	-	-	1.19	U	1.17	U	-	-
Oxidation/Reduction Potential	NONE				mv	220		-	-	240		260		-	-
pH	12408-02-5				SU	7.4		-	-	7.7		6.7		-	-
NJ Extractable Petroleum Hydrocarbons (Total)															
Total EPH	NONE				mg/kg	12200		-	-	2050		2930		-	-
Pesticides by GC															
4,4'-DDD	72-54-8		13	3	mg/kg	20.6		14	PE	0.386		0.561	P	-	-
4,4'-DDE	72-55-9		9	2	mg/kg	0.533	P	-	-	0.0403		0.0667	JP	-	-
4,4'-DDT	50-29-3		8	2	mg/kg	1.35	P	-	-	0.022	U	0.213	U	-	-
Aldrin	309-00-2		0.2	0.04	mg/kg	0.0196	U	-	-	0.0117	U	0.114	U	-	-
Alpha-BHC	319-84-6		0.5	0.1	mg/kg	0.00817	U	-	-	0.00488	U	0.0474	U	-	-
Beta-BHC	319-85-7		2	0.4	mg/kg	0.0196	U	-	-	0.0117	U	0.114	U	-	-
Chlordane	57-74-9		1	0.2	mg/kg	8.57	P	-	-	1.77		2.07	P	-	-
cis-Chlordane	5103-71-9		1	0.2	mg/kg	0.384	P	-	-	0.14	IP	0.152	P	-	-
Delta-BHC	319-86-8				mg/kg	0.0196	U	-	-	0.0117	U	0.114	U	-	-
Dieldrin	60-57-1		0.2	0.04	mg/kg	0.997	P	-	-	0.197		0.0933	P	-	-
Endosulfan I	959-98-8		6800	470	mg/kg	0.0196	U	-	-	0.0117	U	0.114	U	-	-
Endosulfan II	33213-65-9		6800	470	mg/kg	0.0196	U	-	-	0.0117	U	0.114	U	-	-
Endosulfan sulfate	1031-07-8		6800	470	mg/kg	0.00817	U	-	-	0.00488	U	0.0474	U	-	-
Endrin	72-20-8		340	23	mg/kg	0.00817	U	-	-	0.00488	U	0.0474	U	-	-
Endrin aldehyde	7421-93-4				mg/kg	0.0245	U	-	-	0.0146	U	0.142	U	-	-
Endrin ketone	53494-70-5				mg/kg	0.0196	U	-	-	0.0117	U	0.114	U	-	-
Heptachlor	76-44-8		0.7	0.1	mg/kg	0.0098	U	-	-	0.00586	U	0.0568	U	-	-
Heptachlor epoxide	1024-57-3		0.3	0.07	mg/kg	0.0368	U	-	-	0.022	U	0.213	U	-	-
Lindane	58-89-9		2	0.4	mg/kg	0.00817	U	-	-	0.00488	U	0.0474	U	-	-
Methoxychlor	72-43-5		5700	390	mg/kg	0.0368	U	-	-	0.022	U	0.213	U	-	-
Toxaphene	8001-35-2		3	0.6	mg/kg	0.368	U	-	-	0.22	U	2.13	U	-	-
trans-Chlordane	5103-74-2		1	0.2	mg/kg	1	P	-	-	0.147	IP	0.126	JIP	-	-
Polychlorinated Biphenyls by GC															
Aroclor 1016	12674-11-2		1	0.2	mg/kg	4.03	U	-	-	0.981	U	0.956	U	-	-
Aroclor 1221	11104-28-2		1	0.2	mg/kg	4.03	U	-	-	0.981	U	0.956	U	-	-
Aroclor 1232	11141-16-5		1	0.2	mg/kg	4.03	U	-	-	0.981	U	0.956	U	-	-
Aroclor 1242	53469-21-9		1	0.2	mg/kg	4.03	U	-	-	0.981	U	0.956	U	-	-
Aroclor 1248	12672-29-6		1	0.2	mg/kg	11.7		-	-	4.58		3.1		-	-
Aroclor 1254	11097-69-1		1	0.2	mg/kg	13.1		-	-	3.54		2.1		-	-
Aroclor 1260	11096-82-5		1	0.2	mg/kg	4.69		-	-	1.64		0.805	J	-	-
Aroclor 1262	37324-23-5		1	0.2	mg/kg	4.03	U	-	-	0.981	U	0.956	U	-	-
Aroclor 1268	11100-14-4		1	0.2	mg/kg	4.03	U	-	-	0.981	U	0.956	U	-	-
PCBs, Total	1336-36-3		1	0.2	mg/kg	29.5		-	-	9.76		6	J	-	-

Table 1 Soil Analytical Results
366-394 Wilson Avenue, Newark, NJ

LOCATION						WL-SP1 7/10/2020	WL-SP1 7/10/2020	WL-SP2 7/10/2020	WL-SP3 7/10/2020	WL-SP3 7/10/2020		
SAMPLING DATE						L2029228-01	L2029228-01 R1	L2029228-02	L2029228-03	L2029228-03 R1		
LAB SAMPLE ID	CasNum	EPA-TCLP	NJ- NRDCSRS	NJ-RDCSRS	Units	SOIL	SOIL	SOIL	SOIL	SOIL		
SAMPLE TYPE						Results	Qual	Results	Qual	Results	Qual	Results
Semivolatile Organics by GC/MS												
1,2,4,5-Tetrachlorobenzene	95-94-3				mg/kg	6.1	U	-	-	0.73	U	0.72
1,4-Dioxane	123-91-1				mg/kg	0.91	U	-	-	0.11	U	0.11
2,3,4,6-Tetrachlorophenol	58-90-2				mg/kg	6.1	U	-	-	0.73	U	0.72
2,4,5-Trichlorophenol	95-95-4		68000	6100	mg/kg	6.1	U	-	-	0.73	U	0.72
2,4,6-Trichlorophenol	88-06-2		74	19	mg/kg	3.5	U	-	-	0.42	U	0.41
2,4-Dichlorophenol	120-83-2		2100	180	mg/kg	2.9	U	-	-	0.35	U	0.35
2,4-Dimethylphenol	105-67-9		14000	1200	mg/kg	5.8	U	-	-	0.7	U	0.69
2,4-Dinitrophenol	51-28-5		1400	120	mg/kg	8.7	U	-	-	1	U	1
2,4-Dinitrotoluene	121-14-2		3	0.7	mg/kg	3	U	-	-	0.34	J	2.9
2,6-Dinitrotoluene	606-20-2		3	0.7	mg/kg	2.4	U	-	-	0.29	U	0.29
2-Chloronaphthalene	91-58-7				mg/kg	6.1	U	-	-	0.73	U	0.72
2-Chlorophenol	95-57-8		2200	310	mg/kg	2	U	-	-	0.24	U	0.24
2-Methylnaphthalene	91-57-6		2400	230	mg/kg	8.6	U	-	-	0.47	J	0.35
2-Methylphenol	95-48-7		3400	310	mg/kg	6.1	U	-	-	0.73	U	0.72
2-Nitroaniline	88-74-4		23000	39	mg/kg	6.1	U	-	-	0.73	U	0.72
2-Nitrophenol	88-75-5				mg/kg	13	U	-	-	1.6	U	1.6
3,3'-Dichlorobenzidine	91-94-1		4	1	mg/kg	4.7	U	-	-	0.56	U	0.56
3-Methylphenol/4-Methylphenol	98-39-4/106-44		340	31	mg/kg	8.7	U	-	-	0.36	J	1
3-Nitroaniline	99-09-2				mg/kg	6.1	U	-	-	0.73	U	0.72
4,6-Dinitro-o-cresol	534-52-1		68	6	mg/kg	8.7	U	-	-	1	U	1
4-Bromophenyl phenyl ether	101-55-3				mg/kg	6.1	U	-	-	0.73	U	0.72
4-Chloroaniline	106-47-8				mg/kg	6.1	U	-	-	0.73	U	0.72
4-Chlorophenyl phenyl ether	7005-72-3				mg/kg	6.1	U	-	-	0.73	U	0.72
4-Nitroaniline	100-01-6				mg/kg	6.1	U	-	-	0.73	U	0.72
4-Nitrophenol	100-02-7				mg/kg	8.5	U	-	-	1	U	1
Acenaphthene	83-32-9		37000	3400	mg/kg	0.69	J	-	-	1.1		0.58
Acenaphthylene	208-96-8		300000		mg/kg	4.8	U	-	-	0.24	J	0.26
Acetophenone	98-86-2		5	2	mg/kg	6.1	U	-	-	0.18	J	0.22
Anthracene	120-12-7		30000	17000	mg/kg	5.5	U	-	-	2.7		2
Atrazine	1912-24-9		2400	210	mg/kg	4.8	U	-	-	0.59	U	0.58
Benzaldehyde	100-52-7		68000	6100	mg/kg	8	U	-	-	0.97	U	0.95
Benzo(a)anthracene	56-55-3		17	5	mg/kg	2		-	-	5.4		3.2
Benzo(a)pyrene	50-32-8		2	0.5	mg/kg	1.8	J	-	-	5		2.7
Benzo(b)fluoranthene	205-99-2		17	5	mg/kg	2.5		-	-	6.6		4.1
Benzo(ghi)perylene	191-24-2		30000	380000	mg/kg	1.4	J	-	-	3.3		2
Benzo(k)fluoranthene	207-08-9		170	45	mg/kg	0.96	J	-	-	2.2		1.6
Biphenyl	92-52-4		240	61	mg/kg	5.7	J	-	-	0.19	J	0.28
Bis(2-chloroethoxy)methane	111-91-1				mg/kg	6.6	U	-	-	0.79	U	0.78
Bis(2-chloroethyl)ether	111-44-4		2	0.4	mg/kg	2.2	U	-	-	0.26	U	0.26
Bis(2-chloroisopropyl)ether	108-60-1		67	23	mg/kg	7.3	U	-	-	0.88	U	0.87
Bis(2-ethylhexyl)phthalate	117-81-7		140	35	mg/kg	140		-	-	9.3		23
Butyl benzyl phthalate	85-68-7		14000	1200	mg/kg	4.6	J	-	-	0.91		0.72
Caprolactam	105-60-2		340000	31000	mg/kg	6.1	U	-	-	0.73	U	0.72
Carbazole	86-74-8		96	24	mg/kg	6.1	U	-	-	1.2		0.31
Chrysene	218-01-9		1700	450	mg/kg	2.1	J	-	-	5.2		3.4
Di-n-butylphthalate	84-74-2		68000	6100	mg/kg	6.1	U	-	-	0.73	U	0.72
Di-n-octylphthalate	117-84-0		27000	2400	mg/kg	6.1	U	-	-	0.73	U	0.72

Table 1 Soil Analytical Results
366-394 Wilson Avenue, Newark, NJ

LOCATION					WL-SP1		WL-SP1		WL-SP2		WL-SP3		WL-SP3
SAMPLING DATE					7/10/2020		7/10/2020		7/10/2020		7/10/2020		7/10/2020
LAB SAMPLE ID	CasNum	EPA-TCLP	NJ-NRDCSRS	NJ-RDCSRS	Units	L2029228-01	L2029228-01 R1	L2029228-02	L2029228-03	L2029228-03 R1			
SAMPLE TYPE						SOIL	SOIL	SOIL	SOIL	SOIL			
						Results	Qual	Results	Qual	Results	Qual	Results	Qual
Dibenzo(a,h)anthracene	53-70-3		2	0.5	mg/kg	2.1	U	-	-	1		0.63	-
Dibenzofuran	132-64-9				mg/kg	0.6	J	-	-	0.62	J	0.38	-
Diethyl phthalate	84-66-2		550000	49000	mg/kg	6.1	U	-	-	0.73	U	0.72	-
Dimethyl phthalate	131-11-3				mg/kg	6.1	U	-	-	0.73	U	0.72	-
Fluoranthene	206-44-0		24000	2300	mg/kg	3.9		-	-	10		5.1	-
Fluorene	86-73-7		24000	2300	mg/kg	1.3	J	-	-	0.88		0.33	-
Hexachlorobenzene	118-74-1		1	0.3	mg/kg	1.7	U	-	-	0.21	U	0.74	-
Hexachlorobutadiene	87-68-3		25	6	mg/kg	2.2	U	-	-	0.27	U	0.27	-
Hexachlorocyclopentadiene	77-47-4		110	45	mg/kg	17	U	-	-	2.1	U	2.1	-
Hexachloroethane	67-72-1		48	12	mg/kg	3	U	-	-	0.36	U	0.35	-
Indeno(1,2,3-cd)pyrene	193-39-5		17	5	mg/kg	1.2	J	-	-	3.3		2.1	-
Isophorone	78-59-1		2000	510	mg/kg	2	U	-	-	0.25	U	0.24	-
n-Nitrosodi-n-propylamine	621-64-7		0.3	0.2	mg/kg	1.5	U	-	-	0.18	U	0.18	-
Naphthalene	91-20-3		17	6	mg/kg	8.4		-	-	0.95		1.6	-
NDPA/DPA	86-30-6		390	99	mg/kg	2.8		-	-	0.18	U	0.98	-
Nitrobenzene	98-95-3		14	5	mg/kg	2.7	U	-	-	0.56		0.32	-
p-Chloro-m-cresol	59-50-7				mg/kg	6.1	U	-	-	0.73	U	0.72	-
Pentachlorophenol	87-86-5		3	0.9	mg/kg	4	U	-	-	0.48	U	0.48	-
Phenanthrene	85-01-8		300000		mg/kg	4.4		-	-	8.1		2.3	-
Phenol	108-95-2		210000	18000	mg/kg	6.1	U	-	-	0.73	U	0.72	-
Pyrene	129-00-0		18000	1700	mg/kg	3.8		-	-	9.2		4.4	-
Total Metals													
Aluminum, Total	7429-90-5			78000	mg/kg	7170		-	-	8500		7730	-
Antimony, Total	7440-36-0		450	31	mg/kg	21.7		-	-	27.6		28.1	-
Arsenic, Total	7440-38-2		19	19	mg/kg	498		-	-	453		1650	-
Barium, Total	7440-39-3		59000	16000	mg/kg	257		-	-	370		697	-
Beryllium, Total	7440-41-7		140	16	mg/kg	1.28		-	-	1.12		0.386	-
Cadmium, Total	7440-43-9		78	78	mg/kg	62.2		-	-	21.8		16.2	-
Calcium, Total	7440-70-2				mg/kg	11000		-	-	7490		8580	-
Chromium, Total	7440-47-3				mg/kg	1680		-	-	402		208	-
Cobalt, Total	7440-48-4		590	1600	mg/kg	96.2		-	-	51		22.3	-
Copper, Total	7440-50-8		45000	3100	mg/kg	60900		-	-	13200		1330	-
Iron, Total	7439-89-6				mg/kg	30900		-	-	36900		31900	-
Lead, Total	7439-92-1		800	400	mg/kg	1360		-	-	2160		1800	-
Magnesium, Total	7439-95-4				mg/kg	5820		-	-	3500		3270	-
Manganese, Total	7439-96-5		5900	11000	mg/kg	596		-	-	413		207	-
Mercury, Total	7439-97-6		65	23	mg/kg	278		-	-	1220		240	-
Nickel, Total	7440-02-0		23000	1600	mg/kg	2480		-	-	1440		229	-
Potassium, Total	7440-09-7				mg/kg	646		-	-	758		810	-
Selenium, Total	7782-49-2		5700	390	mg/kg	0.665	J	-	-	1.46	J	3.74	-
Silver, Total	7440-22-4		5700	390	mg/kg	17.9		-	-	43.3		26.4	-
Sodium, Total	7440-23-5				mg/kg	426		-	-	324		602	-
Thallium, Total	7440-28-0				mg/kg	0.917	J	-	-	2.27	U	2.34	-
Vanadium, Total	7440-62-2		1100	78	mg/kg	37.8		-	-	54.3		51.3	-
Zinc, Total	7440-66-6		110000	23000	mg/kg	26100		-	-	14900		1360	-

Table 1 Soil Analytical Results
366-394 Wilson Avenue, Newark, NJ

LOCATION						WL-SP1		WL-SP1		WL-SP2		WL-SP3		WL-SP3	
SAMPLING DATE						7/10/2020		7/10/2020		7/10/2020		7/10/2020		7/10/2020	
LAB SAMPLE ID	CasNum	EPA-TCLP	NJ-NRDCSRS	NJ-RDCSRS	Units	L2029228-01		L2029228-01 R1		L2029228-02		L2029228-03		L2029228-03 R1	
SAMPLE TYPE						SOIL		SOIL		SOIL		SOIL		SOIL	
						Results	Qual	Results	Qual	Results	Qual	Results	Qual	Results	Qual
Volatile Organics by EPA 5035															
1,1,1-Trichloroethane	71-55-6			160000	mg/kg	0.053	U	-	-	0.0013	U	0.0013	U	0.00073	U
1,1,2,2-Tetrachloroethane	79-34-5		3	1	mg/kg	0.053	U	-	-	0.0013	U	0.0013	U	0.00073	U
1,1,2-Trichloroethane	79-00-5		6	2	mg/kg	0.11	U	-	-	0.0027	U	0.0027	U	0.0015	U
1,1-Dichloroethane	75-34-3		24	8	mg/kg	0.11	U	-	-	0.0027	U	0.0027	U	0.0015	U
1,1-Dichloroethene	75-35-4		150	11	mg/kg	0.11	U	-	-	0.0027	U	0.0027	U	0.0015	U
1,2,3-Trichlorobenzene	87-61-6				mg/kg	2.6		-	-	0.0079		0.0019	J	0.00066	J
1,2,4-Trichlorobenzene	120-82-1		820	73	mg/kg	12		-	-	0.032		0.0042	J	0.0012	J
1,2-Dibromo-3-chloropropane	96-12-8		0.2	0.08	mg/kg	0.32	U	-	-	0.008	U	0.008	U	0.0044	U
1,2-Dibromoethane	106-93-4		0.04	0.008	mg/kg	0.11	U	-	-	0.0027	U	0.0027	U	0.0015	U
1,2-Dichlorobenzene	95-50-1		59000	5300	mg/kg	33	E	29		0.082		0.0014	J	0.0012	J
1,2-Dichloroethane	107-06-2		3	0.9	mg/kg	0.11	U	-	-	0.071		0.0027	U	0.0015	U
1,2-Dichloroethene, Total	540-59-0				mg/kg	0.2		-	-	0.0083	J	0.0027	U	0.0015	U
1,2-Dichloropropane	78-87-5		5	2	mg/kg	0.11	U	-	-	0.0092		0.0027	U	0.0015	U
1,3-Dichlorobenzene	541-73-1		59000	5300	mg/kg	4.6		-	-	0.026		0.00075	J	0.0009	J
1,3-Dichloropropene, Total	542-75-6				mg/kg	0.053	U	-	-	0.0013	U	0.0013	U	0.00073	U
1,4-Dichlorobenzene	106-46-7		13	5	mg/kg	23		-	-	0.05		0.0013	J	0.0011	J
1,4-Dioxane	123-91-1				mg/kg	8.5	U	-	-	0.21	U	0.21	U	0.12	U
2-Butanone	78-93-3		44000	3100	mg/kg	1.1	U	-	-	0.025	J	0.027	U	0.023	
2-Hexanone	591-78-6				mg/kg	1.1	U	-	-	0.027	U	0.027	U	0.015	U
4-Methyl-2-pentanone	108-10-1				mg/kg	1.1	U	-	-	0.027	U	0.027	U	0.015	U
Acetone	67-64-1			70000	mg/kg	1.1		-	-	0.12		0.034	J	0.13	
Benzene	71-43-2		5	2	mg/kg	1.8		-	-	0.0065		0.00078	J	0.0022	
Bromochloromethane	74-97-5				mg/kg	0.21	U	-	-	0.0053	U	0.0053	U	0.0029	U
Bromodichloromethane	75-27-4		3	1	mg/kg	0.053	U	-	-	0.0013	U	0.0013	U	0.00073	U
Bromoform	75-25-2		280	81	mg/kg	0.43	U	-	-	0.011	U	0.011	U	0.0059	U
Bromomethane	74-83-9		59	25	mg/kg	0.21	U	-	-	0.0053	U	0.0053	U	0.0029	U
Carbon disulfide	75-15-0		110000	7800	mg/kg	1.1	U	-	-	0.027	U	0.027	U	0.015	U
Carbon tetrachloride	56-23-5		4	2	mg/kg	0.11	U	-	-	0.0027	U	0.0027	U	0.0015	U
Chlorobenzene	108-90-7		7400	510	mg/kg	14		-	-	0.0096		0.00038	J	0.00053	J
Chloroethane	75-00-3		1100	220	mg/kg	0.21	U	-	-	0.0053	U	0.0053	U	0.0029	U
Chloroform	67-66-3		2	0.6	mg/kg	0.16	U	-	-	0.0033	J	0.004	U	0.0022	U
Chloromethane	74-87-3		12	4	mg/kg	0.43	U	-	-	0.011	U	0.011	U	0.0059	U
cis-1,2-Dichloroethene	156-59-2		560	230	mg/kg	0.2		-	-	0.0074		0.0027	U	0.0015	U
cis-1,3-Dichloropropene	10061-01-5		7	2	mg/kg	0.053	U	-	-	0.0013	U	0.0013	U	0.00073	U
Cyclohexane	110-82-7				mg/kg	0.095	J	-	-	0.027	U	0.027	U	0.015	U
Dibromochloromethane	124-48-1		8	3	mg/kg	0.11	U	-	-	0.0027	U	0.0027	U	0.0015	U
Dichlorodifluoromethane	75-71-8		230000	490	mg/kg	1.1	U	-	-	0.027	U	0.027	U	0.015	U
Ethylbenzene	100-41-4		110000	7800	mg/kg	38	E	33		0.0067		0.00065	J	0.0011	J
Freon-113	76-13-1				mg/kg	0.43	U	-	-	0.011	U	0.011	U	0.0059	U
Isopropylbenzene	98-82-8				mg/kg	3.6		-	-	0.01		0.0027	U	0.00029	J
Methyl Acetate	79-20-9			78000	mg/kg	2		-	-	0.011	U	0.011	U	0.0059	U
Methyl cyclohexane	108-87-2				mg/kg	1		-	-	0.014		0.011	U	0.0059	U
Methyl tert butyl ether	1634-04-4		320	110	mg/kg	0.21	U	-	-	0.0053	U	0.0053	U	0.0029	U
Methylene chloride	75-09-2		230	46	mg/kg	0.53	U	-	-	0.013	U	0.013	U	0.0073	U
o-Xylene	95-47-6		170000	12000	mg/kg	26		-	-	0.017		0.0027	U	0.00069	J
p/m-Xylene	179601-23-1		170000	12000	mg/kg	120	E	87		0.012		0.0053	U	0.0019	J
Styrene	100-42-5		260	90	mg/kg	0.29		-	-	0.00062	J	0.0027	U	0.0015	U

Table 1 Soil Analytical Results
366-394 Wilson Avenue, Newark, NJ

LOCATION					WL-SP1		WL-SP1		WL-SP2		WL-SP3		WL-SP3
SAMPLING DATE					7/10/2020		7/10/2020		7/10/2020		7/10/2020		7/10/2020
LAB SAMPLE ID	CasNum	EPA-TCLP	NJ-NRDCSRS	NJ-RDCSRS	Units	L2029228-01	L2029228-01 R1	L2029228-02	L2029228-03	L2029228-03 R1			
SAMPLE TYPE						SOIL	SOIL	SOIL	SOIL	SOIL			
						Results	Qual	Results	Qual	Results	Qual	Results	Qual
Tetrachloroethene	127-18-4		1500	43	mg/kg	0.033	J	-	-	0.021		0.0013	U
Toluene	108-88-3		91000	6300	mg/kg	5.8		-	-	0.045		0.0029	
trans-1,2-Dichloroethene	156-60-5		720	300	mg/kg	0.16	U	-	-	0.0009	J	0.004	U
trans-1,3-Dichloropropene	10061-02-6		7	2	mg/kg	0.11	U	-	-	0.0027	U	0.0027	U
Trichloroethene	79-01-6		10	3	mg/kg	0.053	U	-	-	0.012		0.0013	U
Trichlorofluoromethane	75-69-4		340000	23000	mg/kg	0.43	U	-	-	0.011	U	0.011	U
Vinyl chloride	75-01-4		2	0.7	mg/kg	0.11	U	-	-	0.0027	U	0.0027	U
Xylenes, Total	1330-20-7		170000	12000	mg/kg	110		-	-	0.029		0.0027	U
TCLP Herbicides by EPA 1311													
2,4,5-TP (Silvex)	93-72-1	1			mg/l	0.005	U	-	-	0.005	U	0.005	U
2,4-D	94-75-7	10			mg/l	0.025	U	-	-	0.025	U	0.025	U
TCLP Metals by EPA 1311													
Arsenic, TCLP	7440-38-2	5			mg/l	0.24	J	-	-	0.026	J	0.293	J
Barium, TCLP	7440-39-3	100			mg/l	1.26		-	-	0.867		0.205	J
Beryllium, TCLP	7440-41-7				mg/l	0.1	U	-	-	0.1	U	0.1	U
Cadmium, TCLP	7440-43-9	1			mg/l	0.285		-	-	0.224		0.219	
Chromium, TCLP	7440-47-3	5			mg/l	0.2	U	-	-	0.2	U	0.2	U
Copper, TCLP	7440-50-8				mg/l	2.54		-	-	47.2		0.643	
Lead, TCLP	7439-92-1	5			mg/l	1.18		-	-	4.14		2.56	
Mercury, TCLP	7439-97-6	0.2			mg/l	0.0021		-	-	0.0007	J	0.0011	
Nickel, TCLP	7440-02-0				mg/l	2.94		-	-	4.01		0.979	
Selenium, TCLP	7782-49-2	1			mg/l	0.5	U	-	-	0.5	U	0.5	U
Silver, TCLP	7440-22-4	5			mg/l	0.1	U	-	-	0.1	U	0.1	U
Zinc, TCLP	7440-66-6				mg/l	76		-	-	303		12.2	
TCLP Pesticides by EPA 1311													
Chlordane	57-74-9	0.03			mg/l	0.001	U	-	-	0.001	U	0.001	U
Endrin	72-20-8	0.02			mg/l	0.0002	U	-	-	0.0002	U	0.00024	
Heptachlor	76-44-8	0.008			mg/l	0.0001	U	-	-	0.0001	U	0.0001	U
Heptachlor epoxide	1024-57-3	0.008			mg/l	0.0001	U	-	-	0.0001	U	0.0001	U
Lindane	58-89-9	0.4			mg/l	0.0001	U	-	-	0.0001	U	0.0001	U
Methoxychlor	72-43-5	10			mg/l	0.001	U	-	-	0.001	U	0.001	U
Toxaphene	8001-35-2	0.5			mg/l	0.001	U	-	-	0.001	U	0.001	U
TCLP Semivolatiles by EPA 1311													
2,4,5-Trichlorophenol	95-95-4	400			mg/l	0.025	U	-	-	0.025	U	0.025	U
2,4,6-Trichlorophenol	88-06-2	2			mg/l	0.025	U	-	-	0.025	U	0.025	U
2,4-Dinitrotoluene	121-14-2	0.13			mg/l	0.025	U	-	-	0.025	U	0.025	U
2-Methylphenol	95-48-7	200			mg/l	0.025	U	-	-	0.025	U	0.025	U
3-Methylphenol/4-Methylphenol	108-39-4/106-44-5	200			mg/l	0.014	J	-	-	0.025	U	0.025	U
Hexachlorobenzene	118-74-1	0.13			mg/l	0.01	U	-	-	0.01	U	0.01	U
Hexachlorobutadiene	87-68-3	0.5			mg/l	0.01	U	-	-	0.01	U	0.01	U
Hexachloroethane	67-72-1	3			mg/l	0.01	U	-	-	0.01	U	0.01	U
Nitrobenzene	98-95-3	2			mg/l	0.01	U	-	-	0.01	U	0.01	U
Pentachlorophenol	87-86-5	100			mg/l	0.05	U	-	-	0.05	U	0.05	U
Pyridine	110-86-1	5			mg/l	0.018	U	-	-	0.018	U	0.018	U

Table 1 Soil Analytical Results
366-394 Wilson Avenue, Newark, NJ

LOCATION						WL-SP1	WL-SP1		WL-SP2		WL-SP3		WL-SP3	
SAMPLING DATE						7/10/2020	7/10/2020		7/10/2020		7/10/2020		7/10/2020	
LAB SAMPLE ID	CasNum	EPA-TCLP	NJ-NRDCSRS	NJ-RDCSRS	Units	L2029228-01	L2029228-01 R1		L2029228-02		L2029228-03		L2029228-03 R1	
SAMPLE TYPE						SOIL	SOIL		SOIL		SOIL		SOIL	
						Results	Qual	Results	Qual	Results	Qual	Results	Qual	
TCLP Volatiles by EPA 1311														
1,1-Dichloroethene	75-35-4	0.7			mg/l	0.005	U	-	-	0.005	U	0.005	U	-
1,2-Dichloroethane	107-06-2	0.5			mg/l	0.005	U	-	-	0.005	U	0.005	U	-
1,4-Dichlorobenzene	106-46-7	7.5			mg/l	0.068		-	-	0.025	U	0.025	U	-
2-Butanone	78-93-3	200			mg/l	0.05	U	-	-	0.05	U	0.05	U	-
Benzene	71-43-2	0.5			mg/l	0.021		-	-	0.005	U	0.005	U	-
Carbon tetrachloride	56-23-5	0.5			mg/l	0.005	U	-	-	0.005	U	0.005	U	-
Chlorobenzene	108-90-7	100			mg/l	0.087		-	-	0.005	U	0.005	U	-
Chloroform	67-66-3	6			mg/l	0.0075	U	-	-	0.0075	U	0.0075	U	-
Tetrachloroethene	127-18-4	0.7			mg/l	0.005	U	-	-	0.005	U	0.005	U	-
Trichloroethene	79-01-6	0.5			mg/l	0.005	U	-	-	0.005	U	0.005	U	-
Vinyl chloride	75-01-4	0.2			mg/l	0.01	U	-	-	0.01	U	0.01	U	-

Footnotes:

EPA-TCLP: EPA Toxicity Characteristic (TCLP) Regulatory Levels Criteria per 40CFR Part 261 as of September 10, 2015.

NJ-NRDCSRS: New Jersey 2017 Non-Residential Direct Contact Soil Remediation Standards Criteria per Soil Remediation Standards, last amended September 18, 2017.

NJ-RDCSRS: New Jersey 2017 Residential Direct Contact Soil Remediation Standards Criteria per Soil Remediation Standards, last amended September 18, 2017.

I: The lower value for the two columns has been reported due to obvious interference.

P: The RPD between the results for the two columns exceeds the method-specified criteria.

R: Analytical results are from sample re-analysis.

E: Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

Gray Highlight Indicates Non-detect; Detection Limit above RDCSRS

Yellow Highlight indicates Detection above a standard RDCSRS or NRDCSRS

Exhibit A

Photo Documentation



Photo 1: Soil Pile S1



Photo 2: Soil Pile S1 center location with PID reading and Petroleum Staining



Photo 3: Soil Pile S2



Photo 4: Soil Pile S3

Appendix C

Salomone Supplemental Phase II Report



ENVIRONMENTAL & GEOTECHNICAL SERVICES, LLC

INNOVATIVE

COMPREHENSIVE

SOLUTIONS

January 20, 2020

Joseph Salomone
366-394-Wilson Ave, LLC
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Wayne, NJ 07470

**RE: Supplemental Limited Phase II Environmental Site Assessment
Due Diligence Investigation
Industrial Property
366-394 Wilson Avenue Rear
Newark, NJ 07105**

Dear Mr. Salomone:

Environmental and Geotechnical Services (EGS) is providing this summary letter report to document the results of our Supplemental Limited Phase-II Environmental Site Assessment (ESA) performed at the subject property on December 27, 2019. This Supplemental Limited Phase-II ESA was completed for additional due diligence purposes pursuant to documentation received subsequent to our Limited Phase-II activities (Fifth Remedial Action Progress Report For MW-2 Area Remedial Activities dated August 26, 2009 and prepared by The Elm Group, Inc. "ELM" on behalf of Troy Chemical Corporation "Troy", received from the current property owner, Oberwill Corporation "Oberwill" on or about October 12, 2019.) Furthermore, this Supplemental Limited Phase-II ESA was further completed pursuant to information obtained during a meeting held at Region 2 of the United States Environmental Protection Agency's (USEPA) offices (New York, New York) on December 17, 2019. During the December 17, 2019 meeting, the USEPA indicated (verbally) that the laboratory analytical results of their own soil and sediment sampling conducted in August 2019 indicated very high concentrations of metals and PCBs in both soils and sediment at the unnamed tributary on the western portion of the subject property.

Our Supplemental Limited Phase-II ESA activities at the subject property involved soil borings and soil sampling, along with temporary well installation and groundwater sampling. Such additional soil and groundwater investigation included the following scope of work:

- The advancement of twelve soil borings and the collection of eleven soil samples from the soil borings.
- The installation of temporary monitoring wells at three of the soil boring locations and the collection of three groundwater samples from the wells.

The soil boring and temporary monitoring well locations are shown on the attached Site Plan.

The above-referenced and following scope of work was recommended by EGS and authorized by 366-394 Wilson Ave, LLC and is beyond the scope of the ASTM Standard E1527-13 (Phase-I ESA). The results of the latest scope of work are discussed in this report. The methodology used in the Supplemental Limited Phase-II ESA and the results are discussed below.

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Limited Phase-II ESA Purpose

On December 27, 2019, EGS conducted a Supplemental Limited Phase II ESA or site investigation (“SI”) at the subject property in order to further investigate the subject property based on the receipt of documentation subsequent to the limited Phase II investigation (indicated trichloroethylene “TCE” and 1,2-dichloroethane groundwater contamination on the subject property) and based on information obtained during the December 17, 2019 meeting with the USEPA.

Soil Boring Installation

On December 27, 2019 supplemental limited Phase II activities consisted of advancing twelve (12) soil borings throughout the subject property. The December 27, 2019 soil borings were advanced by Salomone Bros., Inc. (“SBI”) utilizing a direct-push drill rig (AMS PowerProbe model# 9630 VTR). A dual tube macro-core sampler assembly was used to limit potential cross contamination between sampling depths. The stainless steel sampler assembly and probe rods were decontaminated (using alconox and tap water) in between each soil sample location.

Eleven soil samples were collected from the soil borings. An EGS Geologist performed site assessment and soil sampling. The soil borings were advanced at the following locations:

- Soil boring SB-1 was advanced within the eastern portion of the main subject building.
- Soil boring SB-2 was advanced within the northwestern portion of the main subject building
- Soil boring SB-3 was advanced within the southwestern portion of the main subject building
- Soil boring SB-4 was advanced within the southeastern portion of the main subject building
- Soil boring SB-5 was advanced at the southern exterior of the subject property
- Soil boring SB-6 was advanced at the southern exterior of the subject property
- Soil boring SB-7 was advanced at the southeastern exterior of the subject property
- Soil borings SB-8 and SB-9 was advanced at the eastern exterior of the subject property
- Soil boring SB-10 was advanced on the edge of the concrete pad at the eastern exterior of the main subject building.
- Soil boring SB-11 was advanced at the northeastern eastern exterior of the subject property

Upon completion of all sampling activities, the boreholes were filled by SBI with soil drill cuttings and sealed with bentonite. The soil samples were sent to a state-certified laboratory for analysis.

Completed soil boring depths on December 27, 2019 consisted of the following:

- SB-1: 8 feet below grade
- SB-2: 8 feet below grade
- SB-3: 8 feet below grade
- SB-4: 8 feet below grade
- SB-5: 8 feet below grade
- SB-6: 8 feet below grade
- SB-7: 8 feet below grade
- SB-8: 8 feet below grade
- SB-9: 8 feet below grade
- SB-10: 8 feet below grade
- SB-11: 8 feet below grade

Sample Collection and Handling-Soil Boring Sampling

Soil sampling procedures and sample handling were based on the New Jersey Department of Environmental Protection (“NJDEP”) *Field Sampling Procedures Manual* (2005). To prevent cross-contamination, the sampler wore dedicated, disposable, latex gloves and dedicated sampling devices at each sampling point. The soil samples were analyzed for a comprehensive suite of parameters which included United States Environmental Protection Agency (USEPA) target compound list/target analyte list (TCL/TAL) and Category 1 extractable petroleum hydrocarbons (EPH). Each soil sample for volatile organic compound (VOC) analysis was collected in the field using dedicated disposable Encore^R samplers, while the aliquots for extractable petroleum hydrocarbons (EPH), semi-volatile organic compounds (SVOCs), target analyte list (TAL) metals, pesticides, polychlorinated biphenyls (PCBs) and cyanide were collected by transferring soil directly into a laboratory-provided glass jars.

The sample containers were labeled, and then temporarily stored in a chilled cooler with ice packs for transport to the laboratory. A chain-of-custody record was initiated and accompanied the sample jars to the laboratory for completion. A state-certified lab, Accredited Analytical Resources, LLC (“AAR”) of Carteret, NJ (NJDEP Certification #12007), performed all analytical work.

Sample Collection and Handling-Temporary Well Point/ Groundwater Samples

The December 27, 2019 groundwater sampling activities consisted of converting two soil borings (SB-1 and SB-8) into temporary wells (TW-1 and TW-3). Additionally, a third temporary well (TW-2) was installed near the southeast corner of the subject property. The temporary wells, designated as TW-1, TW-2 and TW-3 were installed by SBI using a direct-push probe drill rig (AMS PowerProbe model# 9630 VTR). Based on groundwater Classification Exception Area (CEA) fact sheets that have been prepared and published for various adjacent and nearby properties on the NJDEP Dataminer database, including the western adjacent Troy Chemical site, groundwater flow is generally towards the east-northeast or east-southeast. Thus, the temporary monitoring wells were located in the suspected downgradient location of operational activities that were historically completed at the subject property and also downgradient of the westerly adjacent Troy Chemical facility and the Pierson’s Creek Superfund Site. TW-1 was installed at the soil boring SB-1 location within the eastern portion of the main subject building. TW-2 was installed at the southeastern portion of the subject property. TW-3 was installed at the soil boring SB-8 location at the eastern portion of the subject property.

The temporary well points were installed to a bottom depth of 8 feet below grade (fbg). A 8 foot, 2” I.D. PVC 0.010” slot screen was installed with 1 of 2” I.D. PVC casing. Depth to water was measured at approximately 4.0 fbg in the temporary monitoring wells. Groundwater samples were collected from the temporary monitoring wells within 48 hours of installation pursuant to NJDEP *Field Sampling Procedures Manual*. The groundwater samples were collected on the same day as temporary well installation (December 27, 2019). The groundwater samples were collected via a dedicated disposable Teflon-lined bailer and were transferred directly into laboratory provided glassware. The groundwater samples were collected from the temporary wells were analyzed for TCL/TAL (with selected ion monitoring “SIM” for the base neutrals analysis) with a forward library search of thirty tentatively identified compounds (TICs). A state-certified lab, AAR, performed all analytical work.

Site Assessment Activities

December 27, 2019

The soil cores were extensively field-screened using a portable photoionization detector (PID; RKI Instruments model GX-6000) calibrated for isobutylene. With the exception of soil boring SB-4, no indications of significant contamination (e.g., staining, odors) were noted from the soil borings. An unknown purple-colored substance was noted at the soil-groundwater interface in SB-4. No PID readings were recorded from SB-3, SB-4, SB-8, SB-9, SB-10 and SB-11 advanced on December 27, 2019. Low PID readings were recorded from SB-1, SB-6 and SB-7. Evidence of historic fill material was observed at all of the soil boring locations. The historic fill material was generally observed at shallow depth intervals (generally a 3-4 foot thick layer) and consisted of black medium and coarse sand, gravel, ash, cinder concrete and brick fragments. Based on gauging of temporary monitoring wells installed during the supplemental limited Phase II investigation, depth to groundwater was determined to be at approximately 4 fbg. All soil samples were collected from in-situ soils at the 3.0-4.0 fbg depth interval which was also at the soil-groundwater interface (groundwater at 4 fbg). As a result of poor sample recovery, twelve inch increments were sampled from the soil borings. Additionally, twelve-inch increments were sampled from the soil borings in order to attain laboratory requirements for sample volume of the TCL/TAL and EPH analysis. The soil samples were collected from such depth intervals within in-situ soil material in order to further evaluate potential impacts from historical site operations and historic fill.

Temporary Monitoring Wells-December 27, 2019

The soil cores were extensively field-screened using a portable PID (RKI Instruments model GX-6000) calibrated for isobutylene. No indications of significant contamination (e.g., staining, odors) were noted from the soil cores and the groundwater samples that were collected to address temporary monitoring wells TW-2 and TW-3. An oily sheen was noted on the groundwater at the TW-1 location. The groundwater samples were collected in order to further evaluate potential impacts from historical site operations, historic fill, and potential offsite sources of contamination.

Results-Soil Boring Samples

Attachment 1 consists of a site plan depicting the soil boring and temporary monitoring well locations.

Attachment table 2 summarizes the sampling results of soil borings SB-1 through SB-11. The results are further discussed below.

Soil Sample SB-1:

All VOC, SVOC, EPH, PCB, pesticides, and cyanide concentrations were detected below their respective NJDEP Residential Direct Contact Soil Remediation Standards (RDCSRS), Non-Residential Direct Contact Soil Remediation Standards (NRDCSRS) and Default Impact-to-Groundwater Soil Screening Levels (DIGWSSLs).

However, the following metals were detected above applicable NJDEP soil remediation standards and DIGWSSL:

- Mercury was detected at 0.703 ppm which is above the NJDEP DIGWSSL of 0.1 ppb, but below the Site-Specific Impact-to-Groundwater Soil Remediation Standard (SSIGWSRS) of 12.4 ppm. The SSIGWSRS for mercury was established using results from a Synthetic Precipitation Leaching Procedure (SPLP) test during the limited Phase-II activities.
- Aluminum was detected at 13,500 ppm which is above the NJDEP DIGWSSL of 6,000 ppb. As noted previously in the Limited Phase II, the NJDEP considers aluminum to be a secondary metal

(not a health consideration, but rather an aesthetic consideration, i.e., based on taste, odor or appearance) unless there is reason to believe its presence is due to a site discharge. Aluminum was not noted to have been used in historical site operations based on information obtained during the due diligence process (i.e., Globe Metals Right-to-Know Surveys).

- Arsenic was detected at 1,890 ppm, which is above the NJDEP RDCSRS and the NRDCSRS of 19 ppm.
- Lead was detected at 161 ppm, which is above the NJDEP DIGWSSL of 90 ppm and the SSIGWSRS of 150 ppm. The SSIGWSRS for lead was established using results from a SPLP test during the limited Phase-II activities.
- Manganese was detected at 179 ppm, which is above the NJDEP DIGWSSL of 65 ppm. As noted previously in the Limited Phase II, the NJDEP considers manganese to be a secondary metal (not a health consideration, but rather an aesthetic consideration, i.e., based on taste, odor or appearance) unless there is reason to believe its presence is due to a site discharge. Manganese was not noted to have been used in historical site operations based on information obtained during the due diligence process (i.e., Globe Metals Right-to-Know Surveys).

Soil Sample SB-2:

All EPH, PCB, pesticides, and concentrations were detected below their respective NJDEP RDCSRS, NRDCSRS and DIGWSSLs.

However, the following SVOCs, metals, VOCs and cyanide were detected above applicable NJDEP soil remediation standards and DIGWSSL:

- The SVOC benzo(a)anthracene was detected at 63.9 ppm, which is above the NJDEP RDCSRS of 5 ppm and NRDCSRS of 17 ppm.
- The SVOC benzo(a)pyrene was detected at 60.2 ppm, which is above the NJDEP RDCSRS of 0.5 ppm and NRDCSRS of 2 ppm.
- The SVOC benzo(b)fluoranthene was detected at 83.1 ppm, which is above the NJDEP RDCSRS of 5 ppm and NRDCSRS of 17 ppm.
- The SVOC benzo(k)fluoranthene was detected at 27.7 ppm, which is above the NJDEP DIGWSSL of 25 ppm.
- The SVOC dibenzo(a,h) anthracene was detected at 14.4 ppm, which is above the NJDEP RDCSRS of 0.5 ppm and NRDCSRS of 2 ppm.
- The SVOC indeno(1,2,3-cd)pyrene was detected at 32.7 ppm, which is above the NJDEP RDCSRS of 5 ppm and NRDCSRS of 17 ppm.
- The SVOC N-Nitrosodiphenylamine was detected at 0.676 ppm, which is above the NJDEP DIGWSSL of 0.4 ppm.
- Mercury was detected at 0.36 ppm which is above the NJDEP DIGWSSL of 0.1 ppb, but below the SSIGWSRS of 12.4 ppm. The SSIGWSRS for mercury was established using results from a SPLP test during the limited Phase-II activities.
- The metal aluminum was detected at 8,830 ppm which is above the NJDEP DIGWSSL of 6,000 ppb. (Refer to comment regarding aluminum under SB-1 above.)
- The metal arsenic was detected at 542 ppm, which is above the NJDEP RDCSRS and the NRDCSRS of 19 ppm.
- The metal lead was detected at 100 ppm, which is above the NJDEP DIGWSSL of 90 ppm, but below the SSIGWSRS of 150 ppm. The SSIGWSRS for lead was established using results from a SPLP test during the limited Phase-II activities.
- The metal manganese was detected at 84.9 ppm, which is above the NJDEP DIGWSSL of 65 ppm. (Refer to comment regarding manganese under SB-1 above.)

- The VOC 1,2-dibromo-3-chloropropane was detected at 0.00525 ppm, which is slightly above the NJDEP DIGWSSL of 0.005 ppm.
- The VOC benzene was detected at 0.0499 ppm, which is above the DIGWSSL of 0.005 ppm.
- Cyanide was detected at 31.3 ppm, which is above the NJDEP RDCSRS of 20 ppm.

Soil Sample SB-3:

All VOC, SVOC, PCB, pesticides, and cyanide concentrations were detected below their respective NJDEP RDCSRS, NRDCSRS and DIGWSSLs.

However, EPH and arsenic were detected above applicable NJDEP soil remediation standards, DIGWSSL, and Ecological Screening Criteria (ESC) as discussed below:

- EPH was detected at 3,000 ppm, which is above the NJDEP ESC of 1,700 ppm.
- The metal arsenic was detected at 163 ppm, which is above the NJDEP RDCSRS and the NRDCSRS of 19 ppm.

Soil Sample SB-4:

All VOC, SVOC, EPH, PCB, pesticides, and cyanide concentrations were detected below their respective NJDEP RDCSRS, NRDCSRS and DIGWSSLs.

However, the following metals were detected above applicable NJDEP soil remediation standards and DIGWSSL:

- Mercury was detected at 0.17 ppm which is above the NJDEP DIGWSSL of 0.1 ppb, but below the SSIGWSRS of 12.4 ppm
- Aluminum was detected at 10,600 ppm which is above the NJDEP DIGWSSL of 6,000 ppb. (Refer to comment regarding aluminum under SB-1 above.)
- The metal arsenic was detected at 4,310 ppm, which is above the NJDEP RDCSRS and the NRDCSRS of 19 ppm.

Soil Sample SB-5:

All VOC, PCB, pesticides, and cyanide concentrations were detected below their respective NJDEP RDCSRS, NRDCSRS and DIGWSSLs.

However, EPH, one SVOC and the following metals were detected above applicable NJDEP soil remediation standards and DIGWSSL:

- EPH was detected at 9,430 ppm, which is above the NJDEP residential soil standard of 5,100 ppm for Category 1 EPH and above the NJDEP free product limit of 8,000 ppm for Category 1 EPH.
- The SVOC N-Nitrosodiphenylamine was detected at 1,420 ppm which is above the NJDEP RDCSRS of 99 ppm, the NRDCSRS of 390 ppm of 0.1 ppb and the DIGWSSL of 0.4 ppm.
- The metal cadmium was detected at 2,55 ppm which is above the DIGWSSL of 2 ppm but below the SSIGWSRS of 8 ppm. The SSIGWSRS for cadmium was established using results from a SPLP test during the limited Phase-II activities.
- The metal nickel was detected at 133 ppm, which is above the DIGWSSL of 48 ppm.
- The metal zinc was detected at 2,150 ppm, which is above the DIGWSSL of 930 ppm.

Soil Sample SB-6

All VOC, EPH, PCB, pesticides, and cyanide concentrations were detected below their respective NJDEP RDCSRS, NRDCSRS and DIGWSSLs.

However, one SVOC and mercury were detected above applicable NJDEP DIGWSSL, as discussed below:

- The SVOC N-Nitrosodiphenylamine was detected at 1.2 ppm, which is above the NJDEP DIGWSSL of 0.4 ppm.
- Mercury was detected at 0.389 ppm which is above the NJDEP DIGWSSL of 0.1 ppb, but below the SSIGWSRS of 12.4 ppm. The SSIGWSRS for mercury was established using results from a SPLP test during the limited Phase-II activities.

Soil Sample SB-7

All VOC, PCB, pesticides, and cyanide concentrations were detected below their respective NJDEP RDCSRS, NRDCSRS and DIGWSSLs.

However, EPH, one SVOC and the following metals were detected above applicable NJDEP DIGWSSL and ESC:

- Category 1 EPH was detected at 3,250 ppm, which is above the NJDEP ESC of 1,700 ppm.
- The SVOC benzo(a)pyrene was detected at 0.201 ppm, which is slightly above the NJDEP DIGWSSL of 0.2 ppm but below the SSIGWSRS of 0.414 ppm.
- Mercury was detected at 0.916 ppm which is above the NJDEP DIGWSSL of 0.1 ppb, but below the SSIGWSRS of 12.4 ppm. The SSIGWSRS for mercury was established using results from a SPLP test during the limited Phase-II activities.
- The metal arsenic was detected at 20.2 ppm, which is above the NJDEP RDCSRS and the NRDCSRS of 19 ppm.
- The metal cadmium was detected at 7.57 ppm which is above the DIGWSSL of 2 ppm but below the SSIGWSRS of 8 ppm. The SSIGWSRS cadmium was established using results from a SPLP test during the limited Phase-II activities.
- The metal lead was detected at 205 ppm, which is above the NJDEP DIGWSSL of 90 ppm and the SSIGWSRS of 150 ppm. The SSIGWSRS for lead was established using results from a SPLP test during the limited Phase-II activities.
- The metal manganese was detected at 98.8 ppm, which is above the NJDEP DIGWSSL of 65 ppm. (Refer to comment regarding manganese under SB-1 above.)
- The metal nickel was detected at 60.8 ppm, which is above the DIGWSSL of 48 ppm. See SPLP comment regarding nickel under the SB-5 above.

Soil Sample SB-8

All VOC, EPH, PCB, pesticides, and cyanide concentrations were detected below their respective NJDEP RDCSRS, NRDCSRS and DIGWSSLs.

However, the following SVOCs and metals were detected above applicable NJDEP RDCSRS and DIGWSSL:

- The SVOC benzo(a)anthracene was detected at 1.69 ppm, which is above the NJDEP DIGWSSL of 0.8 ppm.
- The SVOC benzo(a)pyrene was detected at 1.34 ppm, which is above the NJDEP RDCSRS of 0.5 ppm but below the NJDEP NRDCSRS of 2 ppm.
- Mercury was detected at 0.561 ppm which is above the NJDEP DIGWSSL of 0.1 ppb, but below the SSIGWSRS of 12.4 ppm. The SSIGWSRS for mercury was established using results from a SPLP test during the limited Phase-II activities.
- The metal lead was detected at 206 ppm, which is above the NJDEP DIGWSSL of 90 ppm and the SSIGWSRS of 150 ppm. The SSIGWSRS for lead was established using results from a SPLP test during the limited Phase-II activities.
- The metal manganese was detected at 253 ppm, which is above the NJDEP DIGWSSL of 65 ppm. (Refer to comment regarding manganese under SB-1 above.)

Soil Sample SB-9

All VOC, SVOC, EPH, PCB, pesticides, and cyanide concentrations were detected below their respective NJDEP RDCSRS, NRDCSRS and DIGWSSLs.

However, mercury was detected above the NJDEP DIGWSSL, as discussed below:

- Mercury was detected at 0.242 ppm which is above the NJDEP DIGWSSL of 0.1 ppb, but below the SSIGWSRS of 12.4 ppm. The SSIGWSRS for mercury was established using results from a SPLP test during the limited Phase-II activities.

Soil Sample SB-10

All VOC, EPH, PCB, pesticides, and cyanide concentrations were detected below their respective NJDEP RDCSRS, NRDCSRS and DIGWSSLs.

However, the following SVOCs and metals were detected above applicable NJDEP RDCSRS and DIGWSSL:

- The SVOC benzo(a)anthracene was detected at 1.22 ppm, which is above the NJDEP DIGWSSL of 0.8 ppm.
- The SVOC benzo(a)pyrene was detected at 1.35 ppm, which is above the NJDEP RDCSRS of 0.5 ppm but below the NJDEP NRDCSRS of 2 ppm.
- Mercury was detected at 0.313 ppm which is above the NJDEP DIGWSSL of 0.1 ppb, but below the SSIGWSRS of 12.4 ppm. The SSIGWSRS for mercury was established using results from a SPLP test during the limited Phase-II activities.
- The metal arsenic was detected at 21.9 ppm, which is above the NJDEP RDCSRS and the NRDCSRS of 19 ppm.

- The metal lead was detected at 194 ppm, which is above the NJDEP DIGWSSL of 90 ppm and the SSIGWSRS of 150 ppm. The SSIGWSRS for lead was established using results from a SPLP test during the limited Phase-II activities.

Soil Sample SB-11

All VOC, EPH, PCB, pesticides, and cyanide concentrations were detected below their respective NJDEP RDCSRS, NRDCSRS and DIGWSSLs.

However, arsenic as detected above applicable NJDEP RDCSRS, NRDCSRS and DIGWSSL, as discussed below:

- The metal arsenic was detected at 32 ppm, which is above the NJDEP RDCSRS and the NRDCSRS of 19 ppm.

Sampling and Analytical Results-Temporary Well Samples

Attachment Table 3 summarizes the sampling results of the temporary well samples collected on December 27, 2019. The results are further discussed below.

Attachment 1 consists of a site plan depicting the temporary well locations.

All PCB and pesticide concentrations were detected below their respective NJDEP Groundwater Quality Standards (GWQS) in the three temporary monitoring wells.

Groundwater Sample TW-1:

The following SVOCs, metals, and cyanide were detected above the GWQS:

- The SVOC benzo(a)anthracene was detected at 0.91 ppb, which is above the NJDEP GWQS of 0.1 ppb.
- The SVOC benzo(a)pyrene was detected at 1.51 ppb, which is above the NJDEP GWQS of 0.1 ppb.
- The SVOC benzo(b)fluoranthene was detected at 1.77 ppb, which is above the NJDEP GWQS of 0.2 ppb.
- The SVOC benzo(k)fluoranthene was detected at 0.546 ppb, which is slightly above the NJDEP GWQS of 0.5 ppb.
- The SVOC indeno(1,2,3-cd)pyrene was detected at 1.31 ppb, which is above the NJDEP GWQS of 0.2 ppb.
- The metal aluminum was detected at 48,900 ppb, which is above the NJDEP GWQS of 200 ppb. The NJDEP considers aluminum to be a secondary background metal (not health-based) but requires the performance of a background investigation of groundwater (groundwater samples at other areas of the site), research and published literature to prove that aluminum is representative of a background condition and not the result of a site discharge.
- The metal arsenic was detected at 1,930 ppb, which is above the NJDEP GWQS of 3 ppb.
- The metal beryllium was detected at 1.89 ppb, which is above the NJDEP GWQS of 1 ppb.
- The metal chromium was detected at 117 ppb, which is above the NJDEP GWQS of 70 ppb.
- The metal iron was detected at 54,700 ppb, which is above the NJDEP GWQS of 300 ppb. The NJDEP considers iron to be a secondary background metal (not health-based) but requires the performance of a background investigation of groundwater (groundwater samples at other areas

of the site), research and published literature to prove that aluminum is representative of a background condition and not the result of a site discharge.

- The metal lead was detected at 87.5 ppb, which is above the NJDEP GWQS of 5 ppb.
- The metal manganese was detected at 1,530 ppb, which is above the NJDEP GWQS of 50 ppb. The NJDEP considers manganese to be a secondary background metal (not health-based) but requires the performance of a background investigation of groundwater (groundwater samples at other areas of the site), research and published literature to prove that aluminum is representative of a background condition and not the result of a site discharge.
- The metal nickel was detected at 146 ppb, which is above the NJDEP GWQS of 100 ppb.
- The metal sodium was detected at 103,000 ppb, which is above the NJDEP GWQS of 50,000 ppb. The NJDEP considers sodium to be a secondary background metal (not health-based) but requires the performance of a background investigation of groundwater (groundwater samples at other areas of the site), research and published literature to prove that aluminum is representative of a background condition and not the result of a site discharge.
- The metal vanadium was detected at 66.5 ppb, which is above the NJDEP GWQS of 60 ppb.
- Cyanide was detected at 2,140 ppb, which is above the NJDEP GWQS of 100 ppb.

Groundwater Sample TW-2:

The following SVOCs, metals, and VOC were detected above the GWQS:

- The SVOC benzo(a)anthracene was detected at 0.748 ppb, which is above the NJDEP GWQS of 0.1 ppb.
- The SVOC benzo(a)pyrene was detected at 1.28 ppb, which is above the NJDEP GWQS of 0.1 ppb.
- The SVOC benzo(b)fluoranthene was detected at 1.48 ppb, which is above the NJDEP GWQS of 0.2 ppb.
- The SVOC indeno(1,2,3-cd)pyrene was detected at 1.1 ppb, which is above the NJDEP GWQS of 0.2 ppb.
- The metal aluminum was detected at 35,000 ppb, which is above the NJDEP GWQS of 200 ppb. (Refer to comment regarding aluminum under TW-1 above.)
- The metal arsenic was detected at 368 ppb, which is above the NJDEP GWQS of 3 ppb.
- The metal beryllium was detected at 2.1 ppb, which is above the NJDEP GWQS of 1 ppb.
- The metal cadmium was detected at 6.63 ppb, which is above the NJDEP GWQS of 4 ppb.
- The metal chromium was detected at 160 ppb, which is above the NJDEP GWQS of 70 ppb.
- The metal iron was detected at 51,300 ppb, which is above the NJDEP GWQS of 300 ppb. (Refer to comment regarding iron under TW-1 above.)
- The metal lead was detected at 119 ppb, which is above the NJDEP GWQS of 5 ppb.
- The metal manganese was detected at 586 ppb, which is above the NJDEP GWQS of 50 ppb. (Refer to comment regarding manganese under TW-1 above.)
- The metal sodium was detected at 77,200 ppb, which is above the NJDEP GWQS of 50,000 ppb. (Refer to comment regarding sodium under TW-1 above.)
- The metal vanadium was detected at 95.9 ppb, which is above the NJDEP GWQS of 60 ppb.
- The metal zinc was detected at 2,500 ppb, which is above the NJDEP GWQS of 2,000 ppb.
- The VOC trichloroethylene (TCE) was detected at 1.29 ppb, which is slightly above the GWQS of 1 ppb.

Groundwater Sample TW-3:

The following SVOCs, metals, and cyanide were detected above the GWQS:

- The SVOC benzo(a)anthracene was detected at 0.29 ppb, which is above the NJDEP GWQS of 0.1 ppb.
- The SVOC benzo(a)pyrene was detected at 0.326 ppb, which is above the NJDEP GWQS of 0.1 ppb.
- The SVOC benzo(b)fluoranthene was detected at 0.538 ppb, which is above the NJDEP GWQS of 0.2 ppb.
- The SVOC indeno(1,2,3-cd)pyrene was detected at 1.207 ppb, which is above the NJDEP GWQS of 0.2 ppb.
- The metal aluminum was detected at 28,700 ppb, which is above the NJDEP GWQS of 200 ppb. (Refer to comment regarding aluminum under TW-1 above.)
- The metal arsenic was detected at 259 ppb, which is above the NJDEP GWQS of 3 ppb.
- The metal beryllium was detected at 1.32 ppb, which is above the NJDEP GWQS of 1 ppb.
- The metal chromium was detected at 99.1 ppb, which is above the NJDEP GWQS of 70 ppb.
- The metal copper was detected at 5,660 ppb, which is above the NJDEP GWQS of 1,300 ppb. The copper concentration in groundwater is much higher than the concentration detected in the other two groundwater samples collected during the supplemental limited Phase II investigation.
- The metal iron was detected at 53,400 ppb, which is above the NJDEP GWQS of 300 ppb. (Refer to comment regarding iron under TW-1 above.)
- The metal lead was detected at 1,610 ppb, which is above the NJDEP GWQS of 5 ppb. The lead concentration in groundwater is much higher than the concentration detected in the other two groundwater samples collected during the supplemental limited Phase II investigation.
- The metal manganese was detected at 1,050 ppb, which is above the NJDEP GWQS of 50 ppb. (Refer to comment regarding manganese under TW-1 above.)
- The metal nickel was detected at 226 ppb, which is above the NJDEP GWQS of 100 ppb.
- The metal sodium was detected at 65,400 ppb, which is above the NJDEP GWQS of 50,000 ppb. (Refer to comment regarding sodium under TW-1 above.)
- The metal zinc was detected at 12,800 ppb, which is above the NJDEP GWQS of 2,000 ppb. The zinc concentration in groundwater is much higher than the concentration detected in the other two groundwater samples collected during the supplemental limited Phase II investigation.
- Cyanide was detected at 182 ppb, which is above the NJDEP GWQS of 100 ppb.

Conclusions & Recommendations

- Based on the results of our Supplemental Limited Phase-II ESA, all PCB and pesticides concentrations were detected below their respective NJDEP RDCSRS, NRDCSRS and DIGWSSLs.
- The results of our Supplemental Limited Phase-II ESA indicates that in-situ soils, including soils beneath the existing main subject building, contain contaminants above NJDEP remediation standards and screening levels.
- Metals, SVOCs, VOCs, EPH, and cyanide were detected above the NJDEP RDCSRS, NRDCSRS DIGWSSLs, and the SSIGWRS (for various metals) that was established during the limited Phase-II activities. The source of the SVOCs, VOCs, EPH, and cyanide may be attributed to historical site operations (e.g., scrap metal recycling, metal smelting and refining, ultramarine

manufacturing), historic fill material, or a combination of both. Further evaluation of site history may be needed to confirm this.

- Based on the metals, SVOCs, VOCs, EPH, cyanide results in soils, we recommend that additional inquiry be completed by a New Jersey Licensed Site Remediation Professional (LSRP) in order to determine if such results may be attributable to historical site operations, historic fill material, an unknown source(s), an off-site source(s), or a combination of the preceding. EGS also recommends the completion of a remedial investigation in order to delineate the horizontal and vertical extent of the identified soil contamination.
- An alternative to compliance can be implemented via further SPLP testing of certain contaminants such as metals and SVOCs.
- Based on the results of the supplemental limited Phase-II ESA and the recommended remedial investigation, the remedial action to address such soil contamination may entail the establishment of Deed Notice for soils pursuant to applicable NJDEP regulations and guidance (e.g., Technical Requirements for Site Remediation, N.J.A.C. 7:26E-5.2(a)4, Administrative Requirement For The Remediation Of Contaminated Sites, N.J.A.C. 7:26C-7.2, Soil Remedial Action Permit Guidance). Such would involve performing a restricted use remediation, the use of engineering and/or institutional controls as a remedy for soil contamination (e.g., capping of soil in place, recording of a Deed Notice at the County Clerk/Register of Deeds and Mortgages and to obtain a remedial action permit (RAP) from the NJDEP). NJDEP soil Deed Notice compliance involves NJDEP fees and the retention of a New Jersey Licensed Site Remediation Professional (LSRP) to perform work, the establishment of a soil RAP (which involves a fee payable to the NJDEP), an annual soil RAP fee (payable to the NJDEP), and post-Response Action Outcome (RAO) inspections and biennial reports submitted to the NJDEP in order to ensure that the engineering control (cap) remains protective of human health and the environment. Alternate means of remedial action may be necessary to address the identified soil contamination following the performance of the recommended remedial investigation, especially if such contamination is deemed by a LSRP as attributable to discharge from historical site operations rather than historic fill.
- VOCs, SVOCs, metals and cyanide were detected above the NJDEP GWQS based on the results of temporary monitoring wells. The source(s) of groundwater contamination may be attributed to historical site operations (e.g., scrap metal recycling, metal smelting and refining, ultramarine manufacturing), historic fill material, an unknown source(s), an off-site source(s) or a combination of the preceding. Based on such results, we recommend that remedial investigation of groundwater is completed under LSRP oversight (e.g., permanent monitoring well installation and sampling). It is further recommended that additional inquiry and sampling as necessary is completed under LSRP oversight in order to determine if any of the groundwater contaminants may be attributable to an off-site source (e.g., completion of a Preliminary Assessment, upgradient monitoring installation and sampling).
- Further investigation may be conducted via permanent well installation and low flow purging and sampling (LFPS). Such methodology may obtain reduced contaminant levels compared to the temporary monitoring well sampling results (i.e., due to the turbidity of the temporary monitoring well samples).

- With regard to secondary metals groundwater contamination (e.g., aluminum, iron, manganese and sodium), additional groundwater investigation via permanent well installation and sampling, and possible vertical soil profiling, is warranted in order to determine if such concentrations can be attributed to natural background or operational discharge.
- Depending on the results of the recommended groundwater investigation, the establishment of a groundwater Classification Exception Area (CEA) may ultimately be required pursuant to applicable NJDEP regulations and guidance (e.g., Technical Requirements for Site Remediation, N.J.A.C. 7:26E-4.9(a)7, Administrative Requirement For The Remediation Of Contaminated Sites, N.J.A.C. 7:26C-7.3, Groundwater Remedial Action Permit Guidance). A groundwater CEA is an institutional control (IC) that is intended to prevent adverse impacts to sensitive receptors (e.g., potable wells) that may be affected by contaminants in the groundwater from the subject property. Unless attributable to historic fill, Groundwater CEA compliance involves NJDEP fees and the retention of a LSRP to perform work, the establishment of a groundwater RAP (which involves a fee payable to the NJDEP), an annual groundwater RAP fee (payable to the NJDEP), post-RAO sampling and laboratory analysis of monitoring wells as set forth in the schedule included in the groundwater RAP, evaluations to ascertain whether nearby receptors and/or sensitive populations may be affected by the groundwater contamination (e.g., Receptor Evaluation and Well Search), and post-RAO inspections and biennial reports submitted to the NJDEP in order to ensure that the institutional control (groundwater CEA) remains protective of human health and the environment.

Such groundwater CEAs, as are typical in cases involving immobile compounds (e.g., metals), are often established for an indeterminate duration and part-in-parcel with a Limited Restricted Use Response Action Outcome “RAO” (e.g., regulatory closure) issued by a LSRP. If the recommended further groundwater investigation confirms that the any of the groundwater contamination is attributable to historic fill rather than site discharge, a groundwater CEA consisting of a Virtual Institutional Control (VIC) can be established. A VIC CEA does not involve NJDEP fees, retention of a LSRP, periodic sampling and laboratory analysis of monitoring wells as set forth in the schedule included in a groundwater RAP or inspections and biennial reports submitted to the NJDEP.

- Based on the metals results in soils, the results (above the NJDEP DIGWSSL) for aluminum and manganese can be attributable to background contamination when compared to median and 90th percentile concentrations noted in “*Ambient Levels of Metals in New Jersey Soils*” by P.F. Sanders, 2003.
- To reiterate the findings from our Phase-I ESA, although groundwater contamination in association with the adjacent Troy Chemical facility has been delineated and does not extend onto the subject property per a NJDEP CEA Fact Sheet and CEA extent map, EGS recommends that the status of the Troy Chemical/USEPA Pierson’s Creek Superfund case be monitored on a periodic basis in order to determine any potential future impacts to the environmental condition of the subject property. This is especially the case since the December 17, 2019 meeting with the USEPA yielded information that the unnamed tributary is designated as a portion of operable unit 1 (OU-1) of the Pierson’s Creek Superfund site, that very high concentrations of metals and PCBs were detected in soils and sediments of the unnamed tributary during sampling by the USEPA in August 2019 and that the remedial investigation/feasibility study (RI/FS) for the Superfund case ongoing.

Based on the results of our Limited Phase-II ESA, EGS recommends that the property owner and/or operator contact the NJDEP Hotline (1-877-927-6337) in order to report soil and groundwater contamination; unless an there is an agreement in existence with regard to non-disclosure of these due 366-394 Wilson Avenue Rear Supplemental Limited Phase II

diligence results. In the case of the latter, EGS recommends consultation with a transactional, business attorney with a focus in environmental compliance counseling regarding reporting obligations based on the results of the Supplemental Limited Phase II. Please note that by contacting the NJDEP to report soil and groundwater contamination, there will be many regulatory requirements and deadlines that will be triggered. A LSRP will be required to oversee all necessary remedial investigation and remediation actions.

For additional details on NJDEP requirements for a regulated site, please contact us at (973) 808-6600.

Sincerely yours,



James Kelly
Project Manager

Attachments:

Site Plan: Soil and Groundwater Sample Locations
Tabulation of Supplemental Phase II Soil Samples
Tabulation of Supplemental Phase II Groundwater Samples
Laboratory Reports and Chain-of-Custody Forms



SB-2

SB-11

SB-10

SB-1/TW-1

SB-3

SB-8/TW-3

SB-4

SB-5

SB-9

SB-6

SB-7

TW-2

© 2019 Google

Google Earth

151 ft

1995

Imagery Date: 5/10/2018 40°42'57.98" N 74°08'35.54" W elev 6 ft eye alt 659

Table 2-Supplemental Phase II Soil Sampling Results (12-27-19)					Sample No.	Sample No.	Sample No.	Sample No.	Sample No.	Sample No.	Sample No.	Sample No.	Sample No.	Sample No.	Sample No.	Sample No.
Lab: Accredited Analytical Resources LLC					SB-1	SB-2	SB-2	SB-3	SB-4	SB-5	SB-5 (Rerun)	SB-6	SB-6	SB-7	SB-8	SB-9
366-394 Wilson Ave Rear, Newark, New Jersey					12/27/19	12/27/19	12/27/19	12/27/19	12/27/19	12/27/19	12/27/19	12/27/19	12/27/19	12/27/19	12/27/19	12/27/19
Compound	IPTGW	NRDCSRS	RDCSRS	SSIGWSRS	SB-1	SB-2	SB-2	SB-3	SB-4	SB-5	SB-5 (Rerun)	SB-6	SB-6	SB-7	SB-8	SB-9
EPA Method SW846 8081B/8082A (mg/kg)					12/27/19	12/27/19	12/27/19	12/27/19	12/27/19	12/27/19	12/27/19	12/27/19	12/27/19	12/27/19	12/27/19	12/27/19
4,4'-DDD	4	13	3	NA	0.00288 U	0.00139 U		0.00126 U	0.00261 U	0.00187 U		0.00137 U		0.00125 U	0.00123 U	0.00119 U
4,4'-DDE	18	9	2	NA	0.00288 U	0.00139 U		0.00126 U	0.00261 U	0.00187 U		0.00137 U		0.00125 U	0.00123 U	0.00119 U
4,4'-DDT	11	8	2	NA	0.00288 U	0.00139 U		0.00126 U	0.00261 U	0.00187 U		0.00137 U		0.00125 U	0.00123 U	0.00119 U
Aldrin	0.2	0.2	0.04	NA	0.00143 U	0.000690 U		0.000627 U	0.00130 U	0.000929 U		0.000680 U		0.000620 U	0.000610 U	0.000591 U
alpha-BHC	0.002	0.5	0.1	NA	0.00143 U	0.000690 U		0.000627 U	0.00130 U	0.000929 U		0.000680 U		0.000620 U	0.000610 U	0.000591 U
alpha-Chlordane	0.025	0.5	0.1	NA	0.00143 U	0.000690 U		0.000627 U	0.00130 U	0.000929 U		0.000680 U		0.000620 U	0.000610 U	0.000591 U
Aroclor-1016	0.2	1	0.2	NA	0.0360 U	0.0174 U		0.0158 U	0.0326 U	0.0234 U		0.0171 U		0.0156 U	0.0153 U	0.0149 U
Aroclor-1221	0.2	1	0.2	NA	0.0360 U	0.0174 U		0.0158 U	0.0326 U	0.0234 U		0.0171 U		0.0156 U	0.0153 U	0.0149 U
Aroclor-1232	0.2	1	0.2	NA	0.0360 U	0.0174 U		0.0158 U	0.0326 U	0.0234 U		0.0171 U		0.0156 U	0.0153 U	0.0149 U
Aroclor-1242	0.2	1	0.2	NA	0.0360 U	0.0174 U		0.0158 U	0.0326 U	0.0234 U		0.0171 U		0.0156 U	0.0153 U	0.0149 U
Aroclor-1248	0.2	1	0.2	NA	0.0360 U	0.0174 U		0.0158 U	0.0326 U	0.0234 U		0.0171 U		0.0156 U	0.0153 U	0.0149 U
Aroclor-1254	0.2	1	0.2	NA	0.0360 U	0.0174 U		0.0158 U	0.0326 U	0.0234 U		0.0171 U		0.0156 U	0.0153 U	0.0149 U
Aroclor-1260	0.2	1	0.2	NA	0.0360 U	0.0174 U		0.0158 U	0.0326 U	0.0234 U		0.0171 U		0.0156 U	0.0153 U	0.0149 U
Aroclor-1262	0.2	1	0.2	NA	0.0360 U	0.0174 U		0.0158 U	0.0326 U	0.0234 U		0.0171 U		0.0156 U	0.0153 U	0.0149 U
Aroclor-1268	0.2	1	0.2	NA	0.0360 U	0.0174 U		0.0158 U	0.0326 U	0.0234 U		0.0171 U		0.0156 U	0.0153 U	0.0149 U
beta-BHC	0.002	2	0.4	NA	0.00143 U	0.000690 U		0.000627 U	0.00130 U	0.000929 U		0.000680 U		0.000620 U	0.000610 U	0.000591 U
delta-BHC	NA	NA	NA	NA	0.00143 U	0.000690 U		0.000627 U	0.00130 U	0.000929 U		0.000680 U		0.000620 U	0.000610 U	0.000591 U
Dieldrin	0.003	0.2	0.04	NA	0.00288 U	0.00139 U		0.00126 U	0.00261 U	0.00187 U		0.00137 U		0.00125 U	0.00123 U	0.00119 U
Endosulfan I	2	3400	235	NA	0.00143 U	0.000690 U		0.000627 U	0.00130 U	0.000929 U		0.000680 U		0.000620 U	0.000610 U	0.000591 U
Endosulfan II	2	3400	235	NA	0.00288 U	0.00139 U		0.00126 U	0.00261 U	0.00187 U		0.00137 U		0.00125 U	0.00123 U	0.00119 U
Endosulfan sulfate	2	6800	470	NA	0.00288 U	0.00139 U		0.00126 U	0.00261 U	0.00187 U		0.00137 U		0.00125 U	0.00123 U	0.00119 U
Endrin	1	340	23	NA	0.00288 U	0.00139 U		0.00126 U	0.00261 U	0.00187 U		0.00137 U		0.00125 U	0.00123 U	0.00119 U
Endrin aldehyde	NA	NA	NA	NA	0.00288 U	0.00139 U		0.00126 U	0.00261 U	0.00187 U		0.00137 U		0.00125 U	0.00123 U	0.00119 U
Endrin ketone	NA	NA	NA	NA	0.00288 U	0.00139 U		0.00126 U	0.00261 U	0.00187 U		0.00137 U		0.00125 U	0.00123 U	0.00119 U
gamma-BHC [Lindane]	0.002	2	0.4	NA	0.00143 U	0.000690 U		0.000627 U	0.00130 U	0.000929 U		0.000680 U		0.000620 U	0.000610 U	0.000591 U
gamma-Chlordane	0.025	0.5	0.1	NA	0.00143 U	0.000690 U		0.000627 U	0.00130 U	0.000929 U		0.000680 U		0.000620 U	0.000610 U	0.000591 U
Heptachlor	0.5	0.7	0.1	NA	0.00143 U	0.000690 U		0.000627 U	0.00130 U	0.000929 U		0.000680 U		0.000620 U	0.000610 U	0.000591 U
Heptachlor Epoxide	0.01	0.3	0.07	NA	0.00143 U	0.000690 U		0.000627 U	0.00130 U	0.000929 U		0.000680 U		0.000620 U	0.000610 U	0.000591 U
Methoxychlor	160	5700	390	NA	0.00434 U	0.00209 U		0.00190 U	0.00393 U	0.00281 U		0.00206 U		0.00188 U	0.00185 U	0.00179 U
Toxaphene	0.3	3	0.6	NA	0.0722 U	0.0348 U		0.0316 U	0.0654 U	0.0469 U		0.0343 U		0.0313 U	0.0308 U	0.0298 U
Extractable Petroleum Hydrocarbons by NJ EPH (mg/kg)																
Extractable Petroleum Hydroc	NA	5,100	54,000	NA	46.2 U	156		3000	41.9 U	9430		22.0 U		3250 D	235	19.1 U
Semivolatile Organic Compounds EPA Method SW846 8270D (mg/kg)																
1,1-Biphenyl	140	240	61	NA	0.138 J	0.187	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
1,2,4,5-Tetrachlorobenzene	NA	NA	NA	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
1,2-Diphenylhydrazine	0.7	2	0.7	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
2,3,4,6-Tetrachlorophenol	NA	NA	NA	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
2,4,5-Trichlorophenol	68	68000	6100	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
2,4,6-Trichlorophenol	0.2	74	19	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
2,4-Dichlorophenol	0.2	2100	180	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
2,4-Dimethylphenol	1	14000	1200	NA	0.0962 U	0.361	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
2,4-Dinitrophenol	0.3	1400	120	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
2,4-Dinitrotoluene	0.1	3	0.7	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
2,6-Dinitrotoluene	0.1	3	0.7	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
2-Chloronaphthalene	NA	NA	NA	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
2-Chlorophenol	0.8	2200	310	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
2-Methylnaphthylene	8	2400	230	NA	0.154 J	0.797	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
2-Methylphenol	NA	3400	310	NA	0.0962 U	0.366	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
2-Nitroaniline	NA	23000	39	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
2-Nitrophenol	NA	NA	NA	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
3 & 4-Methylphenol	NA	340	31	NA	0.0962 U	0.947	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
3,3'-Dichlorobenzidine	0.2	4	1	NA	0.240 U	0.116 U	2.32 U	0.105 U	0.217 U	1.56 U	77.9 U	0.114 U		0.104 U	0.102 U	0.0990 U
3-Nitroaniline	NA	NA	NA	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
4,6-Dinitro-2-methylphenol	0.3	68	6	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
4-Bromophenyl-phenylether	NA	NA	NA	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
4-Chloro-3-methylphenol	NA	NA	NA	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
4-Chloroaniline	NA	NA	NA	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
4-Chlorophenyl-phenylether	NA	NA	NA	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
4-Nitroaniline	NA	NA	NA	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
4-Nitrophenol	NA	NA	NA	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
Acenaphthene	110	37000	3400	NA	0.152 J	0.547	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
Acenaphthylene	NA	300000	NA	NA	0.0962 U	4.16	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
Acetophenone	3	5	2	NA	0.0962 U	0.120	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
Anthracene	2400	30000	17000	NA	0.132 J	6.86 E	7.66 D	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0902 J	0.530	0.0397 U
Atrazine	0.2	2400	210	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
Azobenzene	0.7	2	0.7	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U		0.0417 U	0.0410 U	0.0397 U
Benzaldehyde	NA															

Caprolactam	12	340000	31000	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.0410 U	0.0397 U	0.0392 U	0.0427 U
Carbazole	NA	96	24	NA	0.180 J	1.02	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.236	0.0397 U	0.193	0.0427 U
Chrysene	80	1700	450	NA	0.131 J	27.7 E	54.0 D	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0496 J	0.283	1.70	0.0397 U	1.43	0.168
Dibenzo(a,h)anthracene	0.8	2	0.5	NA	0.0962 U	8.37 E	12.4 D	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0636 J	0.164	0.0397 U	0.258	0.0427 U
Dibenzofuran	NA	NA	NA	NA	0.182 J	1.13	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.105	0.0397 U	0.0392 U	0.0427 U
Diethyl phthalate	88	550000	49000	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.0410 U	0.0397 U	0.0392 U	0.0427 U
Dimethylphthalate	NA	NA	NA	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0750 J	0.0410 U	0.0397 U	0.0392 U	0.0427 U
Di-n-butyl phthalate	760	68000	6100	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.0410 U	0.0397 U	0.0392 U	0.0427 U
Di-n-octyl phthalate	3300	27000	2400	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.0410 U	0.0397 U	0.0392 U	0.0427 U
Fluoranthene	1300	24000	2300	NA	0.404	43.4 E	96.4 D	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0811 J	0.287	3.80	0.0475 J	1.93	0.187
Fluorene	170	24000	2300	NA	0.166 J	0.991	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.0778 J	0.0397 U	0.0435 J	0.0427 U
Hexachlorobenzene	0.2	1	0.3	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.0410 U	0.0397 U	0.0392 U	0.0427 U
Hexachlorobutadiene	0.9	25	6	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.0410 U	0.0397 U	0.0392 U	0.0427 U
Hexachlorocyclopentadiene	320	110	45	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.0410 U	0.0397 U	0.0392 U	0.0427 U
Hexachloroethane	0.2	48	12	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.0410 U	0.0397 U	0.0392 U	0.0427 U
Indeno(1,2,3-cd)pyrene	7	17	5	NA	0.120 J	21.2 E	32.7 D	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.155	0.441	0.0397 U	0.394	0.0515 J
Isophorone	0.2	2000	510	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.0410 U	0.0397 U	0.0392 U	0.0427 U
Naphthalene	25	17	6	NA	1.69	5.94 E	5.84 D	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.0410 U	0.0397 U	0.0699 J	0.0796 J
Nitrobenzene	0.2	14	5	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.0410 U	0.0397 U	0.0392 U	0.0427 U
N-Nitrosodimethylamine	0.7	0.7	0.7	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.0410 U	0.0397 U	0.0392 U	0.0427 U
N-Nitroso-di-n-propylamine	0.2	0.3	0.2	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.0410 U	0.0397 U	0.0392 U	0.0427 U
N-Nitrosodiphenylamine	0.4	390	99	NA	0.0962 U	0.676	0.929 U	0.0422 U	0.168 J	645 E	1420 D	1.20	0.0417 U	0.0549 J	0.0397 U	0.0500 J	0.0547 J
Pentachlorophenol	0.3	3	0.9	NA	0.0962 U	0.0464 U	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.0410 U	0.0397 U	0.0392 U	0.0427 U
Phenanthrene	NA	300000	NA	NA	0.489	13.6 E	16.6 D	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.345	2.97	0.0397 U	0.971	0.130
Phenol	8	210000	18000	NA	0.0962 U	0.641	0.929 U	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0457 U	0.0417 U	0.0410 U	0.0397 U	0.0392 U	0.0427 U
Pyrene	840	18000	1700	NA	0.418	141 E	110 D	0.0422 U	0.0872 U	0.625 U	31.2 U	0.0893 J	0.600	3.59	0.0455 J	1.99	0.190
TIC Summary	NA	NA	NA	NA	8.502	104.76		28.886	4.813	834.59	0	3.054	0.464	6.127	1.277	7.167	0.513
Total Mercury by SW846 7471B (mg/kg)																	
Mercury	0.1	65	23	12.4	0.703	0.360		0.0759 U	0.170	0.223		0.389		0.916	0.561	0.242	0.313
Total Metals by EPA Method SW846 6010D (mg/kg)																	
Aluminum	6000	NA	78000	NA	13500 D	8830 D		391	10600 D	400		1090 D		4080 D	5560 D	1530 D	2650 D
Antimony	6	450	31	NA	6.41 U	2.82 U		2.74 U	5.47 U	4.00 U		2.84 U		4.34	2.57 U	2.53 U	2.44 U
Arsenic	19	19	19	NA	1890	542		163	4310	15.1		3.92		20.8	5.53	2.81	21.9
Barium	2100	59000	16000	NA	79.4	77.1		20.9	45.9	27.3		17.9		108	99.7	26.0	108
Beryllium	0.7	140	16	NA	0.801 U	0.521		0.343 U	0.683 U	0.500 U		0.355 U		0.325 U	0.321 U	0.317 U	0.305 U
Cadmium	2	78	78	8	0.801 U	0.665		0.343 U	0.683 U	2.55		0.732		7.57	0.911	0.317 U	0.380
Calcium	NA	NA	NA	NA	31900 D	7500		661	8150 D	616		1100		1530	5690 D	706	1110
Chromium	NA	NA	NA	NA	20.9	11.4		13.9	16.4	4.77		15.0		17.4	27.1	29.4	34.9
Cobalt	90	590	1600	NA	8.01 U	6.90		3.43 U	6.83 U	5.00 U		3.55 U		3.54	5.15	3.17 U	4.37
Copper	11000	45000	3100	NA	35.7	61.4		20.6	49.3	45.8		31.5		6120	269	15.2	93.4
Iron	NA	NA	NA	NA	15500 D	11500 D		3420 D	19500 D	227		4290 D		18200 D	19200 D	4800 D	8950 D
Lead	90	800	400	150	161	100		3.58	81.4	80.3		11.8		205	206	15.1	194
Magnesium	NA	NA	NA	NA	2610	402		102	1960	112		177		1410	2030	137	235
Manganese	65	5900	11000	NA	179	84.9		5.26	205	6.96		11.4		98.8	233	14.8	53.6
Nickel	48	23000	1600	NA	15.5	26.7		8.10	15.2	133		16.2		60.8	32.0	6.61	16.1
Potassium	NA	NA	NA	NA	1100	687		116	784	78.3		169		434	508	142	322
Selenium	11	5700	390	NA	6.41 U	2.82 U		2.74 U	5.47 U	4.00 U		2.84 U		2.60 U	2.57 U	2.53 U	2.44 U
Silver	1	5700	390	NA	0.801 U	0.353 U		0.343 U	0.683 U	0.500 U		0.355 U		0.325 U	0.321 U	0.317 U	0.305 U
Sodium	NA	NA	NA	NA	638	668		111	697	166		125		151	170	124	98.6
Thallium	3	NA	NA	NA	4.81 U	2.12 U		2.06 U	4.10 U	3.00 U		2.13 U		1.95 U	1.92 U	1.90 U	1.83 U
Vanadium	NA	1100	78	NA	27.0	15.3		8.89	20.9	15.8		18.0		20.1	15.5	8.97	12.8
Zinc	930	110000	23000	NA	165	428		18.3	138	2150 D		199		31700 D	433	45.1	117
Volatile Organic Compounds EPA Method SW846 8260C (mg/kg)																	
1,1,1-Trichloroethane	0.3	NA	160000	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U
1,1,2,2-Tetrachloroethane	0.007	3	1	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U
1,1,2-Trichloroethane	0.02	6	2	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U
1,1-Dichloroethane	0.2	24	8	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U
1,1-Dichloroethene	0.008	150	11	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U
1,2,3-Trichlorobenzene	NA	NA	NA	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.0948	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U
1,2,4-Trichlorobenzene	0.7	820	73	NA	0.0												

cis-1,2-Dichloroethene	0.3	560	230	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00585		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
cis-1,3-Dichloropropene	0.0025	3.5	1	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
Cyclohexane	NA	NA	NA	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00364 J		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
Dibromochloromethane	0.005	8	3	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
Dichlorodifluoromethane	39	230000	490	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
Ethylbenzene	13	110000	7800	NA	0.00398 U	0.0747	0.0279 U	0.0253 U	0.00304 U	0.0174		0.0118	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
Freon 113	NA	NA	NA	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
Isopropylbenzene	NA	NA	NA	NA	0.00398 U	0.0478	0.0279 U	0.0236 D	0.00304 U	0.0213		0.00666	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
m,p-Xylenes	9.5	85000	6000	NA	0.00796 U	0.101	0.0558 U	0.0506 U	0.00609 U	0.122		0.0250	0.0549 U	0.00341 U	0.00306 U	0.00340 U	0.00313 U	0.00396 U
Methyl Acetate	22	NA	78000	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
Methyl tert-Butyl Ether	0.2	320	110	NA	0.00796 U	0.00596 J	0.0558 U	0.0506 U	0.00609 U	0.00574 U		0.00384 U	0.0549 U	0.00341 U	0.00306 U	0.00340 U	0.00313 U	0.00396 U
Methylcyclohexane	NA	NA	NA	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.0430		0.00336 J	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
Methylene Chloride	0.01	230	46	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
o-Xylene	9.5	85000	6000	NA	0.00796 U	0.0881	0.0558 U	0.0506 U	0.00609 U	0.0709		0.0163	0.0549 U	0.00341 U	0.00306 U	0.00340 U	0.00313 U	0.00396 U
Styrene	3	260	90	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
t-Butyl alcohol	0.3	11000	1400	NA	0.0199 U	0.0118 U	0.139 U	0.127 U	0.0152 U	0.0143 U		0.00959 U	0.137 U	0.00851 U	0.00766 U	0.00850 U	0.00782 U	0.00989 U
Tetrachloroethene	0.005	1500	43	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
Toluene	7	91000	6300	NA	0.00398 U	0.0101	0.0279 U	0.0253 U	0.00304 U	0.0108		0.0152	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
trans-1,2-Dichloroethene	0.6	720	300	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
trans-1,3-Dichloropropene	0.0025	3.5	1	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
Trichloroethene	0.01	10	3	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
Trichlorofluoromethane	34	340000	23000	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
Vinyl chloride	0.005	2	0.7	NA	0.00398 U	0.00236 U	0.0279 U	0.0253 U	0.00304 U	0.00287 U		0.00192 U	0.0275 U	0.00170 U	0.00153 U	0.00170 U	0.00156 U	0.00198 U
TIC Summary	NA	NA	NA	NA	0	5.521		103.96	0.5333	0.5338		1.5242		0	0	0	0	0
Wet Chemistry (%)																		
Percent Solids	NA	NA	NA	NA	34.6	71.7		79.0	38.2	53.3		72.8		79.8	81.2	83.8	85.0	78.0
Wet Chemistry (mg/kg)																		
Cyanide (total)	20	680	47	NA	4.81	31.3		1.27 U	6.55	1.88 U		1.37 U		1.25 U	1.23 U	4.56	1.18 U	1.28 U

Notes:
U= Analyzed for, but not detected
NA= Not applicable
B= Analyte was also detected in Lab blank, indicating lab contamination
J= Detected below lab's MDL; value is estimated
E= Exceeded the highest calibration standard
D= Result is based on a diluted run

Table 3-Temporary Well Sampling Results (12-27-2019) Lab: Accredited Analytical Resources LLC 366-394 Wilson Ave, Newark, NJ			Sample No.	Sample No.	Sample No.
			TW-1	TW-2	TW-3
CAS#	Compound	GWQS	12/27/19	12/27/19	12/27/19
EPA Method SW846 8081B/8082A (ug/L)					
72-54-8	4,4'-DDD	0.1	0.00460 U	0.00404 U	0.0248 P
72-55-9	4,4'-DDE	0.1	0.00460 U	0.00404 U	0.00408 U
50-29-3	4,4'-DDT	0.1	0.00460 U	0.00404 U	0.00408 U
309-00-2	Aldrin	0.04	0.00230 U	0.00202 U	0.00204 U
319-84-6	alpha-BHC	0.02	0.00230 U	0.00202 U	0.00204 U
5103-71-9	alpha-Chlordane	NA	0.00230 U	0.00202 U	0.00204 U
12674-11-2	Aroclor-1016	0.5	0.0575 U	0.0505 U	0.0510 U
11104-28-2	Aroclor-1221	NA	0.0575 U	0.0505 U	0.0510 U
11141-16-5	Aroclor-1232	0.5	0.0575 U	0.0505 U	0.0510 U
53469-21-9	Aroclor-1242	0.5	0.0575 U	0.0505 U	0.0510 U
12672-29-6	Aroclor-1248	0.5	0.0575 U	0.0505 U	0.0510 U
11097-69-1	Aroclor-1254	0.5	0.0575 U	0.0505 U	0.0510 U
11096-82-5	Aroclor-1260	0.5	0.0575 U	0.0505 U	0.0510 U
319-85-7	beta-BHC	0.04	0.00230 U	0.00202 U	0.00204 U
319-86-8	delta-BHC	NA	0.00230 U	0.00202 U	0.00204 U
60-57-1	Dieldrin	0.03	0.00460 U	0.00404 U	0.00408 U
959-98-8	Endosulfan I	40	0.00230 U	0.00202 U	0.00204 U
33213-65-9	Endosulfan II	40	0.00460 U	0.00404 U	0.00408 U
1031-07-8	Endosulfan sulfate	40	0.00460 U	0.00404 U	0.00408 U
72-20-8	Endrin	2	0.00460 U	0.00404 U	0.00408 U
7421-93-4	Endrin aldehyde	NA	0.00460 U	0.00404 U	0.00408 U
53494-70-5	Endrin ketone	NA	0.00460 U	0.00404 U	0.00408 U
58-89-9	gamma-BHC [Lindane]	NA	0.00230 U	0.00202 U	0.00204 U
5566-34-7	gamma-Chlordane	NA	0.00230 U	0.00202 U	0.00204 U
76-44-8	Heptachlor	0.05	0.00230 U	0.00202 U	0.00204 U
1024-57-3	Heptachlor Epoxide	0.2	0.00230 U	0.00202 U	0.00204 U
72-43-5	Methoxychlor	40	0.0230 U	0.0202 U	0.0204 U
8001-35-2	Toxaphene	2	0.115 U	0.101 U	0.102 U
Semivolatile Organic Compounds EPA Method SW846 8270D (ug/L)					
92-52-4	1,1-Biphenyl	400	0.532 U	0.510 U	0.538 U
95-94-3	1,2,4,5-Tetrachlorobenzene	NA	0.532 U	0.510 U	0.538 U
122-66-7	1,2-Diphenylhydrazine	20	0.532 U	0.510 U	0.538 U
58-90-2	2,3,4,6-Tetrachlorophenol	200	0.532 U	0.510 U	0.538 U
95-95-4	2,4,5-Trichlorophenol	700	0.532 U	0.510 U	0.538 U
88-06-2	2,4,6-Trichlorophenol	20	0.532 U	0.510 U	0.538 U
120-83-2	2,4-Dichlorophenol	20	0.532 U	0.510 U	0.538 U
105-67-9	2,4-Dimethylphenol	100	0.532 U	0.510 U	0.538 U
51-28-5	2,4-Dinitrophenol	40	1.06 U	1.02 U	1.08 U
121-14-2	2,4-Dinitrotoluene	5	0.532 U	0.510 U	0.538 U
606-20-2	2,6-Dinitrotoluene	5	0.532 U	0.510 U	0.538 U
91-58-7	2-Chloronaphthalene	600	0.532 U	0.510 U	0.538 U
95-57-8	2-Chlorophenol	40	0.532 U	0.510 U	0.538 U
91-57-6	2-Methylnaphthylene	30	0.532 U	0.510 U	0.538 U
95-48-7	2-Methylphenol	NA	0.532 U	0.510 U	0.538 U
88-74-4	2-Nitroaniline	NA	0.532 U	0.510 U	0.538 U
88-75-5	2-Nitrophenol	NA	0.532 U	0.510 U	0.538 U
106-44-5	3 & 4-Methylphenol	NA	0.532 U	0.510 U	0.538 U
91-94-1	3,3'-Dichlorobenzidine	30	0.532 U	0.510 U	0.538 U
99-09-2	3-Nitroaniline	NA	0.532 U	0.510 U	0.538 U
534-52-1	4,6-Dinitro-2-methylphenol	NA	0.532 U	0.510 U	0.538 U

101-55-3	4-Bromophenyl-phenylether	NA	0.532 U	0.510 U	0.538 U
59-50-7	4-Chloro-3-methylphenol	100	0.532 U	0.510 U	0.538 U
106-47-8	4-Chloroaniline	30	0.532 U	0.510 U	0.538 U
7005-72-3	4-Chlorophenyl-phenylether	NA	0.532 U	0.510 U	0.538 U
100-01-6	4-Nitroaniline	NA	0.532 U	0.510 U	0.538 U
100-02-7	4-Nitrophenol	NA	0.532 U	0.510 U	0.538 U
83-32-9	Acenaphthene	400	0.532 U	0.510 U	0.538 U
208-96-8	Acenaphthylene	100	0.532 U	0.510 U	0.538 U
98-86-2	Acetophenone	700	0.532 U	0.510 U	0.538 U
120-12-7	Anthracene	2000	0.532 U	0.510 U	0.538 U
1912-24-9	Atrazine	3	0.532 U	0.510 U	0.538 U
103-33-3	Azobenzene	NA	0.532 U	0.510 U	0.538 U
100-52-7	Benzaldehyde	NA	0.532 U	0.510 U	0.538 U
92-87-5	Benzidine	20	0.532 U	0.510 U	0.538 U
56-55-3	Benzo[a]anthracene	0.1	0.910	0.748	0.290
50-32-8	Benzo[a]pyrene	0.1	1.51	1.28	0.326
205-99-2	Benzo[b]fluoranthene	0.2	1.77	1.48	0.538
191-24-2	Benzo[ghi]perylene	100	1.39	1.18	0.228
207-08-9	Benzo[k]fluoranthene	0.5	0.564	0.481	0.189
111-91-1	bis(2-chloroethoxy)methane	NA	0.532 U	0.510 U	0.538 U
111-44-4	bis(2-chloroethyl)ether	7	0.532 U	0.510 U	0.538 U
39638-32-9	bis(2-chloroisopropyl)ether	300	0.532 U	0.510 U	0.538 U
117-81-7	bis(2-ethylhexyl)phthalate	3	0.765 J	0.795 J	0.859 J
85-68-7	Butylbenzylphthalate	100	0.532 U	0.510 U	0.538 U
105-60-2	Caprolactam	3500	0.532 U	0.877 J	0.538 U
86-74-8	Carbazole	NA	0.532 U	0.510 U	0.538 U
218-01-9	Chrysene	5	0.916	0.773	0.334
53-70-3	Dibenzo(a,h)anthracene	0.3	0.205	0.177	0.0857
132-64-9	Dibenzofuran	NA	0.532 U	0.510 U	0.538 U
84-66-2	Diethyl phthalate	6000	0.532 U	0.510 U	0.538 U
131-11-3	Dimethylphthalate	100	0.532 U	0.510 U	0.538 U
84-74-2	Di-n-butyl phthalate	700	0.532 U	0.510 U	0.538 U
117-84-0	Di-n-octyl phthalate	100	0.532 U	0.510 U	0.538 U
206-44-0	Fluoranthene	300	1.05 J	0.989 J	0.538 U
86-73-7	Fluorene	300	0.532 U	0.510 U	0.538 U
118-74-1	Hexachlorobenzene	0.02	0.0106 U	0.0102 U	0.0108 U
87-68-3	Hexachlorobutadiene	1	0.532 U	0.510 U	0.538 U
77-47-4	Hexachlorocyclopentadiene	40	0.532 U	0.510 U	0.538 U
67-72-1	Hexachloroethane	7	0.532 U	0.510 U	0.538 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.2	1.31	1.10	0.257
78-59-1	Isophorone	40	0.532 U	0.510 U	0.538 U
91-20-3	Naphthalene	300	0.532 U	0.510 U	0.538 U
98-95-3	Nitrobenzene	6	0.532 U	0.510 U	0.538 U
62-75-9	N-Nitrosodimethylamine	0.8	0.532 U	0.510 U	0.538 U
621-64-7	N-Nitroso-di-n-propylamine	10	0.532 U	0.510 U	0.538 U
86-30-6	N-Nitrosodiphenylamine	10	3.25	3.43	0.538 U
87-86-5	Pentachlorophenol	0.3	0.532 U	0.510 U	0.538 U
85-01-8	Phenanthrene	100	0.385	0.313	0.377
108-95-2	Phenol	2000	0.532 U	0.510 U	0.538 U
129-00-0	Pyrene	200	1.40 J	1.25 J	0.538 U
	TIC Summary	NA	153.14	141.07	139.12
Total Mercury by SW846 7470A (ug/L)					
7439-97-6	Mercury	2	1.80	0.942	0.500 U
Total Metals by EPA Method SW846 6010D (ug/L)					
7429-90-5	Aluminum	200	48900	35000	28700
7440-36-0	Antimony	6	5.00 U	5.00 U	5.00 U

7440-38-2	Arsenic	3	1930	368	159
7440-39-3	Barium	6000	176	606	700
7440-41-7	Beryllium	1	1.89	2.10	1.32
7440-43-9	Cadmium	4	4.00 U	6.63	28.4
7440-70-2	Calcium	NA	663000 D	93100	147000
7440-47-3	Chromium	70	117	160	99.1
7440-48-4	Cobalt	100	20.0 U	20.0 U	42.9
7440-50-8	Copper	1300	2.91 U	121	5660
7439-89-6	Iron	300	54700	51300	53400
7439-92-1	Lead	5	87.5	119	1610
7439-95-4	Magnesium	NA	15900	18000	18200
7439-96-5	Manganese	50	1530	586	1050
7440-02-0	Nickel	100	146	89.2	226
7440-09-7	Potassium	NA	34600	14900	13400
7782-49-2	Selenium	NA	10.0 U	10.0 U	10.0 U
7440-22-4	Silver	40	4.00 U	4.00 U	4.00 U
7440-23-5	Sodium	50000	103000 D	77200	65400
7440-28-0	Thallium	2	2.00 U	2.00 U	2.00 U
7440-62-2	Vanadium	60	66.5	95.9	249
7440-66-6	Zinc	2000	906	2500	12800
Volatile Organic Compounds EPA Method SW846 8260C (ug/L)					
71-55-6	1,1,1-Trichloroethane	30	0.500 U	0.500 U	0.500 U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.500 U	0.500 U	0.500 U
79-00-5	1,1,2-Trichloroethane	3	0.500 U	0.500 U	0.500 U
75-34-3	1,1-Dichloroethane	50	0.400 U	0.430 J	0.400 U
75-35-4	1,1-Dichloroethene	1	0.400 U	0.400 U	0.400 U
87-61-6	1,2,3-Trichlorobenzene	NA	0.500 U	0.500 U	0.500 U
120-82-1	1,2,4-Trichlorobenzene	9	0.500 U	0.500 U	0.500 U
96-12-8	1,2-Dibromo-3-chloropropane	0.02	0.500 U	0.500 U	0.500 U
106-93-4	1,2-Dibromoethane	0.03	0.500 U	0.500 U	0.500 U
95-50-1	1,2-Dichlorobenzene	600	0.500 U	0.500 U	0.500 U
107-06-2	1,2-Dichloroethane	2	0.500 U	0.500 U	0.500 U
78-87-5	1,2-Dichloropropane	1	0.500 U	0.500 U	0.500 U
541-73-1	1,3-Dichlorobenzene	600	0.500 U	0.500 U	0.500 U
106-46-7	1,4-Dichlorobenzene	75	0.500 U	0.500 U	0.500 U
78-93-3	2-Butanone	300	1.59 J	1.00 U	1.00 U
591-78-6	2-Hexanone	300	1.00 U	1.00 U	1.00 U
108-10-1	4-Methyl-2-pentanone	NA	1.00 U	1.00 U	1.00 U
67-64-1	Acetone	6000	4.02 JB	2.24 JB	2.60 JB
107-02-8	Acrolein	5	5.00 U	5.00 U	5.00 U
107-13-1	Acrylonitrile	2	2.00 U	2.00 U	2.00 U
71-43-2	Benzene	1	0.400 U	0.400 U	0.400 U
74-97-5	Bromochloromethane	NA	0.500 U	0.500 U	0.500 U
75-27-4	Bromodichloromethane	1	0.500 U	0.500 U	0.500 U
75-25-2	Bromoform	4	0.500 U	0.500 U	0.500 U
74-83-9	Bromomethane	10	1.00 U	1.00 U	1.00 U
75-15-0	Carbon disulfide	700	0.500 U	0.500 U	0.500 U
56-23-5	Carbon Tetrachloride	1	0.500 U	0.500 U	0.500 U
108-90-7	Chlorobenzene	50	0.500 U	0.500 U	0.500 U
75-00-3	Chloroethane	5	1.00 U	1.00 U	1.00 U
67-66-3	Chloroform	70	0.500 U	0.500 U	0.500 U
74-87-3	Chloromethane	NA	1.00 U	1.00 U	1.00 U
156-59-4	cis-1,2-Dichloroethene	70	0.500 U	2.79	0.500 U
10061-01-5	cis-1,3-Dichloropropene	0.5	0.500 U	0.500 U	0.500 U
110-82-7	Cyclohexane	NA	0.500 U	0.500 U	0.500 U
124-48-1	Dibromochloromethane	1	0.500 U	0.500 U	0.500 U

75-71-8	Dichlorodifluoromethane	1000	1.00 U	1.00 U	1.00 U
100-41-4	Ethylbenzene	700	0.500 U	0.500 U	0.500 U
76-13-1	Freon 113	NA	1.00 U	1.00 U	1.00 U
98-82-8	Isopropylbenzene	700	0.500 U	0.500 U	0.500 U
108-38-3/106-	m,p-Xylenes	500	1.00 U	1.00 U	1.00 U
79-20-9	Methyl Acetate	7000	0.400 U	0.400 U	0.400 U
1634-04-4	Methyl tert-Butyl Ether	70	1.00 U	1.00 U	1.00 U
108-87-2	Methylcyclohexane	NA	0.500 U	0.500 U	0.500 U
75-09-2	Methylene Chloride	3	0.600 U	0.600 U	0.600 U
95-47-6	o-Xylene	500	1.00 U	1.00 U	1.00 U
100-42-5	Styrene	100	1.00 U	1.00 U	1.00 U
75-65-0	t-Butyl alcohol	100	3.00 U	3.00 U	3.00 U
127-18-4	Tetrachloroethene	1	0.610 J	0.580 J	0.500 U
108-88-3	Toluene	600	0.500 U	0.500 U	0.500 U
156-60-5	trans-1,2-Dichloroethene	100	0.400 U	0.700 J	0.400 U
10061-02-6	trans-1,3-Dichloropropene	0.5	0.500 U	0.500 U	0.500 U
79-01-6	Trichloroethene	1	0.500 U	1.29	0.500 U
75-69-4	Trichlorofluoromethane	2000	1.00 U	1.00 U	1.00 U
75-01-4	Vinyl chloride	1	1.00 U	1.00 U	1.00 U
	TIC Summary	NA	0	0	0
Wet Chemistry (mg/L)					
	Cyanide (total)	0.1	2.14 D	0.0100 U	0.182

Qualifiers:

E - Concentration exceeds highest calibration standard

B - Indicates compound found in associated blank

D - Indicates result is based on a dilution

H - Alternate peak selection upon analytical review

J - Indicates estimated value for TICs and all results when detected below the RL

U - Indicates compound analyzed for but not detected

P - Greater than 25% diff between 2 GC columns

GWQS = NJDEP Ground Water Quality Standards

Shaded-Detected above NJDEP GWQS

Appendix D
OSR Request Form - CENJ

U.S. EPA Region 2 Off-Site Rule Request Form

Receiving Facility Information

Estimated Initial Shipping Date:
Estimated Shipping Completion Date:

Supporting Documentation Attached: ☐ Yes ☐ No

1.) Name of Facility Receiving CERCLA Waste

2.) Address of Facility

3.) City

4.) County

5.) State

6.) Zip Code

7.) EPA Facility I.D. (Hazardous Waste or Municipal Waste I.D.)

[RCRA Info Webpage](#)

Facility Type

Subtitle C ☐

Subtitle D ☐

Other ☐

State Permit No.

8.) Any other pertinent I.D. numbers that may apply (License Numbers, etc.)

9.) Facility Phone Number

Contact Name

10.) Facility Fax Number (if available)

11.) Email Address

Generating Site Information

12.) Name of CERCLA Site

13.) Address of CERCLA Site

14.) City

15.) County

16.) State

17.) Zip Code

18.) CERCLA Site I.D.

19.) CERCLA Waste Median (e.g. Soil, Water, Air etc.)

Hazardous and/or Non-Hazardous (check all that apply)

RCRA Hazardous ☐ Non-Hazardous ☐

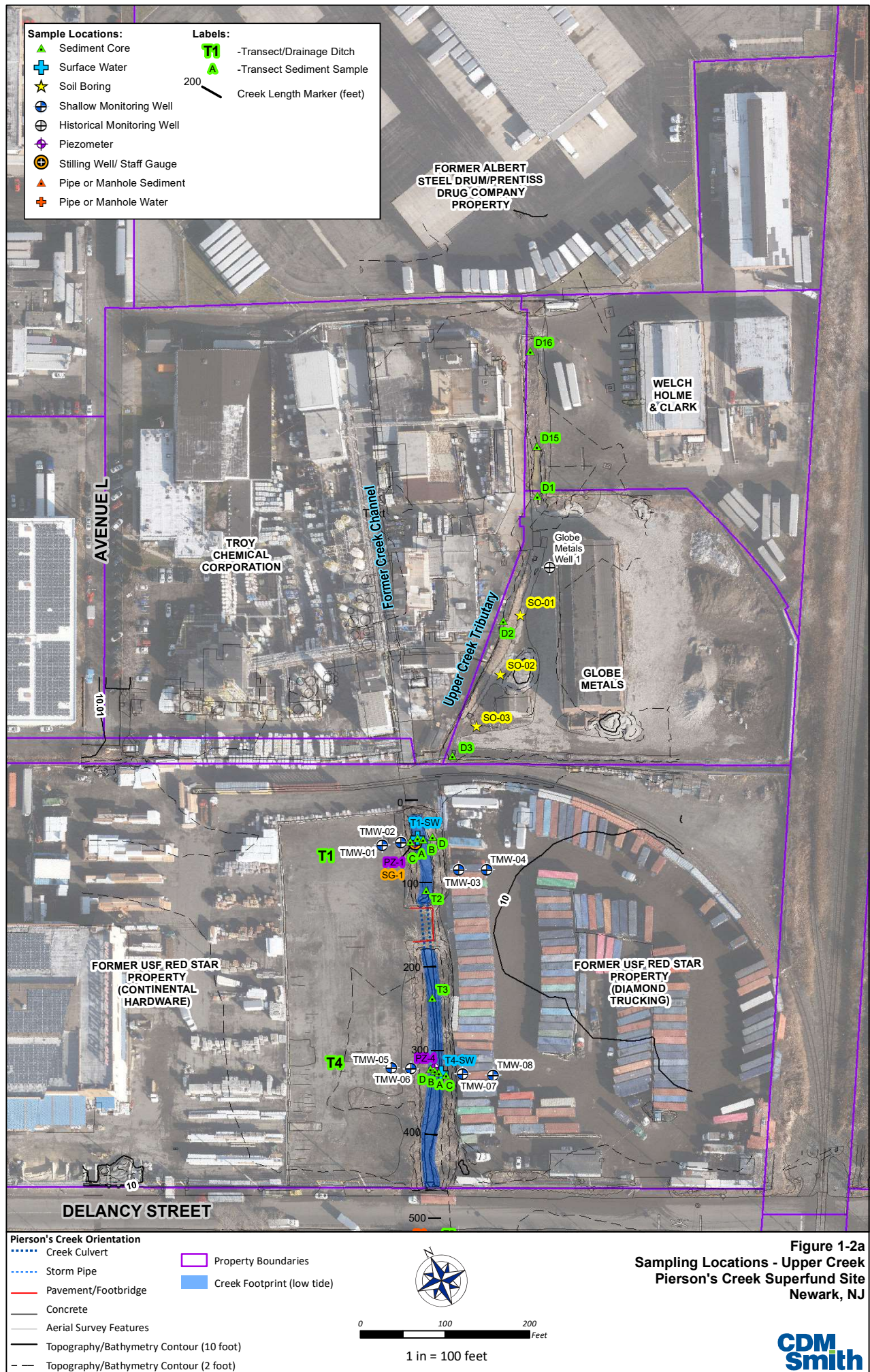
20.) CERCLA Waste Contaminates (e.g. tce, pcb, Mercury, Lead, etc.)

21.) Amount of CERCLA Waste (e.g. Gallons, Pounds, Tons, etc.)

22.) Person Making Request(s)/Affiliation & Phone Number

Appendix E

**CDM Smith's Pierson Creek Superfund
Sampling Results**



Appendix H-3
Analytical Results for Groundwater
Pierson's Creek Superfund Site
Newark, New Jersey

					Location Sample #	GLOBAL METALS GLOBE METALS WELL		GLOBAL METALS LOBE METALS WELL		MW-103 MW-103-R1		MW-103 MW-103-R1-F		MW-103 MW-103-R2		MW-103 MW-103-R2-F		T1-PZ T1-PZ-GW	
					Start Depth	1		1		5		5		5		5		5	
					End Depth	11		11		15		15		15		15		6	
					Depth Unit	ft bgs		ft bgs		ft		ft		ft bgs		ft bgs		ft	
					Sample Type	N		N		N		N		N		N		N	
					Parent Sample #														
					Sample Date	12/12/2019		12/12/2019		8/20/2019		8/20/2019		12/9/2019		12/9/2019		8/29/2019	
Method Group	Analyte	CAS #	Units	RI Groundwater Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
001-VOCs-Piers	1,1,1-Trichloroethane	71-55-6	µg/L	30	0.5	U			0.5	U			0.5	U			2.7		
001-VOCs-Piers	1,1,2,2-Tetrachloroethane	79-34-5	µg/L	1	0.5	U			1	U			0.5	U			1	U	
001-VOCs-Piers	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	µg/L	20000	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	1,1,2-Trichloroethane	79-00-5	µg/L	3	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	1,1-Dichloroethane	75-34-3	µg/L	50	0.84				0.5	U			0.5	U			5.1		
001-VOCs-Piers	1,1-Dichloroethene	75-35-4	µg/L	1	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	1,2,3-Trichlorobenzene	87-61-6	µg/L	7	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	1,2,4-Trichlorobenzene	120-82-1	µg/L	9	0.5	U			1	U			0.5	U			1	U	
001-VOCs-Piers	1,2-Dibromo-3-chloropropane	96-12-8	µg/L	0.02	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	1,2-Dibromoethane	106-93-4	µg/L	0.03	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	1,2-Dichlorobenzene	95-50-1	µg/L	600	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	1,2-Dichloroethane	107-06-2	µg/L	2	0.58				0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	1,2-Dichloropropane	78-87-5	µg/L	1	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	1,3-Dichlorobenzene	541-73-1	µg/L	600	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	1,4-Dichlorobenzene	106-46-7	µg/L	75	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	2-Butanone	78-93-3	µg/L	300	5	U			5	U			5	U			5	U	
001-VOCs-Piers	2-Hexanone	591-78-6	µg/L	40	5	U			5	U			5	U			5	U	
001-VOCs-Piers	4-Methyl-2-pentanone	108-10-1	µg/L	6300	5	U			5	U			5	U			5	U	
001-VOCs-Piers	Acetone	67-64-1	µg/L	6000	5	U			5	U			5	U			5	U	
001-VOCs-Piers	Benzene	71-43-2	µg/L	1	0.5	U			0.5	U			0.5	U			0.57		
001-VOCs-Piers	Bromochloromethane	74-97-5	µg/L	83	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	Bromodichloromethane	75-27-4	µg/L	1	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	Bromoform	75-25-2	µg/L	4	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	Bromomethane	74-83-9	µg/L	10	0.5	U			1	U			0.5	U			1	U	
001-VOCs-Piers	Carbon Disulfide	75-15-0	µg/L	700	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	Carbon Tetrachloride	56-23-5	µg/L	1	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	Chlorobenzene	108-90-7	µg/L	50	0.5	U			13	L			7.9				2.7		
001-VOCs-Piers	Chloroethane	75-00-3	µg/L	5	0.5	U			0.5	U			0.5	U			1.6		
001-VOCs-Piers	Chloroform	67-66-3	µg/L	70	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	Chloromethane	74-87-3	µg/L	190	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	cis-1,2-Dichloroethene	156-59-2	µg/L	70	0.47	J-			0.5	U			0.5	U			8.6		
001-VOCs-Piers	cis-1,3-Dichloropropene	10061-01-5	µg/L	1	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	Cyclohexane	110-82-7	µg/L	13000	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	Dibromochloromethane	124-48-1	µg/L	1	0.5	U			0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	Dichlorodifluoromethane	75-71-8	µg/L	1000	0.5	U			0.5	U			0.5	U			0.5	U	

Appendix H-3
Analytical Results for Groundwater
Pierson's Creek Superfund Site
Newark, New Jersey

					Location Sample #	GLOBAL METALS GLOBE METALS WELL	GLOBAL METALS LOBE METALS WELL	MW-103 MW-103-R1	MW-103 MW-103-R1-F	MW-103 MW-103-R2	MW-103 MW-103-R2-F	T1-PZ T1-PZ-GW			
					Start Depth	1	1	5	5	5	5	5			
					End Depth	11	11	15	15	15	15	6			
					Depth Unit	ft bgs	ft bgs	ft	ft	ft bgs	ft bgs	ft			
					Sample Type	N	N	N	N	N	N	N			
					Parent Sample #										
					Sample Date	12/12/2019	12/12/2019	8/20/2019	8/20/2019	12/9/2019	12/9/2019	8/29/2019			
Method Group	Analyte	CAS #	Units	RI Groundwater Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
001-VOCs-Piers	Ethylbenzene	100-41-4	µg/L	700	0.5	UJ			0.5	U			0.5	U	
001-VOCs-Piers	Isopropylbenzene	98-82-8	µg/L	700	0.5	UJ			0.5	U			0.5	U	
001-VOCs-Piers	m,p-Xylene	179601-23-1	µg/L		0.5	UJ					0.5	U			
001-VOCs-Piers	M,P-XYLENE (SUM OF ISOMERS)	XYLMP	µg/L	1000					0.5	U				0.5	U
001-VOCs-Piers	Methyl acetate	79-20-9	µg/L	7000	0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	Methyl tert-Butyl Ether	1634-04-4	µg/L	70	0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	Methylcyclohexane	108-87-2	µg/L	100	0.5	U			0.5	UL			0.5	UL	
001-VOCs-Piers	Methylene Chloride	75-09-2	µg/L	3	0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	o-Xylene	95-47-6	µg/L	1000	0.5	UJ			0.5	U			0.5	U	
001-VOCs-Piers	Styrene	100-42-5	µg/L	100	0.5	UJ			0.5	U			0.5	U	
001-VOCs-Piers	Tetrachloroethene	127-18-4	µg/L	1	0.5	UJ			0.5	U			0.5	U	
001-VOCs-Piers	Toluene	108-88-3	µg/L	600	0.5	UJ			0.5	U			0.5	U	
001-VOCs-Piers	trans-1,2-Dichloroethene	156-60-5	µg/L	100	0.5	UJ			0.5	U			0.5	U	
001-VOCs-Piers	trans-1,3-Dichloropropene	10061-02-6	µg/L	1	0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	Trichloroethene	79-01-6	µg/L	1	0.12	J-			0.5	U			0.5	U	
001-VOCs-Piers	Trichlorofluoromethane	75-69-4	µg/L	2000	0.5	U			0.5	U			0.5	U	
001-VOCs-Piers	Vinyl Chloride	75-01-4	µg/L	1	0.19	J			0.5	UJ			0.19	J	
002-SVOCs-Piers	1,1'-Biphenyl	92-52-4	µg/L	400	5	U			4.8	U			5.1	U	
002-SVOCs-Piers	1,2,4,5-Tetrachlorobenzene	95-94-3	µg/L	1.7	5	U			4.8	U			5.1	U	
002-SVOCs-Piers	1,4-Dioxane	123-91-1	µg/L	0.4	2	U			1.9	U			2	U	
002-SVOCs-Piers	2,2'-Oxybis(1-chloropropane)	108-60-1	µg/L	300	10	U			9.5	U			10	U	
002-SVOCs-Piers	2,3,4,6-Tetrachlorophenol	58-90-2	µg/L	200	5	U			4.8	U			5.1	U	
002-SVOCs-Piers	2,4,5-Trichlorophenol	95-95-4	µg/L	700	5	U			4.8	U			5.1	U	
002-SVOCs-Piers	2,4,6-Trichlorophenol	88-06-2	µg/L	20	5	U			4.8	U			5.1	U	
002-SVOCs-Piers	2,4-Dichlorophenol	120-83-2	µg/L	20	5	U			4.8	U			5.1	U	
002-SVOCs-Piers	2,4-Dimethylphenol	105-67-9	µg/L	100	5	U			4.8	U			5.1	U	
002-SVOCs-Piers	2,4-Dinitrophenol	51-28-5	µg/L	40	10	U			9.5	U			10	U	
002-SVOCs-Piers	2,4-Dinitrotoluene	121-14-2	µg/L	0.24	5	U			4.8	U			5.1	U	
002-SVOCs-Piers	2,6-Dinitrotoluene	606-20-2	µg/L	0.049	5	U			4.8	U			5.1	U	
002-SVOCs-Piers	2-Chloronaphthalene	91-58-7	µg/L	600	5	U			4.8	U			5.1	U	
002-SVOCs-Piers	2-Chlorophenol	95-57-8	µg/L	40	5	U			4.8	U			5.1	U	
002-SVOCs-Piers	2-Methylnaphthalene	91-57-6	µg/L	30	5	U			4.8	U			5.1	U	
002-SVOCs-Piers	2-Methylphenol	95-48-7	µg/L	50	10	U			9.5	U			10	U	
002-SVOCs-Piers	2-Nitroaniline	88-74-4	µg/L	190	5	U			4.8	U			5.1	U	
002-SVOCs-Piers	2-Nitrophenol	88-75-5	µg/L	100	5	U			4.8	U			5.1	U	

Appendix H-3
Analytical Results for Groundwater
Pierson's Creek Superfund Site
Newark, New Jersey

					Location Sample #	GLOBAL METALS GLOBE METALS WELL	GLOBAL METALS LOBE METALS WELL	MW-103 MW-103-R1	MW-103 MW-103-R1-F	MW-103 MW-103-R2	MW-103 MW-103-R2-F	T1-PZ T1-PZ-GW		
					Start Depth	1	1	5	5	5	5	5		
					End Depth	11	11	15	15	15	15	6		
					Depth Unit	ft bgs	ft bgs	ft	ft	ft bgs	ft bgs	ft		
					Sample Type	N	N	N	N	N	N	N		
					Parent Sample #									
					Sample Date	12/12/2019	12/12/2019	8/20/2019	8/20/2019	12/9/2019	12/9/2019	8/29/2019		
Method Group	Analyte	CAS #	Units	RI Groundwater Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
002-SVOCs-Piers	3,3'-Dichlorobenzidine	91-94-1	µg/L	30	10	U			9.5	U	10	U	11	U
002-SVOCs-Piers	3-Nitroaniline	99-09-2	µg/L	100	10	U			9.5	U	10	U	11	U
002-SVOCs-Piers	4,6-Dinitro-2-methylphenol	534-52-1	µg/L	0.7	10	U			9.5	U	10	U	11	U
002-SVOCs-Piers	4-Bromophenyl-phenylether	101-55-3	µg/L	100	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	4-Chloro-3-methylphenol	59-50-7	µg/L	100	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	4-Chloroaniline	106-47-8	µg/L	30	10	U			9.5	U	10	U	11	U
002-SVOCs-Piers	4-Chlorophenyl-phenylether	7005-72-3	µg/L	100	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	4-Methylphenol	106-44-5	µg/L	50	10	U			9.5	U	10	U	11	U
002-SVOCs-Piers	4-Nitroaniline	100-01-6	µg/L	3.8	10	U			9.5	U	10	U	11	U
002-SVOCs-Piers	4-Nitrophenol	100-02-7	µg/L	100	10	U			9.5	U	10	U	11	U
002-SVOCs-Piers	Acenaphthene	83-32-9	µg/L	400	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	Acenaphthylene	208-96-8	µg/L	100	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	Acetophenone	98-86-2	µg/L	700	10	U			9.5	U	10	U	11	U
002-SVOCs-Piers	Anthracene	120-12-7	µg/L	2000	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	Atrazine	1912-24-9	µg/L	3	10	U			9.5	U	10	U	11	U
002-SVOCs-Piers	Benzaldehyde	100-52-7	µg/L	19	10	U			9.5	U	10	U	11	U
002-SVOCs-Piers	Benzo(a)anthracene	56-55-3	µg/L	0.1	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	Benzo(a)pyrene	50-32-8	µg/L	0.1	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	Benzo(b)fluoranthene	205-99-2	µg/L	0.2	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	Benzo(g,h,i)perylene	191-24-2	µg/L	100	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	Benzo(k)fluoranthene	207-08-9	µg/L	0.5	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	Bis(2-chloroethoxy)methane	111-91-1	µg/L	59	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	Bis(2-chloroethyl)ether	111-44-4	µg/L	7	10	U			9.5	U	10	U	11	U
002-SVOCs-Piers	Bis(2-ethylhexyl)phthalate	117-81-7	µg/L	3	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	Butylbenzylphthalate	85-68-7	µg/L	100	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	Caprolactam	105-60-2	µg/L	4000	10	U			9.5	U	10	U	11	U
002-SVOCs-Piers	Carbazole	86-74-8	µg/L	100	10	U			9.5	U	10	U	11	U
002-SVOCs-Piers	Chrysene	218-01-9	µg/L	5	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	Dibenzo(a,h)anthracene	53-70-3	µg/L	0.3	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	Dibenzofuran	132-64-9	µg/L	7.9	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	Diethylphthalate	84-66-2	µg/L	6000	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	Dimethylphthalate	131-11-3	µg/L	100	1.2	J			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	Di-n-butylphthalate	84-74-2	µg/L	700	5	U			4.8	U	5.1	U	5.4	U
002-SVOCs-Piers	Di-n-octylphthalate	117-84-0	µg/L	100	10	U			9.5	U	10	U	11	U
002-SVOCs-Piers	Fluoranthene	206-44-0	µg/L	300	10	U			9.5	U	10	U	11	U

Appendix H-3
Analytical Results for Groundwater
Pierson's Creek Superfund Site
Newark, New Jersey

					Location	GLOBAL METALS		GLOBAL METALS		MW-103		MW-103		MW-103		MW-103		T1-PZ	
					Sample #	GLOBE METALS WELL		LOBE METALS WELL		MW-103-R1		MW-103-R1-F		MW-103-R2		MW-103-R2-F		T1-PZ-GW	
					Start Depth	1		1		5		5		5		5		5	
					End Depth	11		11		15		15		15		15		6	
					Depth Unit	ft bgs		ft bgs		ft		ft		ft bgs		ft bgs		ft	
					Sample Type	N		N		N		N		N		N		N	
					Parent Sample #														
					Sample Date	12/12/2019		12/12/2019		8/20/2019		8/20/2019		12/9/2019		12/9/2019		8/29/2019	
Method Group	Analyte	CAS #	Units	RI Groundwater Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
002-SVOCs-Piers	Fluorene	86-73-7	µg/L	300	5	U			4.8	U			5.1	U			5.4	U	
002-SVOCs-Piers	Hexachlorobenzene	118-74-1	µg/L	0.02	5	U			4.8	U			5.1	U			5.4	U	
002-SVOCs-Piers	Hexachlorobutadiene	87-68-3	µg/L	1	5	U			4.8	U			5.1	U			5.4	U	
002-SVOCs-Piers	Hexachlorocyclopentadiene	77-47-4	µg/L	40	10	U			9.5	U			10	U			11	U	
002-SVOCs-Piers	Hexachloroethane	67-72-1	µg/L	7	5	U			4.8	U			5.1	U			5.4	U	
002-SVOCs-Piers	Indeno(1,2,3-cd)pyrene	193-39-5	µg/L	0.2	5	U			4.8	U			5.1	U			5.4	U	
002-SVOCs-Piers	Isophorone	78-59-1	µg/L	40	5	U			4.8	U			5.1	U			5.4	U	
002-SVOCs-Piers	Naphthalene	91-20-3	µg/L	300	5	U			4.8	U			5.1	U			5.4	U	
002-SVOCs-Piers	Nitrobenzene	98-95-3	µg/L	6	5	U			4.8	U			5.1	U			5.4	U	
002-SVOCs-Piers	N-Nitroso-di-n-propylamine	621-64-7	µg/L	10	5	U			4.8	U			5.1	U			5.4	U	
002-SVOCs-Piers	N-Nitrosodiphenylamine	86-30-6	µg/L	10	3.1	J			4.8	U			5.1	U			5.4	U	
002-SVOCs-Piers	Pentachlorophenol	87-86-5	µg/L	0.3	10	U			9.5	U			10	U			11	U	
002-SVOCs-Piers	Phenanthrene	85-01-8	µg/L	100	5	U			4.8	U			5.1	U			5.4	U	
002-SVOCs-Piers	Phenol	108-95-2	µg/L	2000	10	U			9.5	U			10	U			11	U	
002-SVOCs-Piers	Pyrene	129-00-0	µg/L	200	5	U			4.8	U			5.1	U			5.4	U	
003-Pest-Piers	4,4'-DDD	72-54-8	µg/L	0.1	0.1	U			0.097	U			0.1	U			0.11	U	
003-Pest-Piers	4,4'-DDE	72-55-9	µg/L	0.1	0.1	U			0.0049	J			0.1	U			0.11	U	
003-Pest-Piers	4,4'-DDT	50-29-3	µg/L	0.1	0.1	U			0.097	U			0.1	U			0.11	U	
003-Pest-Piers	Aldrin	309-00-2	µg/L	0.04	0.05	U			0.049	U			0.05	U			0.053	U	
003-Pest-Piers	alpha-BHC	319-84-6	µg/L	0.02	0.05	U			0.049	U			0.05	U			0.025	J	
003-Pest-Piers	alpha-Chlordane	5103-71-9	µg/L	0.5	0.05	U			0.049	U			0.05	U			0.053	U	
003-Pest-Piers	beta-BHC	319-85-7	µg/L	0.04	0.05	U			0.049	U			0.05	U			0.053	U	
003-Pest-Piers	delta-BHC	319-86-8	µg/L	5	0.05	U			0.0026	J			0.05	U			0.053	U	
003-Pest-Piers	Dieldrin	60-57-1	µg/L	0.03	0.1	U			0.097	U			0.1	U			0.11	U	
003-Pest-Piers	Endosulfan I	959-98-8	µg/L	40	0.05	U			0.049	U			0.05	U			0.053	U	
003-Pest-Piers	Endosulfan II	33213-65-9	µg/L	40	0.1	U			0.097	U			0.1	U			0.11	U	
003-Pest-Piers	Endosulfan Sulfate	1031-07-8	µg/L	40	0.1	U			0.0037	J			0.1	U			0.11	U	
003-Pest-Piers	Endrin	72-20-8	µg/L	2	0.1	U			0.097	U			0.1	U			0.11	U	
003-Pest-Piers	Endrin aldehyde	7421-93-4	µg/L	100	0.1	U			0.097	U			0.1	U			0.11	U	
003-Pest-Piers	Endrin Ketone	53494-70-5	µg/L	100	0.1	U			0.097	U			0.1	U			0.11	U	
003-Pest-Piers	gamma-BHC (Lindane)	58-89-9	µg/L	0.03	0.05	U			0.049	U			0.05	U			0.053	U	
003-Pest-Piers	gamma-Chlordane	5103-74-2	µg/L	0.5	0.05	U			0.049	U			0.05	U			0.053	U	
003-Pest-Piers	Heptachlor	76-44-8	µg/L	0.05	0.05	U			0.049	U			0.05	U			0.053	U	
003-Pest-Piers	Heptachlor Epoxide	1024-57-3	µg/L	0.2	0.05	U			0.049	U			0.05	U			0.0036	J	
003-Pest-Piers	Methoxychlor	72-43-5	µg/L	40	0.5	U			0.49	U			0.5	U			0.53	U	

Appendix H-3
Analytical Results for Groundwater
Pierson's Creek Superfund Site
Newark, New Jersey

					Location Sample #	GLOBAL METALS GLOBE METALS WELL	GLOBAL METALS LOBE METALS WELL	MW-103 MW-103-R1	MW-103 MW-103-R1-F	MW-103 MW-103-R2	MW-103 MW-103-R2-F	T1-PZ T1-PZ-GW		
					Start Depth	1	1	5	5	5	5	5		
					End Depth	11	11	15	15	15	15	6		
					Depth Unit	ft bgs	ft bgs	ft	ft	ft bgs	ft bgs	ft		
					Sample Type	N	N	N	N	N	N	N		
					Parent Sample #									
					Sample Date	12/12/2019	12/12/2019	8/20/2019	8/20/2019	12/9/2019	12/9/2019	8/29/2019		
Method Group	Analyte	CAS #	Units	RI Groundwater Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
003-Pest-Piers	Toxaphene	8001-35-2	µg/L	2	5	U			4.9	U	5	U	5.3	U
005-Aroclors-Piers	Aroclor 1016	12674-11-2	µg/L	0.5	1	U			0.97	U	1	U	1.1	U
005-Aroclors-Piers	Aroclor 1221	11104-28-2	µg/L	0.5	1	U			0.97	U	1	U	1.1	U
005-Aroclors-Piers	Aroclor 1232	11141-16-5	µg/L	0.5	1	U			0.97	U	1	U	1.1	U
005-Aroclors-Piers	Aroclor 1242	53469-21-9	µg/L	0.5	1	U			0.97	U	1	U	1.1	U
005-Aroclors-Piers	Aroclor 1248	12672-29-6	µg/L	0.5	1	U			0.97	U	1	U	1.1	U
005-Aroclors-Piers	Aroclor 1254	11097-69-1	µg/L	0.5	1	U			0.97	U	1	U	1.1	U
005-Aroclors-Piers	Aroclor 1260	11096-82-5	µg/L	0.5	1	U			0.97	U	1	U	1.1	U
005-Aroclors-Piers	Aroclor 1262	37324-23-5	µg/L	0.5	1	U			0.97	U	1	U	1.1	U
005-Aroclors-Piers	Aroclor 1268	11100-14-4	µg/L	0.5	1	U			0.97	U	1	U	1.1	U
005-Aroclors-Piers	Total Aroclors	TARO	µg/L	0.5	0	U			0	U	0	U	0	U
011-Inorganics-Piers	Aluminum	7429-90-5	µg/L	200	47.6		20	U	240		240		680	
011-Inorganics-Piers	Antimony	7440-36-0	µg/L	6	2	U	2	U	20	U	2	U	20	U
011-Inorganics-Piers	Arsenic	7440-38-2	µg/L	3	5010		5070		8.8	8	4.3	3.7	46	
011-Inorganics-Piers	Barium	7440-39-3	µg/L	2000	43.5		43.4		1500	1500	1490	1480	240	
011-Inorganics-Piers	Beryllium	7440-41-7	µg/L	1	1	U	1	U	3	U	3	U	3	U
011-Inorganics-Piers	Cadmium	7440-43-9	µg/L	4	1	U	1	U	3	U	3	U	3	U
011-Inorganics-Piers	Calcium	7440-70-2	µg/L		103000		107000		140000	140000	163000	156000	120000	
011-Inorganics-Piers	Chromium	7440-47-3	µg/L	70	1.5	J	1	J	5	U	4.3	4.9	5	U
011-Inorganics-Piers	Cobalt	7440-48-4	µg/L	100	0.58	J	0.51	J	20	U	0.45	0.47	20	U
011-Inorganics-Piers	Copper	7440-50-8	µg/L	1300	1.9	J	0.48	J	10	U	4.3	0.99	12	
011-Inorganics-Piers	Cyanide	57-12-5	µg/L	100	10	U			10	U	10	U	10	U
011-Inorganics-Piers	Iron	7439-89-6	µg/L	300	42000		42600		3200	3100	4910	5160	2300	
011-Inorganics-Piers	Lead	7439-92-1	µg/L	5	3		1	U	8	U	2.2	1	11	
011-Inorganics-Piers	Magnesium	7439-95-4	µg/L		18100		18400		15000	15000	18700	19400	140000	
011-Inorganics-Piers	Manganese	7439-96-5	µg/L	50	601		611		220	220	317	344	450	
011-Inorganics-Piers	Mercury	7439-97-6	µg/L	2	0.05	U	0.05	U	0.2	U	0.05	0.05	0.71	
011-Inorganics-Piers	Nickel	7440-02-0	µg/L	100	3.6		3.5		20	U	22	20.7	20	U
011-Inorganics-Piers	Potassium	7440-09-7	µg/L		17500		17200		17000	17000	14800	15600	57000	
011-Inorganics-Piers	Selenium	7782-49-2	µg/L	40	5	U	5	U	20	U	5	5	20	U
011-Inorganics-Piers	Silver	7440-22-4	µg/L	40	1	U	1	U	5	U	1	1	5	U
011-Inorganics-Piers	Sodium	7440-23-5	µg/L	50000	104000		107000		180000	180000	200000	183000	1300000	
011-Inorganics-Piers	Thallium	7440-28-0	µg/L	2	1	U	1	U	20	U	1	1	20	U
011-Inorganics-Piers	Vanadium	7440-62-2	µg/L	86	0.66	J	0.59	J	20	U	5	5	20	U
011-Inorganics-Piers	Zinc	7440-66-6	µg/L	2000	20.4		16.4		20	U	6.2	1.2	57	

Appendix H-3
Analytical Results for Groundwater
Pierson's Creek Superfund Site
Newark, New Jersey

					Location	GLOBAL METALS		GLOBAL METALS		MW-103		MW-103		MW-103		MW-103		T1-PZ	
					Sample #	GLOBE METALS WELL		LOBE METALS WELL		MW-103-R1		MW-103-R1-F		MW-103-R2		MW-103-R2-F		T1-PZ-GW	
					Start Depth	1		1		5		5		5		5		5	
					End Depth	11		11		15		15		15		15		6	
					Depth Unit	ft bgs		ft bgs		ft		ft		ft bgs		ft bgs		ft	
					Sample Type	N		N		N		N		N		N		N	
					Parent Sample #														
					Sample Date	12/12/2019		12/12/2019		8/20/2019		8/20/2019		12/9/2019		12/9/2019		8/29/2019	
Method Group	Analyte	CAS #	Units	RI Groundwater Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
014-General Chemistr	Alkalinity Bicarbonate	71-52-3	mg/L						750								310		
014-General Chemistr	ALKALINITY, BICARBONATE (AS CaCO3)	ALKB	mg/L		220								850						
014-General Chemistr	Ammonia	7664-41-7	mg/L		1.8				2.4				4.2				5.7		
014-General Chemistr	Chloride	16887-00-6	mg/L		140				110				180				3200		
014-General Chemistr	Dissolved Organic Carbon	DOC	mg/L		10				7.2				8.9				9.7		
014-General Chemistr	Nitrate + Nitrite [As N]	NN	mg/L		0.05	U			0.05	U			0.05	U			0.064		
014-General Chemistr	Particulate Organic Carbon	PAROC	µg/L		2500				1100				2900				1600		
014-General Chemistr	Phosphorus	7723-14-0	mg/L		0.16				0.584				0.557				1.31		
014-General Chemistr	Sulfate	14808-79-8	mg/L		250				2.3				1	U			420		
014-General Chemistr	Total Alkalinity	ALK	mg/L		220								850						
014-General Chemistr	Total Dissolved Solids	TDS	mg/L		860				1100				1200				5700		
014-General Chemistr	Total Organic Carbon	TOC	mg/L		9.5				8.6				10				11		
014-General Chemistr	Total Suspended Solids	TSS	mg/L		57				10	U			13				13		

Notes:

- Results that are greater than the RI groundwater screening criteria are highlighted yellow.

Acronyms:

FD - field duplicate	N - normal
ft - feet	Q - qualifier
ft bgs - feet below ground surface	R - rejected
J - estimated	RI - remedial investigation
J+ - estimated, biased high	U - nondetect
J- - estimated, biased low	UJ - nondetect, estimated
J-EMPC - estimated maximum possible concentration	µg/L - microgram per liter
mg/L - milligram per liter	

Appendix H-1
Analytical Results for Sediment
Pierson's Creek Superfund Site
Newark, New Jersey

					Location	D1	D1	D1	D1	D1	D10		
					Sample #	D1-SE-A	D1-SE-B	D1-SE-C	D1-SE-D	D1-SE-E	D10-SE-A		
					Start Depth	0	0.5	1	2	3	0		
					End Depth	0.5	1	2	3	4	0.5		
					Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs		
					Sample Type	N	N	N	N	N	N		
					Parent Sample #								
					Sample Date	8/6/2019	8/6/2019	8/6/2019	8/6/2019	8/6/2019	7/30/2019		
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q
001-VOCs-Piers	1,1,1-Trichloroethane	71-55-6	µg/kg	856	200	48	U	28	UJ	12	U	9	UJ
001-VOCs-Piers	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	202	3000	48	UJ	R		R		800	U
001-VOCs-Piers	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	µg/kg	28000000	28000000	48	U	28	UJ	12	U	9	UJ
001-VOCs-Piers	1,1,2-Trichloroethane	79-00-5	µg/kg	570	6000	48	U	28	U	12	U	9	UJ
001-VOCs-Piers	1,1-Dichloroethane	75-34-3	µg/kg	16000	24000	48	U	28	UJ	12	U	9	UJ
001-VOCs-Piers	1,1-Dichloroethene	75-35-4	µg/kg	2780	150000	48	U	28	UJ	12	U	9	UJ
001-VOCs-Piers	1,2,3-Trichlorobenzene	87-61-6	µg/kg	930000	930000	48	UJ	R		R		800	U
001-VOCs-Piers	1,2,4-Trichlorobenzene	120-82-1	µg/kg	4.8	820000	48	UJ	78	J	10	J	R	
001-VOCs-Piers	1,2-Dibromo-3-chloropropane	96-12-8	µg/kg	64	200	48	UJ	R		R		800	U
001-VOCs-Piers	1,2-Dibromoethane	106-93-4	µg/kg	160	40	48	U	28	UJ	12	U	9	UJ
001-VOCs-Piers	1,2-Dichlorobenzene	95-50-1	µg/kg	989	59000000	7.8	J	3600		3600		2300	J
001-VOCs-Piers	1,2-Dichloroethane	107-06-2	µg/kg	2000	3000	48	U	28	U	12	U	9	UJ
001-VOCs-Piers	1,2-Dichloropropane	78-87-5	µg/kg	11000	5000	48	U	28	U	12	U	9	UJ
001-VOCs-Piers	1,3-Dichlorobenzene	541-73-1	µg/kg	842	59000000	48	UJ	3700		1700		1200	J
001-VOCs-Piers	1,4-Dichlorobenzene	106-46-7	µg/kg	110	13000	17	J	13000		7100		4600	J
001-VOCs-Piers	2-Butanone	78-93-3	µg/kg	190000000	44000000	78	J	1500	J	340	J	410	J
001-VOCs-Piers	2-Hexanone	591-78-6	µg/kg	1300000	1300000	240	U	140	UJ	62	U	45	UJ
001-VOCs-Piers	4-Methyl-2-pentanone	108-10-1	µg/kg	140000000	140000000	240	U	140	U	62	U	45	UJ
001-VOCs-Piers	Acetone	67-64-1	µg/kg	670000000	12000	480		1200	J	620	J	390	J
001-VOCs-Piers	Benzene	71-43-2	µg/kg	340	5000	65		2400	J	1000		1400	
001-VOCs-Piers	Bromochloromethane	74-97-5	µg/kg	630000	630000	48	U	28	UJ	12	U	9	UJ
001-VOCs-Piers	Bromodichloromethane	75-27-4	µg/kg	1300	3000	48	U	28	U	12	U	9	UJ
001-VOCs-Piers	Bromoform	75-25-2	µg/kg	1310	280000	48	U	28	UJ	12	U	9	UJ
001-VOCs-Piers	Bromomethane	74-83-9	µg/kg	30000	59000	95	U	57	UJ	25	U	18	UJ
001-VOCs-Piers	Carbon Disulfide	75-15-0	µg/kg	3500000	110000000	16	J	18	J	40	J	9	UJ
001-VOCs-Piers	Carbon Tetrachloride	56-23-5	µg/kg	7240	4000	48	U	28	UJ	12	U	9	UJ
001-VOCs-Piers	Chlorobenzene	108-90-7	µg/kg	162	7400000	10	J	420	J	1300		1700	
001-VOCs-Piers	Chloroethane	75-00-3	µg/kg	57000000	1100000	95	U	57	UJ	5.3	J	2.5	J
001-VOCs-Piers	Chloroform	67-66-3	µg/kg	1400	2000	48	U	28	UJ	12	U	9	UJ
001-VOCs-Piers	Chloromethane	74-87-3	µg/kg	460000	12000	95	U	57	UJ	25	U	18	UJ
001-VOCs-Piers	cis-1,2-Dichloroethene	156-59-2	µg/kg	2300000	560000	48	U	28	UJ	27	J	6.5	J
001-VOCs-Piers	cis-1,3-Dichloropropene	10061-01-5	µg/kg	7.31	7000	48	U	28	U	12	U	9	UJ
001-VOCs-Piers	Cyclohexane	110-82-7	µg/kg	27000000	27000000	48	U	1500	J	170	J	240	J
001-VOCs-Piers	Dibromochloromethane	124-48-1	µg/kg	39000	8000	48	U	28	UJ	12	U	9	UJ
001-VOCs-Piers	Dichlorodifluoromethane	75-71-8	µg/kg	370000	230000000	95	U	57	UJ	25	U	18	UJ
001-VOCs-Piers	Ethylbenzene	100-41-4	µg/kg	1400	110000000	12	J	140	J	85	J	62	J
001-VOCs-Piers	Isopropylbenzene	98-82-8	µg/kg	9900000	9900000	48	UJ	660	J	610	J	500	J
001-VOCs-Piers	M,P-XYLENE (SUM OF ISOMERS)	XYLMP	µg/kg	120	170000000	95	U	370	J	410	J	230	J
001-VOCs-Piers	Methyl acetate	79-20-9	µg/kg	1200000000	14000	48	U	28	U	12	U	9	UJ
001-VOCs-Piers	Methyl tert-Butyl Ether	1634-04-4	µg/kg	210000	320000	48	U	28	UJ	12	U	9	UJ
001-VOCs-Piers	Methylcyclohexane	108-87-2	µg/kg			48	U	3400		360	J	360	J

Appendix H-1
Analytical Results for Sediment
Pierson's Creek Superfund Site
Newark, New Jersey

						Location Sample # Start Depth End Depth Depth Unit Sample Type Parent Sample # Sample Date	D1 D1-SE-A 0 0.5 ft bgs N 8/6/2019	D1 D1-SE-B 0.5 1 ft bgs N 8/6/2019	D1 D1-SE-C 1 2 ft bgs N 8/6/2019	D1 D1-SE-D 2 3 ft bgs N 8/6/2019	D1 D1-SE-E 3 4 ft bgs N 8/6/2019	D10 D10-SE-A 0 0.5 ft bgs N 7/30/2019	
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q
001-VOCs-Piers	Methylene Chloride	75-09-2	µg/kg	1000000	230000	240	U	140	UJ	62	U	45	UJ
001-VOCs-Piers	o-Xylene	95-47-6	µg/kg	120	170000000	48	U	230	J	270	J	180	J
001-VOCs-Piers	Styrene	100-42-5	µg/kg	7070	260000	48	U	8.8	J	3.8	J	2.1	J
001-VOCs-Piers	Tetrachloroethene	127-18-4	µg/kg	450	1500000	48	U	28	U	12	U	9	UJ
001-VOCs-Piers	Toluene	108-88-3	µg/kg	2500	91000000	460		310		61	J	30	J
001-VOCs-Piers	TOTAL XYLENES	133-02-07	µg/kg										
001-VOCs-Piers	trans-1,2-Dichloroethene	156-60-5	µg/kg	23000000	720000	48	U	28	UJ	9.2	J	4.6	J
001-VOCs-Piers	trans-1,3-Dichloropropene	10061-02-6	µg/kg	7.31	7000	48	U	28	U	12	U	9	UJ
001-VOCs-Piers	Trichloroethene	79-01-6	µg/kg	1600	10000	48	U	28	U	4	J	9	UJ
001-VOCs-Piers	Trichlorofluoromethane	75-69-4	µg/kg	350000000	340000000	95	U	57	UJ	25	U	18	UJ
001-VOCs-Piers	Vinyl Chloride	75-01-4	µg/kg	1700	2000	95	U	57	UJ	4.4	J	4.5	J
001-VOCs-Piers	Xylenes (TOTAL)	1330-20-7	µg/kg			140	U	600	J	670	J	410	J
002-SVOCs-Piers	1,1'-Biphenyl	92-52-4	µg/kg	200000	240000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	1,2,4,5-Tetrachlorobenzene	95-94-3	µg/kg	47000	350000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	1,4-Dioxane	123-91-1	µg/kg	24000	24000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	2,2'-Oxybis(1-chloropropane)	108-60-1	µg/kg	47000000	67000	2000	UJ	1700	UJ	780	UJ	610	UJ
002-SVOCs-Piers	2,3,4,6-Tetrachlorophenol	58-90-2	µg/kg	25000000	25000000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	2,4,5-Trichlorophenol	95-95-4	µg/kg	3	68000000	5000	U	4200	U	2000	UJ	1500	UJ
002-SVOCs-Piers	2,4,6-Trichlorophenol	88-06-2	µg/kg	6	74000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	2,4-Dichlorophenol	120-83-2	µg/kg	5	2100000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	2,4-Dimethylphenol	105-67-9	µg/kg	16000000	14000000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	2,4-Dinitrophenol	51-28-5	µg/kg	1600000	1400000	5000	U	4200	U	2000	UJ	1500	UJ
002-SVOCs-Piers	2,4-Dinitrotoluene	121-14-2	µg/kg	7400	3000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	2,6-Dinitrotoluene	606-20-2	µg/kg	1500	3000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	2-Chloronaphthalene	91-58-7	µg/kg	60000000	60000000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	2-Chlorophenol	95-57-8	µg/kg	8	2200000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	2-Methylnaphthalene	91-57-6	µg/kg	70	2400000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	2-Methylphenol	95-48-7	µg/kg	41000000	3400000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	2-Nitroaniline	88-74-4	µg/kg	8000000	23000000	5000	U	4200	U	2000	UJ	1500	UJ
002-SVOCs-Piers	2-Nitrophenol	88-75-5	µg/kg		1600	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	3,3'-Dichlorobenzidine	91-94-1	µg/kg	2060	4000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	3-Nitroaniline	99-09-2	µg/kg		3160	5000	U	4200	U	2000	UJ	1500	UJ
002-SVOCs-Piers	4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	66000	68000	5000	U	4200	U	2000	UJ	1500	UJ
002-SVOCs-Piers	4-Bromophenyl-phenylether	101-55-3	µg/kg			2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	4-Chloro-3-methylphenol	59-50-7	µg/kg	82000000	82000000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	4-Chloroaniline	106-47-8	µg/kg	11000	11000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	4-Chlorophenyl-phenylether	7005-72-3	µg/kg			2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	4-Nitroaniline	100-01-6	µg/kg	110000	110000	5000	U	4200	U	2000	UJ	1500	UJ
002-SVOCs-Piers	4-Nitrophenol	100-02-7	µg/kg		5120	5000	U	4200	U	2000	UJ	1500	UJ
002-SVOCs-Piers	Acenaphthene	83-32-9	µg/kg	16	37000000	2000	U	1700	U	180	J	610	UJ
002-SVOCs-Piers	Acenaphthylene	208-96-8	µg/kg	44	300000000	2000	U	1700	U	780	UJ	610	UJ

Appendix H-1
Analytical Results for Sediment
Pierson's Creek Superfund Site
Newark, New Jersey

						Location	D1	D1	D1	D1	D1	D10	
						Sample #	D1-SE-A	D1-SE-B	D1-SE-C	D1-SE-D	D1-SE-E	D10-SE-A	
						Start Depth	0	0.5		2	3	0	
						End Depth	0.5	1	2	3	4	0.5	
						Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	
						Sample Type	N	N	N	N	N	N	
						Parent Sample #							
						Sample Date	8/6/2019	8/6/2019	8/6/2019	8/6/2019	8/6/2019	7/30/2019	
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q
002-SVOCs-Piers	Acetophenone	98-86-2	µg/kg	120000000	5000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Anthracene	120-12-7	µg/kg	85	30000000	2000	U	1700	U	3600	J	3900	J
002-SVOCs-Piers	Atrazine	1912-24-9	µg/kg	10000	2400000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Benzaldehyde	100-52-7	µg/kg	820000	68000000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Benzo(a)anthracene	56-55-3	µg/kg	261	17000	640	J	450	J	780	UJ	360	J
002-SVOCs-Piers	Benzo(a)pyrene	50-32-8	µg/kg	430	2000	930	J	610	J	780	UJ	290	J
002-SVOCs-Piers	Benzo(b)fluoranthene	205-99-2	µg/kg	1800	17000	1500	J	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Benzo(g,h,i)perylene	191-24-2	µg/kg	170	30000000	760	J	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Benzo(k)fluoranthene	207-08-9	µg/kg	240	170000	650	J	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Bis(2-chloroethoxy)methane	111-91-1	µg/kg	2500000	2500000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Bis(2-chloroethyl)ether	111-44-4	µg/kg	1000	2000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	182.16	140000	21000		110000		100000		47000	
002-SVOCs-Piers	Butylbenzylphthalate	85-68-7	µg/kg	63	14000000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Caprolactam	105-60-2	µg/kg	400000000	340000000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Carbazole	86-74-8	µg/kg		96000	2000	U	1700	U	710	J	1200	J
002-SVOCs-Piers	Chrysene	218-01-9	µg/kg	384	1700000	1000	J	860	J	370	J	540	J
002-SVOCs-Piers	CRESOLS, M & P	MEPH1314	µg/kg			2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Dibenzo(a,h)anthracene	53-70-3	µg/kg	63	2000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Dibenzofuran	132-64-9	µg/kg	7300	1000000	2000	U	1700	U	780	UJ	270	J
002-SVOCs-Piers	Diethylphthalate	84-66-2	µg/kg	6	550000000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Dimethylphthalate	131-11-3	µg/kg		734000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Di-n-butylphthalate	84-74-2	µg/kg	110	68000000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Di-n-octylphthalate	117-84-0	µg/kg	8200000	27000000	2000	U	2300		2100	J	1300	J
002-SVOCs-Piers	Fluoranthene	206-44-0	µg/kg	600	24000000	910	J	770	J	280	J	650	J
002-SVOCs-Piers	Fluorene	86-73-7	µg/kg	19	24000000	2000	U	1700	U	780	UJ	270	J
002-SVOCs-Piers	Hexachlorobenzene	118-74-1	µg/kg	20	1000	2000	UJ	1700	UJ	780	UJ	610	UJ
002-SVOCs-Piers	Hexachlorobutadiene	87-68-3	µg/kg	1.3	25000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Hexachlorocyclopentadiene	77-47-4	µg/kg	139	110000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Hexachloroethane	67-72-1	µg/kg	73	48000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	200	17000	790	J	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Isophorone	78-59-1	µg/kg	2400000	2000000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Naphthalene	91-20-3	µg/kg	160	17000	2000	U	1700	U	780	UJ	220	J
002-SVOCs-Piers	Nitrobenzene	98-95-3	µg/kg	22000	14000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	N-Nitroso-di-n-propylamine	621-64-7	µg/kg	330	300	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	N-Nitrosodiphenylamine	86-30-6	µg/kg	422000	390000	2000	U	1700	U	760	J	950	J
002-SVOCs-Piers	Pentachlorophenol	87-86-5	µg/kg	17	3000	5000	U	4200	U	2000	UJ	1500	UJ
002-SVOCs-Piers	Phenanthrene	85-01-8	µg/kg	240	45700	2000	U	430	J	250	J	770	J
002-SVOCs-Piers	Phenol	108-95-2	µg/kg	130	210000000	2000	U	1700	U	780	UJ	610	UJ
002-SVOCs-Piers	Pyrene	129-00-0	µg/kg	665	18000000	1300	J	1100	J	1000	J	1300	J
003-Pest-Piers	4,4'-DDD	72-54-8	µg/kg	2	13000	240		910	J	14000		18000	
003-Pest-Piers	4,4'-DDE	72-55-9	µg/kg	2.2	9000	51	J	210	J	4400	J	5900	J

Appendix H-1
Analytical Results for Sediment
Pierson's Creek Superfund Site
Newark, New Jersey

					Location	D1	D1	D1	D1	D1	D10		
					Sample #	D1-SE-A	D1-SE-B	D1-SE-C	D1-SE-D	D1-SE-E	D10-SE-A		
					Start Depth	0	0.5	1	2	3	0		
					End Depth	0.5	1	2	3	4	0.5		
					Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs		
					Sample Type	N	N	N	N	N	N		
					Parent Sample #								
					Sample Date	8/6/2019	8/6/2019	8/6/2019	8/6/2019	8/6/2019	7/30/2019		
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q
003-Pest-Piers	4,4'-DDT	50-29-3	µg/kg	1	8000	170	J	740	J	8600	J	10000	J
003-Pest-Piers	Aldrin	309-00-2	µg/kg	2	200	19	J	66		1400	J	1600	J
003-Pest-Piers	alpha-BHC	319-84-6	µg/kg	1360	500	30	U	17	U	24	U	18	U
003-Pest-Piers	alpha-Chlordane	5103-71-9	µg/kg	3.24	1000000	72		300		2900		3400	
003-Pest-Piers	beta-BHC	319-85-7	µg/kg	1300	2000	30	U	17	U	24	U	18	U
003-Pest-Piers	delta-BHC	319-86-8	µg/kg	1300	1300	30	U	17	U	840	J	1300	J
003-Pest-Piers	Dieldrin	60-57-1	µg/kg	1.9	200	210	J	910	J	8500	J	7400	J
003-Pest-Piers	Endosulfan I	959-98-8	µg/kg	7000000	6800000	30	U	17	U	24	U	18	U
003-Pest-Piers	Endosulfan II	33213-65-9	µg/kg	7000000	6800000	59	U	33	U	47	U	36	U
003-Pest-Piers	Endosulfan Sulfate	1031-07-8	µg/kg	0.357	6800000	59	U	180		1800		2200	
003-Pest-Piers	Endrin	72-20-8	µg/kg	2.22	340000	59	U	33	U	47	U	36	U
003-Pest-Piers	Endrin aldehyde	7421-93-4	µg/kg		1620	34	J	180	J	1600	J	1900	J
003-Pest-Piers	Endrin Ketone	53494-70-5	µg/kg		1620	59	U	33	U	47	U	36	U
003-Pest-Piers	gamma-BHC (Lindane)	58-89-9	µg/kg	0.32	2000	30	U	17	U	24	U	18	U
003-Pest-Piers	gamma-Chlordane	5103-74-2	µg/kg	3.24	1000000	130		560		6800	J	8200	J
003-Pest-Piers	Heptachlor	76-44-8	µg/kg	0.3	700	30	U	17	U	24	U	18	U
003-Pest-Piers	Heptachlor Epoxide	1024-57-3	µg/kg	2.47	300	30	U	17	U	24	U	18	U
003-Pest-Piers	Methoxychlor	72-43-5	µg/kg	29.6	5700000	300	U	170	U	240	U	180	U
003-Pest-Piers	Toxaphene	8001-35-2	µg/kg	536	3000	590	U	330	U	470	U	360	U
005-Aroclors-Piers	Aroclor 1016	12674-11-2	µg/kg	7	1000	520	UJ	430	UJ	400	U	1200	U
005-Aroclors-Piers	Aroclor 1221	11104-28-2	µg/kg	23	1000	520	UJ	430	UJ	400	U	1200	U
005-Aroclors-Piers	Aroclor 1232	11141-16-5	µg/kg	23	1000	520	UJ	430	UJ	400	U	1200	U
005-Aroclors-Piers	Aroclor 1242	53469-21-9	µg/kg	23	1000	520	UJ	430	UJ	400	U	42000	
005-Aroclors-Piers	Aroclor 1248	12672-29-6	µg/kg	30	1000	520	UJ	430	UJ	60000		1200	U
005-Aroclors-Piers	Aroclor 1254	11097-69-1	µg/kg	60	1000	2500	J	8100	J	400	U	150000	
005-Aroclors-Piers	Aroclor 1260	11096-82-5	µg/kg	5	1000	1600	J	5300	J	50000		71000	
005-Aroclors-Piers	Aroclor 1262	37324-23-5	µg/kg	23	1000	520	UJ	430	UJ	400	U	1200	U
005-Aroclors-Piers	Aroclor 1268	11100-14-4	µg/kg	23	1000	520	UJ	430	UJ	400	U	1200	U
005-Aroclors-Piers	Total Aroclors	TARO	µg/kg	23	1000	4100		13400		110000		263000	
007-Dioxin/Furan-Pier	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	ng/kg										
007-Dioxin/Furan-Pier	2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	ng/kg										

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Analytical Results for Sediment
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				Location	D1	D1	D1	D1	D1	D10						
				Sample #	D1-SE-A	D1-SE-B	D1-SE-C	D1-SE-D	D1-SE-E	D10-SE-A						
				Start Depth	0	0.5	1	2	3	0						
				End Depth	0.5	1	2	3	4	0.5						
				Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs						
				Sample Type	N	N	N	N	N	N						
				Parent Sample #												
				Sample Date	8/6/2019	8/6/2019	8/6/2019	8/6/2019	8/6/2019	7/30/2019						
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q			
007-Dioxin/Furan-Pier	2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	ng/kg													
007-Dioxin/Furan-Pier	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	ng/kg													
007-Dioxin/Furan-Pier	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	ng/kg	3.6	22											
007-Dioxin/Furan-Pier	Octachlorodibenzofuran	39001-02-0	ng/kg													
007-Dioxin/Furan-Pier	Octachlorodibenzo-p-dioxin	3268-87-9	ng/kg													
007-Dioxin/Furan-Pier	Total HxCDF	38998-75-3	ng/kg													
007-Dioxin/Furan-Pier	Total HpCDD	37871-00-4	ng/kg													
007-Dioxin/Furan-Pier	Total HxCDD	34465-46-8	ng/kg													
007-Dioxin/Furan-Pier	Total HxCDF	55684-94-1	ng/kg													
007-Dioxin/Furan-Pier	Total PeCDD	36088-22-9	ng/kg													
007-Dioxin/Furan-Pier	Total PeCDF	30402-15-4	ng/kg													
007-Dioxin/Furan-Pier	Total TCDD	41903-57-5	ng/kg													
007-Dioxin/Furan-Pier	Total TCDF	55722-27-5	ng/kg													
007-Dioxin/Furan-Pier	2,3,7,8-TCDD TEQ	TEQ	ng/kg	3.6	22											
011-Inorganics-Piers	Aluminum	7429-90-5	mg/kg	18000	3900	13500		17500		12900		10400		6880		14600
011-Inorganics-Piers	Antimony	7440-36-0	mg/kg	9.3	450	10.2		16.5		21.3		53.4		12.6		10.2
011-Inorganics-Piers	Arsenic	7440-38-2	mg/kg	8.2	19	98.6		226		460		407		239		143
011-Inorganics-Piers	Barium	7440-39-3	mg/kg	48	59000	131		238		601		1200		214		1740
011-Inorganics-Piers	Beryllium	7440-41-7	mg/kg	2300	140	0.839		0.973		2.29		5.3		0.854		0.68
011-Inorganics-Piers	Cadmium	7440-43-9	mg/kg	1.2	78	13.1		28.2		60.8		136		11.9		4.03
011-Inorganics-Piers	Calcium	7440-70-2	mg/kg			6880		7690		12700		7080		4950		14400
011-Inorganics-Piers	Chromium	7440-47-3	mg/kg	81	3600000	106		159		214		363		164		82.2
011-Inorganics-Piers	Cobalt	7440-48-4	mg/kg	10	590	56.3		56.5		39.5		103		12.3		27.7
011-Inorganics-Piers	Copper	7440-50-8	mg/kg	34	45000	935		1250		856		1330		405		462
011-Inorganics-Piers	Cyanide	57-12-5	mg/kg	150	680	5.2 U		6.8 U		7.1		13		5		22
011-Inorganics-Piers	Iron	7439-89-6	mg/kg	820000	820000	22500		27400		21900		22100		17500		95100
011-Inorganics-Piers	Lead	7439-92-1	mg/kg	47	800	765		1330		2460		3460		647		217
011-Inorganics-Piers	Magnesium	7439-95-4	mg/kg			5850		6760		5860		2930		2330		10100
011-Inorganics-Piers	Manganese	7439-96-5	mg/kg	260	5900	190		223		227		164		81		368
011-Inorganics-Piers	Mercury	7439-97-6	mg/kg	0.15	65	1270 J		1820 J		934 J		504 J		87.1 J		2.93
011-Inorganics-Piers	Mercury	7439-97-6	ng/g	150	65000	396000		1290000								2150
011-Inorganics-Piers	Methyl Mercury	22967-92-6	ng/g			122		224		506		570		87.4		11.5
011-Inorganics-Piers	Nickel	7440-02-0	mg/kg	21	23000	260		338		77.2		120		24.8		84.2
011-Inorganics-Piers	Potassium	7440-09-7	mg/kg			1390		1610		1150		1110		590		2790
011-Inorganics-Piers	Selenium	7782-49-2	mg/kg	1	5700	1.4 J		2.26		2.13		3.64		1.76		2 J
011-Inorganics-Piers	Silver	7440-22-4	mg/kg	1	5700	26.7		52.7		33.6		71.9		4.95		2.32
011-Inorganics-Piers	Sodium	7440-23-5	mg/kg			1000		1000		1080		804		806		19200
011-Inorganics-Piers	Thallium	7440-28-0	mg/kg	12	3	0.16 J		0.25 J		0.475		1.72		0.289		0.19 J
011-Inorganics-Piers	Vanadium	7440-62-2	mg/kg	57	1100	64.6		77.4		59.4		178		38.7		74.4
011-Inorganics-Piers	Zinc	7440-66-6	mg/kg	150	110000	1090		1430		916		1980		294		1780
014-General Chemistr	Total Organic Carbon	TOC	µg/g			120000		180000		160000		190000		240000		210000

Appendix H-1
Analytical Results for Sediment
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						Location Sample # Start Depth End Depth Depth Unit Sample Type Parent Sample # Sample Date		D1 D1-SE-A 0 0.5 ft bgs N 8/6/2019		D1 D1-SE-B 0.5 1 ft bgs N 8/6/2019		D1 D1-SE-C 1 2 ft bgs N 8/6/2019		D1 D1-SE-D 2 3 ft bgs N 8/6/2019		D1 D1-SE-E 3 4 ft bgs N 8/6/2019		D10 D10-SE-A 0 0.5 ft bgs N 7/30/2019	
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
014-General Chemistr	TOTAL SOLIDS	TSOLIDS	%			16 16 16		20 20 20		42 42 42		54 54 54		50 50 50		14 14 14			
015-Grain Size-Piers	% COARSE SAND >.5 - 1 MM	COARSE SAND	%			0		0		2.02		0.92		8.73		0			
015-Grain Size-Piers	% Coarse Sand >0.5 - 1.0 mm	%COARSE SAND	%																
015-Grain Size-Piers	% Fine Sand >.125 - .25 mm	%FINE SAND	%																
015-Grain Size-Piers	% Medium Sand >.25 - .5 mm	%MEDIUM SAND	%																
015-Grain Size-Piers	% MEDIUM SAND >.25 - .5 MM	MEDIUM SAND	%			23.38		15.15		16.18		21.62		19.35		3.5			
015-Grain Size-Piers	0	HYD01	% Passing			8.68		10.03		9.5		7.97		11.42		13.85			
015-Grain Size-Piers	0	HYD02	% Passing			8.68		10.03		9.92		7.73		10.66		12.25			
015-Grain Size-Piers	0	HYD03	% Passing			8.24		7.13		8.14		6.93		6.61		4.04			
015-Grain Size-Piers	0	HYD04	% Passing			6.79		7.13		8.14		6.13		6.61		3.24			
015-Grain Size-Piers	0	HYD05	% Passing			5.33		5.49		6.36		5.09		5.62		3.24			
015-Grain Size-Piers	0	HYD06	% Passing			4.45		4.72		5.53		3.8		3.63		3.24			
015-Grain Size-Piers	0	HYD07	% Passing			4.45		3.85		4.17		3.25		2.33		2.44			
015-Grain Size-Piers	0.75 INCH SIEVE	SIEVE0.75IN	% Passing			100		100		100		100		100		100			
015-Grain Size-Piers	1.5 INCH SIEVE	SIEVE1.5IN	% Passing			100		100		100		100		100		100			
015-Grain Size-Piers	3 INCH SIEVE	SIEVE3IN	% Passing			100		100		100		100		100		100			
015-Grain Size-Piers	Clay	%CLAY	%			5.53		5.36		6.17		4.72		4.52		2.88			
015-Grain Size-Piers	GRAVEL	Gravel	%			0		0		7.28		2.77		8.16		0			
015-Grain Size-Piers	HYDROMETER, READING 1	HYD1-PARTICLE	um			37.01		36.63		37.01		36.37		35.73		35.37			
015-Grain Size-Piers	HYDROMETER, READING 2	HYD2-PARTICLE	um			23.4		23.16		23.26		23.15		22.59		22.62			
015-Grain Size-Piers	HYDROMETER, READING 3	HYD3-PARTICLE	um			13.6		13.6		13.51		13.46		13.46		13.77			

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Analytical Results for Sediment
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						Location	D1	D1	D1	D1	D1	D10	
						Sample #	D1-SE-A	D1-SE-B	D1-SE-C	D1-SE-D	D1-SE-E	D10-SE-A	
						Start Depth	0	0.5	1	2	3	0	
						End Depth	0.5	1	2	3	4	0.5	
						Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	
						Sample Type	N	N	N	N	N	N	
						Parent Sample #							
						Sample Date	8/6/2019	8/6/2019	8/6/2019	8/6/2019	8/6/2019	7/30/2019	
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q
015-Grain Size-Piers	HYDROMETER, READING 4	HYD4-PARTICLE	um			9.71		9.61		9.56		9.52	9.83
015-Grain Size-Piers	HYDROMETER, READING 5	HYD5-PARTICLE	um			6.76		6.91		6.87		6.77	6.95
015-Grain Size-Piers	HYDROMETER, READING 6	HYD6-PARTICLE	um			3.48		3.5		3.48		3.47	3.48
015-Grain Size-Piers	HYDROMETER, READING 7	HYD7-PARTICLE	um			1.42		1.42		1.42		1.42	1.42
015-Grain Size-Piers	Percent Passing Sieve#10	SIEVE10	% Passing			100		100		90.69		96.3	100
015-Grain Size-Piers	Percent Passing Sieve#20	SIEVE20	% Passing			96.66		96.81		86.24		88.91	99.3
015-Grain Size-Piers	Percent Passing Sieve#40	SIEVE40	% Passing			76.62		84.85		74.51		74.68	96.5
015-Grain Size-Piers	Percent Passing Sieve#60	SIEVE60	% Passing			38.75		69.69		59.14		59.9	93.71
015-Grain Size-Piers	Sand Fine	FINE SAND	%			81.29		35.89		39.24		31.6	13.29
015-Grain Size-Piers	Sieve 0.25 inch, % passing	SIEVE0.25IN	% Passing			100		100		93.53		98.15	100
015-Grain Size-Piers	SIEVE 1 inch, Percent Finer	SIEVE1INCH	% Passing			100		100		100		100	100
015-Grain Size-Piers	SIEVE 2 inch, Percent Finer	SIEVE2INCH	% Passing			100		100		100		100	100
015-Grain Size-Piers	SIEVE NO. 80, PERCENT PASSING	SIEVE80	% Passing			17.6		61.72		49.43		47.33	92.31
015-Grain Size-Piers	SIEVE, 0.15 mm, PERCENT PASSING	SIEVEUS100	% Passing			8.69		57.73		43.76		44.19	90.91
015-Grain Size-Piers	SIEVE, 4.75 mm, PERCENT PASSING	SIEVEUS4	% Passing			100		100		92.72		97.23	100
015-Grain Size-Piers	Sieve-U.S. Std. No. 200 (0.075 mm)	SIEVEUS200	% Passing			-4.68		48.96		35.27		43.08	83.22
015-Grain Size-Piers	Silt	%SILT	%										
015-Grain Size-Piers	SILT	445	%			-10.21		43.6		29.1		38.36	80.34
017-MerSpec-Piers	MINERAL-BOUND HG	M-G-HG	ng/g			339000							77.6
017-MerSpec-Piers	ORGANO-COMPLEXED HG	OG-C-HG	ng/g			19400							1410
017-MerSpec-Piers	STRONGLY COMPLEXED AND ELEMENTAL HG	S-B-HG	ng/g			200000							522
017-MerSpec-Piers	VOLATILE HG	V-E-HG	ng/g			315	U	262	U				374
017-MerSpec-Piers	WATER SOLUBLE HG	W-S-HG	ng/g			4420							48.5
017-MerSpec-Piers	WEAK ACID-SOLUBLE HG	SAS-HG	ng/g			1280							56.5

Notes:
1. Results that are greater than the RI sediment screening criteria are bolded.
2. Results that are greater than the RI soil screening criteria are highlighted yellow.

Acronyms:
FD - field duplicate
ft bgs - feet below ground surface
J - estimated
J+ - estimated, biased high
J- - estimated, biased low
J-EMPC - estimated maximum possible concentration
mg/kg - milligram per kilogram
N - normal
ng/g - nanogram per gram
ng/kg - nanogram per kilogram
Q - qualifier
R - rejected
RI - remedial investigation
U - nondetect
UI - nondetect, estimated
µg/kg - microgram per kilogram

Appendix H-1
Analytical Results for Sediment
Pierson's Creek Superfund Site
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						Location	D16	D16	D2	D2	D2	D2	D3
						Sample #	D16-SE-A	D16-SE-B	D2-SE-9A	D2-SE-A	D2-SE-E	D2-SE-F	D3-SE-A
						Start Depth	0	0.5	0	0	3	4	0
						End Depth	0.5	1	0.5	0.5	4	5	0.5
						Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs
						Sample Type	N	N	FD	N	N	N	N
						Parent Sample #			D2-SE-A				
						Sample Date	12/12/2019	12/12/2019	8/5/2019	8/5/2019	8/5/2019	8/5/2019	8/6/2019
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q
001-VOCs-Piers	1,1,1-Trichloroethane	71-55-6	µg/kg	856	200	8	U	12	U	15	U	26	U
001-VOCs-Piers	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	202	3000	8	UJ	12	U	15	U	26	UJ
001-VOCs-Piers	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	µg/kg	28000000	28000000	8	U	12	U	15	U	26	U
001-VOCs-Piers	1,1,2-Trichloroethane	79-00-5	µg/kg	570	6000	8	U	12	U	15	U	26	U
001-VOCs-Piers	1,1-Dichloroethane	75-34-3	µg/kg	16000	24000	8	U	12	U	15	U	26	U
001-VOCs-Piers	1,1-Dichloroethene	75-35-4	µg/kg	2780	150000	8	U	12	U	15	U	26	U
001-VOCs-Piers	1,2,3-Trichlorobenzene	87-61-6	µg/kg	930000	930000	8	UJ	12	U	15	U	26	UJ
001-VOCs-Piers	1,2,4-Trichlorobenzene	120-82-1	µg/kg	4.8	820000	9.6	J	2.8	J	15	U	26	UJ
001-VOCs-Piers	1,2-Dibromo-3-chloropropane	96-12-8	µg/kg	64	200	8	UJ	12	U	15	U	26	UJ
001-VOCs-Piers	1,2-Dibromoethane	106-93-4	µg/kg	160	40	8	U	12	U	15	U	26	U
001-VOCs-Piers	1,2-Dichlorobenzene	95-50-1	µg/kg	989	59000000	37	J	8.9	J	15	U	26	UJ
001-VOCs-Piers	1,2-Dichloroethane	107-06-2	µg/kg	2000	3000	8	U	12	U	15	U	26	U
001-VOCs-Piers	1,2-Dichloropropane	78-87-5	µg/kg	11000	5000	8	U	12	U	15	U	26	U
001-VOCs-Piers	1,3-Dichlorobenzene	541-73-1	µg/kg	842	59000000	39	J	7.8	J	15	U	26	UJ
001-VOCs-Piers	1,4-Dichlorobenzene	106-46-7	µg/kg	110	13000	57	J	13	J	15	U	26	UJ
001-VOCs-Piers	2-Butanone	78-93-3	µg/kg	190000000	44000000	84	J	79	J	45	UJ	130	U
001-VOCs-Piers	2-Hexanone	591-78-6	µg/kg	1300000	1300000	40	U	62	U	45	UJ	130	U
001-VOCs-Piers	4-Methyl-2-pentanone	108-10-1	µg/kg	140000000	140000000	40	U	62	U	45	UJ	130	U
001-VOCs-Piers	Acetone	67-64-1	µg/kg	670000000	12000	600	J	1400	J	45	UJ	250	J
001-VOCs-Piers	Benzene	71-43-2	µg/kg	340	5000	17	J	4.4	J	6.8	J	26	U
001-VOCs-Piers	Bromochloromethane	74-97-5	µg/kg	630000	630000	8	U	12	U	15	U	26	U
001-VOCs-Piers	Bromodichloromethane	75-27-4	µg/kg	1300	3000	8	U	12	U	15	U	26	U
001-VOCs-Piers	Bromoform	75-25-2	µg/kg	1310	280000	8	UJ	12	U	15	U	26	U
001-VOCs-Piers	Bromomethane	74-83-9	µg/kg	30000	59000	16	U	25	U	30	U	53	U
001-VOCs-Piers	Carbon Disulfide	75-15-0	µg/kg	3500000	110000000	8	U	12	U	15	U	5.3	J
001-VOCs-Piers	Carbon Tetrachloride	56-23-5	µg/kg	7240	4000	8	U	12	U	15	U	26	U
001-VOCs-Piers	Chlorobenzene	108-90-7	µg/kg	162	7400000	11	J	12	U	15	U	26	U
001-VOCs-Piers	Chloroethane	75-00-3	µg/kg	57000000	1100000	16	U	25	U	30	U	53	U
001-VOCs-Piers	Chloroform	67-66-3	µg/kg	1400	2000	8	U	12	U	15	U	26	U
001-VOCs-Piers	Chloromethane	74-87-3	µg/kg	460000	12000	16	U	25	U	30	U	53	U
001-VOCs-Piers	cis-1,2-Dichloroethene	156-59-2	µg/kg	2300000	560000	8	U	12	U	15	U	26	U
001-VOCs-Piers	cis-1,3-Dichloropropene	10061-01-5	µg/kg	7.31	7000	8	U	12	U	15	U	26	U
001-VOCs-Piers	Cyclohexane	110-82-7	µg/kg	27000000	27000000	8	U	12	U	15	U	26	U
001-VOCs-Piers	Dibromochloromethane	124-48-1	µg/kg	39000	8000	8	U	12	U	15	U	26	U
001-VOCs-Piers	Dichlorodifluoromethane	75-71-8	µg/kg	370000	230000000	16	U	25	U	30	U	53	U
001-VOCs-Piers	Ethylbenzene	100-41-4	µg/kg	1400	110000000	9.4	J	1.7	J	15	U	26	U
001-VOCs-Piers	Isopropylbenzene	98-82-8	µg/kg	9900000	9900000	2.3	J	12	U	15	U	26	UJ
001-VOCs-Piers	M,P-XYLENE (SUM OF ISOMERS)	XYLMP	µg/kg	120	170000000	17	J	25	U	30	U	53	U
001-VOCs-Piers	Methyl acetate	79-20-9	µg/kg	1200000000	14000	8	UJ	12	U	15	U	26	U
001-VOCs-Piers	Methyl tert-Butyl Ether	1634-04-4	µg/kg	210000	320000	8	U	12	U	15	U	26	U
001-VOCs-Piers	Methylcyclohexane	108-87-2	µg/kg			8	UJ	12	U	15	U	26	U

Appendix H-1
Analytical Results for Sediment
Pierson's Creek Superfund Site
Newark, New Jersey

						Location Sample #	D16 D16-SE-A	D16 D16-SE-B	D2 D2-SE-9A	D2 D2-SE-A	D2 D2-SE-E	D2 D2-SE-F	D3 D3-SE-A
						Start Depth	0	0.5	0	0	3	4	0
						End Depth	0.5	1	0.5	0.5	4	5	0.5
						Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs
						Sample Type	N	N	FD	N	N	N	N
						Parent Sample #			D2-SE-A				
						Sample Date	12/12/2019	12/12/2019	8/5/2019	8/5/2019	8/5/2019	8/5/2019	8/6/2019
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q
001-VOCs-Piers	Methylene Chloride	75-09-2	µg/kg	1000000	230000	40	U	62	U	75	U	240000	U
001-VOCs-Piers	o-Xylene	95-47-6	µg/kg	120	170000000	5.9	J	12	U	15	U	180000	U
001-VOCs-Piers	Styrene	100-42-5	µg/kg	7070	260000	8	UJ	12	U	15	U	46000	U
001-VOCs-Piers	Tetrachloroethene	127-18-4	µg/kg	450	1500000	8	U	12	U	15	U	46000	U
001-VOCs-Piers	Toluene	108-88-3	µg/kg	2500	91000000	18		12	U	15	U	47000	U
001-VOCs-Piers	TOTAL XYLENES	133-02-07	µg/kg									51000	U
001-VOCs-Piers	trans-1,2-Dichloroethene	156-60-5	µg/kg	23000000	720000	8	U	12	U	15	U	46000	U
001-VOCs-Piers	trans-1,3-Dichloropropene	10061-02-6	µg/kg	7.31	7000	8	U	12	U	15	U	46000	U
001-VOCs-Piers	Trichloroethene	79-01-6	µg/kg	1600	10000	1.2	J	12	U	15	U	46000	U
001-VOCs-Piers	Trichlorofluoromethane	75-69-4	µg/kg	350000000	340000000	16	U	25	U	30	U	93000	U
001-VOCs-Piers	Vinyl Chloride	75-01-4	µg/kg	1700	2000	16	U	25	U	30	U	93000	U
001-VOCs-Piers	Xylenes (TOTAL)	1330-20-7	µg/kg			23	J	38	U	45	U	420000	U
002-SVOCs-Piers	1,1'-Biphenyl	92-52-4	µg/kg	200000	240000	520	U	610	U	1100	U	15000	U
002-SVOCs-Piers	1,2,4,5-Tetrachlorobenzene	95-94-3	µg/kg	47000	350000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	1,4-Dioxane	123-91-1	µg/kg	24000	24000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	2,2'-Oxybis(1-chloropropane)	108-60-1	µg/kg	47000000	67000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	2,3,4,6-Tetrachlorophenol	58-90-2	µg/kg	25000000	25000000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	2,4,5-Trichlorophenol	95-95-4	µg/kg	3	68000000	1300	U	1500	U	2600	U	1700	U
002-SVOCs-Piers	2,4,6-Trichlorophenol	88-06-2	µg/kg	6	74000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	2,4-Dichlorophenol	120-83-2	µg/kg	5	2100000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	2,4-Dimethylphenol	105-67-9	µg/kg	16000000	14000000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	2,4-Dinitrophenol	51-28-5	µg/kg	1600000	1400000	1300	U	1500	U	2600	U	1700	U
002-SVOCs-Piers	2,4-Dinitrotoluene	121-14-2	µg/kg	7400	3000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	2,6-Dinitrotoluene	606-20-2	µg/kg	1500	3000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	2-Chloronaphthalene	91-58-7	µg/kg	60000000	60000000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	2-Chlorophenol	95-57-8	µg/kg	8	2200000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	2-Methylnaphthalene	91-57-6	µg/kg	70	2400000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	2-Methylphenol	95-48-7	µg/kg	41000000	3400000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	2-Nitroaniline	88-74-4	µg/kg	8000000	23000000	1300	U	1500	U	2600	U	1700	U
002-SVOCs-Piers	2-Nitrophenol	88-75-5	µg/kg	1600	1600	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	3,3'-Dichlorobenzidine	91-94-1	µg/kg	2060	4000	520	U	610	UJ	1100	UJ	690	UJ
002-SVOCs-Piers	3-Nitroaniline	99-09-2	µg/kg		3160	1300	U	1500	U	2600	U	1700	U
002-SVOCs-Piers	4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	66000	68000	1300	U	1500	U	2600	U	1700	U
002-SVOCs-Piers	4-Bromophenyl-phenylether	101-55-3	µg/kg			520	U	610	U	1100	U	690	U
002-SVOCs-Piers	4-Chloro-3-methylphenol	59-50-7	µg/kg	82000000	82000000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	4-Chloroaniline	106-47-8	µg/kg	11000	11000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	4-Chlorophenyl-phenylether	7005-72-3	µg/kg			520	U	610	U	1100	U	690	U
002-SVOCs-Piers	4-Nitroaniline	100-01-6	µg/kg	110000	110000	1300	U	1500	U	2600	U	1700	U
002-SVOCs-Piers	4-Nitrophenol	100-02-7	µg/kg		5120	1300	U	1500	U	2600	U	1700	U
002-SVOCs-Piers	Acenaphthene	83-32-9	µg/kg	16	37000000	520	U	150	J	220	J	190	J
002-SVOCs-Piers	Acenaphthylene	208-96-8	µg/kg	44	300000000	520	U	610	U	1100	U	690	U

Appendix H-1
Analytical Results for Sediment
Pierson's Creek Superfund Site
Newark, New Jersey

						Location Sample #	D16 D16-SE-A	D16 D16-SE-B	D2 D2-SE-9A	D2 D2-SE-A	D2 D2-SE-E	D2 D2-SE-F	D3 D3-SE-A
						Start Depth	0	0.5	0	0	3	4	0
						End Depth	0.5	1	0.5	0.5	4	5	0.5
						Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs
						Sample Type	N	N	FD	N	N	N	N
						Parent Sample #			D2-SE-A				
						Sample Date	12/12/2019	12/12/2019	8/5/2019	8/5/2019	8/5/2019	8/5/2019	8/6/2019
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q
002-SVOCs-Piers	Acetophenone	98-86-2	µg/kg	120000000	5000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Anthracene	120-12-7	µg/kg	85	30000000	520	U	580	J	690	J	610	J
002-SVOCs-Piers	Atrazine	1912-24-9	µg/kg	10000	2400000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Benzaldehyde	100-52-7	µg/kg	820000	68000000	520	U	310	J	1100	U	690	U
002-SVOCs-Piers	Benzo(a)anthracene	56-55-3	µg/kg	261	17000	660		1900	J	3700		3500	J
002-SVOCs-Piers	Benzo(a)pyrene	50-32-8	µg/kg	430	2000	820	J	2400	J	4400	J	4300	J
002-SVOCs-Piers	Benzo(b)fluoranthene	205-99-2	µg/kg	1800	17000	1400	J	3000	J	7700	J	7400	J
002-SVOCs-Piers	Benzo(g,h,i)perylene	191-24-2	µg/kg	170	30000000	690	J	1700	J	3200	J	3200	J
002-SVOCs-Piers	Benzo(k)fluoranthene	207-08-9	µg/kg	240	170000	620	J	1200	J	2900	J	2800	J
002-SVOCs-Piers	Bis(2-chloroethoxy)methane	111-91-1	µg/kg	2500000	2500000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Bis(2-chloroethyl)ether	111-44-4	µg/kg	1000	2000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	182.16	140000	7300		16000		6900		3500	J
002-SVOCs-Piers	Butylbenzylphthalate	85-68-7	µg/kg	63	14000000	1700		360	J	640	J	400	J
002-SVOCs-Piers	Caprolactam	105-60-2	µg/kg	400000000	340000000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Carbazole	86-74-8	µg/kg	96000	96000	520	U	610	U	620	J	620	J
002-SVOCs-Piers	Chrysene	218-01-9	µg/kg	384	1700000	860		2300	J	4800		4500	J
002-SVOCs-Piers	CRESOLS, M & P	MEPH1314	µg/kg			520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Dibenzo(a,h)anthracene	53-70-3	µg/kg	63	2000	520	U	580	J	1300	J	1300	J
002-SVOCs-Piers	Dibenzofuran	132-64-9	µg/kg	7300	1000000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Diethylphthalate	84-66-2	µg/kg	6	550000000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Dimethylphthalate	131-11-3	µg/kg		734000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Di-n-butylphthalate	84-74-2	µg/kg	110	68000000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Di-n-octylphthalate	117-84-0	µg/kg	8200000	27000000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Fluoranthene	206-44-0	µg/kg	600	24000000	1100		3000		6300		5700	
002-SVOCs-Piers	Fluorene	86-73-7	µg/kg	19	24000000	520	U	180	J	1100	U	190	J
002-SVOCs-Piers	Hexachlorobenzene	118-74-1	µg/kg	20	1000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Hexachlorobutadiene	87-68-3	µg/kg	1.3	25000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Hexachlorocyclopentadiene	77-47-4	µg/kg	139	110000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Hexachloroethane	67-72-1	µg/kg	73	48000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	200	17000	670	J	1700	J	3100	J	3000	J
002-SVOCs-Piers	Isophorone	78-59-1	µg/kg	2400000	2000000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Naphthalene	91-20-3	µg/kg	160	17000	520	U	610	U	290	J	690	U
002-SVOCs-Piers	Nitrobenzene	98-95-3	µg/kg	22000	14000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	N-Nitroso-di-n-propylamine	621-64-7	µg/kg	330	300	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	N-Nitrosodiphenylamine	86-30-6	µg/kg	422000	390000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Pentachlorophenol	87-86-5	µg/kg	17	3000	1300	U	1500	U	2600	U	1700	U
002-SVOCs-Piers	Phenanthrene	85-01-8	µg/kg	240	45700	640		2600		3500		3400	
002-SVOCs-Piers	Phenol	108-95-2	µg/kg	130	210000000	520	U	610	U	1100	U	690	U
002-SVOCs-Piers	Pyrene	129-00-0	µg/kg	665	18000000	2100		5300		7200		7400	
003-Pest-Piers	4,4'-DDD	72-54-8	µg/kg	2	13000	850	J	1900		140	J	87	J
003-Pest-Piers	4,4'-DDE	72-55-9	µg/kg	2.2	9000	110	J	270		18	J	10	J

Appendix H-1
Analytical Results for Sediment
Pierson's Creek Superfund Site
Newark, New Jersey

					Location	D16	D16	D2	D2	D2	D2	D3	
					Sample #	D16-SE-A	D16-SE-B	D2-SE-9A	D2-SE-A	D2-SE-E	D2-SE-F	D3-SE-A	
					Start Depth	0	0.5	0	0	3	4	0	
					End Depth	0.5	1	0.5	0.5	4	5	0.5	
					Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	
					Sample Type	N	N	FD	N	N	N	N	
					Parent Sample #			D2-SE-A					
					Sample Date	12/12/2019	12/12/2019	8/5/2019	8/5/2019	8/5/2019	8/5/2019	8/6/2019	
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q
003-Pest-Piers	4,4'-DDT	50-29-3	µg/kg	1	8000	310	J	210	J	63	U	1500	J
003-Pest-Piers	Aldrin	309-00-2	µg/kg	2	200	2.9	U	16	U	33	U	21	U
003-Pest-Piers	alpha-BHC	319-84-6	µg/kg	1360	500	2.9	U	16	U	33	U	21	U
003-Pest-Piers	alpha-Chlordane	5103-71-9	µg/kg	3.24	1000000	140		48	J	21	U	1300	J
003-Pest-Piers	beta-BHC	319-85-7	µg/kg	1300	2000	2.9	U	16	U	33	U	21	U
003-Pest-Piers	delta-BHC	319-86-8	µg/kg	1300	1300	2.9	U	16	U	33	U	5.7	J
003-Pest-Piers	Dieldrin	60-57-1	µg/kg	1.9	200	580		370	J	88	J	46	J
003-Pest-Piers	Endosulfan I	959-98-8	µg/kg	7000000	6800000	7.9		16	U	33	U	21	U
003-Pest-Piers	Endosulfan II	33213-65-9	µg/kg	7000000	6800000	5.6	U	30	U	63	U	42	U
003-Pest-Piers	Endosulfan Sulfate	1031-07-8	µg/kg	0.357	6800000	5.6	U	30	U	63	U	42	U
003-Pest-Piers	Endrin	72-20-8	µg/kg	2.22	340000	5.6	U	30	U	63	U	42	U
003-Pest-Piers	Endrin aldehyde	7421-93-4	µg/kg		1620	5.6	U	30	U	63	U	42	U
003-Pest-Piers	Endrin Ketone	53494-70-5	µg/kg		1620	200	J	98	J	63	U	42	U
003-Pest-Piers	gamma-BHC (Lindane)	58-89-9	µg/kg	0.32	2000	2.9	U	16	U	33	U	21	U
003-Pest-Piers	gamma-Chlordane	5103-74-2	µg/kg	3.24	1000000	230		110		79	J	21	U
003-Pest-Piers	Heptachlor	76-44-8	µg/kg	0.3	700	2.9	U	16	U	33	U	21	U
003-Pest-Piers	Heptachlor Epoxide	1024-57-3	µg/kg	2.47	300	2.9	U	16	U	33	U	21	U
003-Pest-Piers	Methoxychlor	72-43-5	µg/kg	29.6	5700000	29	U	160	U	330	U	210	U
003-Pest-Piers	Toxaphene	8001-35-2	µg/kg	536	3000	56	U	300	U	630	U	420	U
005-Aroclors-Piers	Aroclor 1016	12674-11-2	µg/kg	7	1000	140	U	160	U	270	U	180	U
005-Aroclors-Piers	Aroclor 1221	11104-28-2	µg/kg	23	1000	140	U	160	U	270	U	180	U
005-Aroclors-Piers	Aroclor 1232	11141-16-5	µg/kg	23	1000	140	U	160	U	270	U	180	U
005-Aroclors-Piers	Aroclor 1242	53469-21-9	µg/kg	23	1000	500		320		880		180	U
005-Aroclors-Piers	Aroclor 1248	12672-29-6	µg/kg	30	1000	140	U	160	U	270	U	180	U
005-Aroclors-Piers	Aroclor 1254	11097-69-1	µg/kg	60	1000	6000		2600	J	270	U	180	U
005-Aroclors-Piers	Aroclor 1260	11096-82-5	µg/kg	5	1000	3200		1400		1400		740	
005-Aroclors-Piers	Aroclor 1262	37324-23-5	µg/kg	23	1000	140	U	160	U	270	U	180	U
005-Aroclors-Piers	Aroclor 1268	11100-14-4	µg/kg	23	1000	140	U	160	U	270	U	180	U
005-Aroclors-Piers	Total Aroclors	TARO	µg/kg	23	1000	9700		4320		2280		740	
007-Dioxin/Furan-Pier	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	ng/kg										
007-Dioxin/Furan-Pier	2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	ng/kg										

Appendix H-1
Analytical Results for Sediment
Pierson's Creek Superfund Site
Newark, New Jersey

				Location	D16	D16	D2	D2	D2	D2	D3				
				Sample #	D16-SE-A	D16-SE-B	D2-SE-9A	D2-SE-A	D2-SE-E	D2-SE-F	D3-SE-A				
				Start Depth	0	0.5	0	0	3	4	0				
				End Depth	0.5	1	0.5	0.5	4	5	0.5				
				Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs				
				Sample Type	N	N	FD	N	N	N	N				
				Parent Sample #			D2-SE-A								
				Sample Date	12/12/2019	12/12/2019	8/5/2019	8/5/2019	8/5/2019	8/5/2019	8/6/2019				
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
007-Dioxin/Furan-Pier	2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	ng/kg												
007-Dioxin/Furan-Pier	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	ng/kg												
007-Dioxin/Furan-Pier	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	ng/kg	3.6	22										
007-Dioxin/Furan-Pier	Octachlorodibenzofuran	39001-02-0	ng/kg												
007-Dioxin/Furan-Pier	Octachlorodibenzo-p-dioxin	3268-87-9	ng/kg												
007-Dioxin/Furan-Pier	Total HxCDF	38998-75-3	ng/kg												
007-Dioxin/Furan-Pier	Total HpCDD	37871-00-4	ng/kg												
007-Dioxin/Furan-Pier	Total HxCDD	34465-46-8	ng/kg												
007-Dioxin/Furan-Pier	Total HxCDF	55684-94-1	ng/kg												
007-Dioxin/Furan-Pier	Total PeCDD	36088-22-9	ng/kg												
007-Dioxin/Furan-Pier	Total PeCDF	30402-15-4	ng/kg												
007-Dioxin/Furan-Pier	Total TCDD	41903-57-5	ng/kg												
007-Dioxin/Furan-Pier	Total TCDF	55722-27-5	ng/kg												
007-Dioxin/Furan-Pier	2,3,7,8-TCDD TEQ	TEQ	ng/kg	3.6	22										
011-Inorganics-Piers	Aluminum	7429-90-5	mg/kg	18000	3900	11200		13600		27700		19400		36200	10700
011-Inorganics-Piers	Antimony	7440-36-0	mg/kg	9.3	450	1.39 J		1.25 J		2.7		1.61		23	21.4
011-Inorganics-Piers	Arsenic	7440-38-2	mg/kg	8.2	19	578		638		157 J		45.4 J		1760	704
011-Inorganics-Piers	Barium	7440-39-3	mg/kg	48	59000	192		232		236		156		955	4550
011-Inorganics-Piers	Beryllium	7440-41-7	mg/kg	2300	140	0.669		0.789		1.44		0.981		1.32	0.55
011-Inorganics-Piers	Cadmium	7440-43-9	mg/kg	1.2	78	18.7		20.4		6.47		3.8		72.4	311
011-Inorganics-Piers	Calcium	7440-70-2	mg/kg			16600		21400		20200		13900		28200	41500
011-Inorganics-Piers	Chromium	7440-47-3	mg/kg	81	3600000	76.6		88.9		159		111		351	665
011-Inorganics-Piers	Cobalt	7440-48-4	mg/kg	10	590	26		22.9		83.5		53		101	210
011-Inorganics-Piers	Copper	7440-50-8	mg/kg	34	45000	320		273		1050		407		1550	3890
011-Inorganics-Piers	Cyanide	57-12-5	mg/kg	150	680	1.5 U		2.3 U		3.8 U		3.7 U		32	10 J
011-Inorganics-Piers	Iron	7439-89-6	mg/kg	820000	820000	25900		29100		62000		39600		63200	28400
011-Inorganics-Piers	Lead	7439-92-1	mg/kg	47	800	594 J		405 J		1500		918		4200	31600
011-Inorganics-Piers	Magnesium	7439-95-4	mg/kg			6120		8040		12900		8220		8350	4810
011-Inorganics-Piers	Manganese	7439-96-5	mg/kg	260	5900	301		356		520		339		763	847
011-Inorganics-Piers	Mercury	7439-97-6	mg/kg	0.15	65	556 J		477 J		1690		681		4280	3560
011-Inorganics-Piers	Mercury	7439-97-6	ng/g	150	65000			521000		671000					55800
011-Inorganics-Piers	Methyl Mercury	22967-92-6	ng/g			69.4		93.1		186		110		6400	12500
011-Inorganics-Piers	Nickel	7440-02-0	mg/kg	21	23000	94.1 J		61.3 J		314		130		153	137
011-Inorganics-Piers	Potassium	7440-09-7	mg/kg			1140		1650		2430		1760		2640	901
011-Inorganics-Piers	Selenium	7782-49-2	mg/kg	1	5700	0.733 J		0.733		1.42		0.811 J		4.5	2.1
011-Inorganics-Piers	Silver	7440-22-4	mg/kg	1	5700	17.5 J		5.8 J		17		10.5		105	116
011-Inorganics-Piers	Sodium	7440-23-5	mg/kg			1860		1930		1720		1090		2480	846
011-Inorganics-Piers	Thallium	7440-28-0	mg/kg	12	3	0.14 J		0.199		0.316		0.22		0.569	0.328
011-Inorganics-Piers	Vanadium	7440-62-2	mg/kg	57	1100	46.1		58.1		123		83.9		120	66.8
011-Inorganics-Piers	Zinc	7440-66-6	mg/kg	150	110000	876		697		2840		1620		3320	4210
014-General Chemistr	Total Organic Carbon	TOC	µg/g			64000		62000		120000		56000		150000	150000

Appendix H-1
Analytical Results for Sediment
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						Location	D16	D16	D2	D2	D2	D2	D3		
						Sample #	D16-SE-A	D16-SE-B	D2-SE-9A	D2-SE-A	D2-SE-E	D2-SE-F	D3-SE-A		
						Start Depth	0	0.5	0	0	3	4	0		
						End Depth	0.5	1	0.5	0.5	4	5	0.5		
						Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs		
						Sample Type	N	N	FD	N	N	N	N		
						Parent Sample #			D2-SE-A						
						Sample Date	12/12/2019	12/12/2019	8/5/2019	8/5/2019	8/5/2019	8/5/2019	8/6/2019		
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
014-General Chemistr	TOTAL SOLIDS	TSOLIDS	%			55.9		52.1		31		47		26	
						56		52		31		47		26	
015-Grain Size-Piers	% COARSE SAND >.5 - 1 MM	COARSE SAND	%									0		0	
015-Grain Size-Piers	% Coarse Sand >0.5 - 1.0 mm	%COARSE SAND	%												
015-Grain Size-Piers	% Fine Sand >.125 - .25 mm	%FINE SAND	%												
015-Grain Size-Piers	% Medium Sand >.25 - .5 mm	%MEDIUM SAND	%												
015-Grain Size-Piers	% MEDIUM SAND >.25 - .5 MM	MEDIUM SAND	%												
015-Grain Size-Piers	0	HYD01	% Passing									3.25		13.76	
015-Grain Size-Piers	0	HYD02	% Passing									14.83		12.44	
015-Grain Size-Piers	0	HYD03	% Passing									13.24		10.01	
015-Grain Size-Piers	0	HYD04	% Passing									10.86		9.2	
015-Grain Size-Piers	0	HYD05	% Passing									9.03		8.14	
015-Grain Size-Piers	0	HYD06	% Passing									11.27			
015-Grain Size-Piers	0	HYD07	% Passing									7.99		7.34	
015-Grain Size-Piers	0	HYD08	% Passing									5.37		4.66	
015-Grain Size-Piers	0	HYD09	% Passing									7.65		2.48	
015-Grain Size-Piers	0.75 INCH SIEVE	SIEVE0.75IN	% Passing									4.02			
015-Grain Size-Piers	1.5 INCH SIEVE	SIEVE1.5IN	% Passing									100		100	
015-Grain Size-Piers	3 INCH SIEVE	SIEVE3IN	% Passing									100		100	
015-Grain Size-Piers	Clay	%CLAY	%									100		100	
015-Grain Size-Piers	GRAVEL	Gravel	%									6.82		5.69	
015-Grain Size-Piers	HYDROMETER, READING 1	HYD1-PARTICLE	um									0		0	
015-Grain Size-Piers	HYDROMETER, READING 2	HYD2-PARTICLE	um									35.15		35.77	
015-Grain Size-Piers	HYDROMETER, READING 3	HYD3-PARTICLE	um									34.88		23.04	
015-Grain Size-Piers	HYDROMETER, READING 4	HYD4-PARTICLE	um									20.29		13.3	
015-Grain Size-Piers	HYDROMETER, READING 5	HYD5-PARTICLE	um									12.71			

Appendix H-1
Analytical Results for Sediment
Pierson's Creek Superfund Site
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					Location Sample #	D16 D16-SE-A		D16 D16-SE-B		D2 D2-SE-9A		D2 D2-SE-A		D2 D2-SE-E		D2 D2-SE-F		D3 D3-SE-A	
					Start Depth	0		0.5		0		0		3		4		0	
					End Depth	0.5		1		0.5		0.5		4		5		0.5	
					Depth Unit	ft bgs		ft bgs		ft bgs		ft bgs		ft bgs		ft bgs		ft bgs	
					Sample Type	N		N		FD		N		N		N		N	
					Parent Sample #					D2-SE-A									
					Sample Date	12/12/2019		12/12/2019		8/5/2019		8/5/2019		8/5/2019		8/5/2019		8/6/2019	
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
015-Grain Size-Piers	HYDROMETER, READING 4	HYD4-PARTICLE	um											9.41		9.34		9.57	
015-Grain Size-Piers	HYDROMETER, READING 5	HYD5-PARTICLE	um											6.82		6.64		6.76	
015-Grain Size-Piers	HYDROMETER, READING 6	HYD6-PARTICLE	um											3.43		3.4		3.46	
015-Grain Size-Piers	HYDROMETER, READING 7	HYD7-PARTICLE	um											1.41		1.39		1.42	
015-Grain Size-Piers	Percent Passing Sieve#10	SIEVE10	% Passing											100		98.04		100	
015-Grain Size-Piers	Percent Passing Sieve#20	SIEVE20	% Passing											98.82		93.89		95.28	
015-Grain Size-Piers	Percent Passing Sieve#40	SIEVE40	% Passing											96.75		86.46		86.24	
015-Grain Size-Piers	Percent Passing Sieve#60	SIEVE60	% Passing											93.8		80.79		77.98	
015-Grain Size-Piers	Sand Fine	FINE SAND	%											16.55		13.97		29.48	
015-Grain Size-Piers	Sieve 0.25 inch, % passing	SIEVE0.25IN	% Passing											100		99.13		100	
015-Grain Size-Piers	SIEVE 1 inch, Percent Finer	SIEVE1INCH	% Passing											100		100		100	
015-Grain Size-Piers	SIEVE 2 inch, Percent Finer	SIEVE2INCH	% Passing											100		100		100	
015-Grain Size-Piers	SIEVE NO. 80, PERCENT PASSING	SIEVE80	% Passing											90.84		76.86		72.09	
015-Grain Size-Piers	SIEVE, 0.15 mm, PERCENT PASSING	SIEVEUS100	% Passing											88.48		74.68		68.55	
015-Grain Size-Piers	SIEVE, 4.75 mm, PERCENT PASSING	SIEVEUS4	% Passing											100		99.13		100	
015-Grain Size-Piers	Sieve-U.S. Std. No. 200 (0.075 mm)	SIEVEUS200	% Passing											80.2		72.49		56.76	
015-Grain Size-Piers	Silt	%SILT	%																
015-Grain Size-Piers	SILT	445	%											73.38		63.67		51.07	
017-MerSpec-Piers	MINERAL-BOUND HG	M-G-HG	ng/g							472000		470000						8840	
017-MerSpec-Piers	ORGANO-COMPLEXED HG	OG-C-HG	ng/g							8210 J		13000						4110	
017-MerSpec-Piers	STRONGLY COMPLEXED AND ELEMENTAL HG	S-B-HG	ng/g							322000		455000						48900	
017-MerSpec-Piers	VOLATILE HG	V-E-HG	ng/g							160 U		107 U						190 U	
017-MerSpec-Piers	WATER SOLUBLE HG	W-S-HG	ng/g							8800		11800						1950	
017-MerSpec-Piers	WEAK ACID-SOLUBLE HG	SAS-HG	ng/g							8910 J		3840						223	

Notes:

- Results that are greater than the RI sediment screening criteria are bolded.
- Results that are greater than the RI soil screening criteria are highlighted yellow.

Acronyms:

FD - field duplicate
ft bgs - feet below ground surface
J - estimated
J+ - estimated, biased high
J- - estimated, biased low
J-EMPC - estimated maximum possible concentration
mg/kg - milligram per kilogram
N - normal
ng/g - nanogram per gram

ng/kg - nanogram per kilogram
Q - qualifier
R - rejected
RI - remedial investigation
U - nondetect
UJ - nondetect, estimated
µg/kg - microgram per kilogram

Appendix H-1
Analytical Results for Sediment
Pierson's Creek Superfund Site
Newark, New Jersey

						Location	D3	D3	D4	D4	D4	D4	D4
						Sample #	D3-SE-B	D3-SE-C	D4-SE-A	D4-SE-B	D4-SE-C	D4-SE-D	D4-SE-E
						Start Depth	0.5	1	0	0.5	1	2	3
						End Depth	1	2.5	0.5	1	2	3	4
						Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs
						Sample Type	N	N	N	N	N	N	N
						Parent Sample #							
						Sample Date	8/6/2019	8/6/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q
001-VOCs-Piers	1,1,1-Trichloroethane	71-55-6	µg/kg	856	200	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	202	3000	11	UJ	11	U	24	UJ	4.5	UJ
001-VOCs-Piers	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	µg/kg	28000000	28000000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	1,1,2-Trichloroethane	79-00-5	µg/kg	570	6000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	1,1-Dichloroethane	75-34-3	µg/kg	16000	24000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	1,1-Dichloroethene	75-35-4	µg/kg	2780	150000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	1,2,3-Trichlorobenzene	87-61-6	µg/kg	930000	930000	11	UJ	11	U	24	U	4.5	U
001-VOCs-Piers	1,2,4-Trichlorobenzene	120-82-1	µg/kg	4.8	820000	11	UJ	11	U	24	U	4.5	U
001-VOCs-Piers	1,2-Dibromo-3-chloropropane	96-12-8	µg/kg	64	200	11	UJ	11	U	24	U	4.5	U
001-VOCs-Piers	1,2-Dibromoethane	106-93-4	µg/kg	160	40	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	1,2-Dichlorobenzene	95-50-1	µg/kg	989	59000000	11	UJ	11	U	24	U	4.5	U
001-VOCs-Piers	1,2-Dichloroethane	107-06-2	µg/kg	2000	3000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	1,2-Dichloropropane	78-87-5	µg/kg	11000	5000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	1,3-Dichlorobenzene	541-73-1	µg/kg	842	59000000	11	UJ	11	U	14	J	26	U
001-VOCs-Piers	1,4-Dichlorobenzene	106-46-7	µg/kg	110	13000	11	UJ	11	U	14	J	34	U
001-VOCs-Piers	2-Butanone	78-93-3	µg/kg	190000000	44000000	55	U	55	U	220	U	45	U
001-VOCs-Piers	2-Hexanone	591-78-6	µg/kg	1300000	1300000	55	U	55	U	120	U	68	U
001-VOCs-Piers	4-Methyl-2-pentanone	108-10-1	µg/kg	140000000	140000000	55	U	55	U	120	U	68	U
001-VOCs-Piers	Acetone	67-64-1	µg/kg	670000000	12000	110	U	55	U	550	U	620	U
001-VOCs-Piers	Benzene	71-43-2	µg/kg	340	5000	3.1	J	11	U	24	U	4.5	U
001-VOCs-Piers	Bromochloromethane	74-97-5	µg/kg	630000	630000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	Bromodichloromethane	75-27-4	µg/kg	1300	3000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	Bromoform	75-25-2	µg/kg	1310	280000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	Bromomethane	74-83-9	µg/kg	30000	59000	22	U	22	U	47	U	27	U
001-VOCs-Piers	Carbon Disulfide	75-15-0	µg/kg	3500000	110000000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	Carbon Tetrachloride	56-23-5	µg/kg	7240	4000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	Chlorobenzene	108-90-7	µg/kg	162	7400000	11	U	11	U	11	J	29	U
001-VOCs-Piers	Chloroethane	75-00-3	µg/kg	57000000	1100000	22	U	22	U	47	U	27	U
001-VOCs-Piers	Chloroform	67-66-3	µg/kg	1400	2000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	Chloromethane	74-87-3	µg/kg	460000	12000	22	U	22	U	47	U	27	U
001-VOCs-Piers	cis-1,2-Dichloroethene	156-59-2	µg/kg	2300000	560000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	cis-1,3-Dichloropropene	10061-01-5	µg/kg	7.31	7000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	Cyclohexane	110-82-7	µg/kg	27000000	27000000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	Dibromochloromethane	124-48-1	µg/kg	39000	8000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	Dichlorodifluoromethane	75-71-8	µg/kg	370000	230000000	22	U	22	U	47	U	27	U
001-VOCs-Piers	Ethylbenzene	100-41-4	µg/kg	1400	110000000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	Isopropylbenzene	98-82-8	µg/kg	9900000	9900000	11	UJ	11	U	24	UJ	4.5	UJ
001-VOCs-Piers	M,P-XYLENE (SUM OF ISOMERS)	XYLMP	µg/kg	120	170000000	22	U	22	U	47	U	27	U
001-VOCs-Piers	Methyl acetate	79-20-9	µg/kg	1200000000	14000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	Methyl tert-Butyl Ether	1634-04-4	µg/kg	210000	320000	11	U	11	U	24	U	4.5	U
001-VOCs-Piers	Methylcyclohexane	108-87-2	µg/kg			11	U	11	U	24	U	4.5	U

Appendix H-1
Analytical Results for Sediment
Pierson's Creek Superfund Site
Newark, New Jersey

						Location Sample #	D3 D3-SE-B	D3 D3-SE-C	D4 D4-SE-A	D4 D4-SE-B	D4 D4-SE-C	D4 D4-SE-D	D4 D4-SE-E
						Start Depth	0.5	1	0	0.5	1	2	3
						End Depth	1	2.5	0.5	1	2	3	4
						Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs
						Sample Type	N	N	N	N	N	N	N
						Parent Sample #							
						Sample Date	8/6/2019	8/6/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q
001-VOCs-Piers	Methylene Chloride	75-09-2	µg/kg	1000000	230000	55	U	55	U	120	UJ	68	UJ
001-VOCs-Piers	o-Xylene	95-47-6	µg/kg	120	170000000	11	U	11	U	24	U	14	U
001-VOCs-Piers	Styrene	100-42-5	µg/kg	7070	260000	11	U	11	U	24	U	14	U
001-VOCs-Piers	Tetrachloroethene	127-18-4	µg/kg	450	1500000	11	U	11	U	24	UJ	14	UJ
001-VOCs-Piers	Toluene	108-88-3	µg/kg	2500	91000000	32		11	U	24	U	14	J
001-VOCs-Piers	TOTAL XYLENES	133-02-07	µg/kg										
001-VOCs-Piers	trans-1,2-Dichloroethene	156-60-5	µg/kg	23000000	720000	11	U	11	U	24	U	14	U
001-VOCs-Piers	trans-1,3-Dichloropropene	10061-02-6	µg/kg	7.31	7000	11	U	11	U	24	U	14	U
001-VOCs-Piers	Trichloroethene	79-01-6	µg/kg	1600	10000	11	U	11	U	24	U	14	U
001-VOCs-Piers	Trichlorofluoromethane	75-69-4	µg/kg	350000000	340000000	22	U	22	U	47	U	27	U
001-VOCs-Piers	Vinyl Chloride	75-01-4	µg/kg	1700	2000	22	U	22	U	47	U	27	U
001-VOCs-Piers	Xylenes (TOTAL)	1330-20-7	µg/kg			33	U	33	U	70	U	40	U
002-SVOCs-Piers	1,1'-Biphenyl	92-52-4	µg/kg	200000	240000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	1,2,4,5-Tetrachlorobenzene	95-94-3	µg/kg	47000	350000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	1,4-Dioxane	123-91-1	µg/kg	24000	24000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	2,2'-Oxybis(1-chloropropane)	108-60-1	µg/kg	47000000	67000	650	UJ	710	UJ	1300	UJ	1100	UJ
002-SVOCs-Piers	2,3,4,6-Tetrachlorophenol	58-90-2	µg/kg	25000000	25000000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	2,4,5-Trichlorophenol	95-95-4	µg/kg	3	68000000	1600	U	1800	U	3300	U	2800	U
002-SVOCs-Piers	2,4,6-Trichlorophenol	88-06-2	µg/kg	6	74000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	2,4-Dichlorophenol	120-83-2	µg/kg	5	2100000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	2,4-Dimethylphenol	105-67-9	µg/kg	16000000	14000000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	2,4-Dinitrophenol	51-28-5	µg/kg	1600000	1400000	1600	U	1800	U	3300	U	2800	U
002-SVOCs-Piers	2,4-Dinitrotoluene	121-14-2	µg/kg	7400	3000	210	J	710	U	1300	U	1100	U
002-SVOCs-Piers	2,6-Dinitrotoluene	606-20-2	µg/kg	1500	3000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	2-Chloronaphthalene	91-58-7	µg/kg	60000000	60000000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	2-Chlorophenol	95-57-8	µg/kg	8	2200000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	2-Methylnaphthalene	91-57-6	µg/kg	70	2400000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	2-Methylphenol	95-48-7	µg/kg	41000000	3400000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	2-Nitroaniline	88-74-4	µg/kg	8000000	23000000	1600	U	1800	U	3300	U	2800	U
002-SVOCs-Piers	2-Nitrophenol	88-75-5	µg/kg	1600	1600	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	3,3'-Dichlorobenzidine	91-94-1	µg/kg	2060	4000	650	UJ	710	UJ	1300	U	1100	U
002-SVOCs-Piers	3-Nitroaniline	99-09-2	µg/kg		3160	1600	U	1800	U	3300	U	2800	U
002-SVOCs-Piers	4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	66000	68000	1600	U	1800	U	3300	U	2800	U
002-SVOCs-Piers	4-Bromophenyl-phenylether	101-55-3	µg/kg			650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	4-Chloro-3-methylphenol	59-50-7	µg/kg	82000000	82000000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	4-Chloroaniline	106-47-8	µg/kg	11000	11000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	4-Chlorophenyl-phenylether	7005-72-3	µg/kg			650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	4-Nitroaniline	100-01-6	µg/kg	110000	110000	1600	U	1800	U	3300	U	2800	U
002-SVOCs-Piers	4-Nitrophenol	100-02-7	µg/kg		5120	1600	U	1800	U	3300	U	2800	U
002-SVOCs-Piers	Acenaphthene	83-32-9	µg/kg	16	37000000	160	J	220	J	1300	U	1100	U
002-SVOCs-Piers	Acenaphthylene	208-96-8	µg/kg	44	300000000	650	U	710	U	1300	U	1100	U

Appendix H-1
Analytical Results for Sediment
Pierson's Creek Superfund Site
Newark, New Jersey

						Location Sample #	D3 D3-SE-B	D3 D3-SE-C	D4 D4-SE-A	D4 D4-SE-B	D4 D4-SE-C	D4 D4-SE-D	D4 D4-SE-E
						Start Depth	0.5	1	0	0.5	1	2	3
						End Depth	1	2.5	0.5	1	2	3	4
						Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs
						Sample Type	N	N	N	N	N	N	N
						Parent Sample #							
						Sample Date	8/6/2019	8/6/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q
002-SVOCs-Piers	Acetophenone	98-86-2	µg/kg	120000000	5000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Anthracene	120-12-7	µg/kg	85	300000000	450	J	500	J	1300	U	1100	U
002-SVOCs-Piers	Atrazine	1912-24-9	µg/kg	10000	2400000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Benzaldehyde	100-52-7	µg/kg	820000	68000000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Benzo(a)anthracene	56-55-3	µg/kg	261	17000	3500	J	3000	J	640	J	1200	J
002-SVOCs-Piers	Benzo(a)pyrene	50-32-8	µg/kg	430	2000	5200	J	3800	J	780	J	1400	J
002-SVOCs-Piers	Benzo(b)fluoranthene	205-99-2	µg/kg	1800	17000	9600	J	6200	J	1000	J	2000	J
002-SVOCs-Piers	Benzo(g,h,i)perylene	191-24-2	µg/kg	170	30000000	4800	J	3100	J	590	J	1000	J
002-SVOCs-Piers	Benzo(k)fluoranthene	207-08-9	µg/kg	240	170000	3200	J	2300	J	440	J	820	J
002-SVOCs-Piers	Bis(2-chloroethoxy)methane	111-91-1	µg/kg	2500000	2500000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Bis(2-chloroethyl)ether	111-44-4	µg/kg	1000	2000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	182.16	140000	3900	J	6400	J	880	J	1100	J
002-SVOCs-Piers	Butylbenzylphthalate	85-68-7	µg/kg	63	14000000	700	J	1400	J	1300	U	1100	U
002-SVOCs-Piers	Caprolactam	105-60-2	µg/kg	400000000	340000000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Carbazole	86-74-8	µg/kg		96000	440	J	400	J	1300	U	1100	U
002-SVOCs-Piers	Chrysene	218-01-9	µg/kg	384	1700000	6000	J	4200	J	910	J	1600	J
002-SVOCs-Piers	CRESOLS, M & P	MEPH1314	µg/kg			650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Dibenzo(a,h)anthracene	53-70-3	µg/kg	63	2000	1600	J	1000	J	1300	U	1100	U
002-SVOCs-Piers	Dibenzofuran	132-64-9	µg/kg	7300	1000000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Diethylphthalate	84-66-2	µg/kg	6	550000000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Dimethylphthalate	131-11-3	µg/kg		734000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Di-n-butylphthalate	84-74-2	µg/kg	110	68000000	210	J	710	U	1300	U	1100	U
002-SVOCs-Piers	Di-n-octylphthalate	117-84-0	µg/kg	8200000	27000000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Fluoranthene	206-44-0	µg/kg	600	24000000	5800	J	5300	J	1300	J	2500	J
002-SVOCs-Piers	Fluorene	86-73-7	µg/kg	19	24000000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Hexachlorobenzene	118-74-1	µg/kg	20	1000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Hexachlorobutadiene	87-68-3	µg/kg	1.3	25000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Hexachlorocyclopentadiene	77-47-4	µg/kg	139	110000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Hexachloroethane	67-72-1	µg/kg	73	48000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	200	17000	4100	J	3000	J	750	J	1300	J
002-SVOCs-Piers	Isophorone	78-59-1	µg/kg	2400000	2000000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Naphthalene	91-20-3	µg/kg	160	17000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Nitrobenzene	98-95-3	µg/kg	22000	14000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	N-Nitroso-di-n-propylamine	621-64-7	µg/kg	330	300	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	N-Nitrosodiphenylamine	86-30-6	µg/kg	422000	390000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Pentachlorophenol	87-86-5	µg/kg	17	3000	1600	U	1800	U	3300	U	2800	U
002-SVOCs-Piers	Phenanthrene	85-01-8	µg/kg	240	45700	2800	J	2900	J	400	J	630	J
002-SVOCs-Piers	Phenol	108-95-2	µg/kg	130	210000000	650	U	710	U	1300	U	1100	U
002-SVOCs-Piers	Pyrene	129-00-0	µg/kg	665	18000000	9000	J	7700	J	1100	J	2100	J
003-Pest-Piers	4,4'-DDD	72-54-8	µg/kg	2	13000	97	J	200	J	74	J	110	J
003-Pest-Piers	4,4'-DDE	72-55-9	µg/kg	2.2	9000	17	J	53	J	55	J	83	J

Appendix H-1
Analytical Results for Sediment
Pierson's Creek Superfund Site
Newark, New Jersey

						Location	D3	D3	D4	D4	D4	D4	D4
						Sample #	D3-SE-B	D3-SE-C	D4-SE-A	D4-SE-B	D4-SE-C	D4-SE-D	D4-SE-E
						Start Depth	0.5	1	0	0.5	1	2	3
						End Depth	1	2.5	0.5	1	2	3	4
						Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs
						Sample Type	N	N	N	N	N	N	N
						Parent Sample #							
						Sample Date	8/6/2019	8/6/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q
003-Pest-Piers	4,4'-DDT	50-29-3	µg/kg	1	8000	120	J	240	J	27	U	33	J
003-Pest-Piers	Aldrin	309-00-2	µg/kg	2	200	20	U	160	J	14	U	6.8	U
003-Pest-Piers	alpha-BHC	319-84-6	µg/kg	1360	500	20	U	22	U	14	U	6.8	U
003-Pest-Piers	alpha-Chlordane	5103-71-9	µg/kg	3.24	1000000	47	J	230	J	14	U	6.8	U
003-Pest-Piers	beta-BHC	319-85-7	µg/kg	1300	2000	20	U	22	U	14	U	6.8	U
003-Pest-Piers	delta-BHC	319-86-8	µg/kg	1300	1300	62	J	22	U	14	U	30	J
003-Pest-Piers	Dieldrin	60-57-1	µg/kg	1.9	200	69	J	180	J	27	U	13	U
003-Pest-Piers	Endosulfan I	959-98-8	µg/kg	7000000	6800000	20	U	22	U	14	U	6.8	U
003-Pest-Piers	Endosulfan II	33213-65-9	µg/kg	7000000	6800000	39	U	43	U	27	U	13	U
003-Pest-Piers	Endosulfan Sulfate	1031-07-8	µg/kg	0.357	6800000	35	J	43	U	27	U	13	U
003-Pest-Piers	Endrin	72-20-8	µg/kg	2.22	340000	39	U	43	U	27	U	13	U
003-Pest-Piers	Endrin aldehyde	7421-93-4	µg/kg		1620	39	U	43	U	27	U	13	U
003-Pest-Piers	Endrin Ketone	53494-70-5	µg/kg		1620	39	U	43	U	27	U	13	U
003-Pest-Piers	gamma-BHC (Lindane)	58-89-9	µg/kg	0.32	2000	14	J	22	U	14	U	6.8	U
003-Pest-Piers	gamma-Chlordane	5103-74-2	µg/kg	3.24	1000000	63	J	300	J	14	U	6.8	U
003-Pest-Piers	Heptachlor	76-44-8	µg/kg	0.3	700	20	U	22	U	14	U	6.8	U
003-Pest-Piers	Heptachlor Epoxide	1024-57-3	µg/kg	2.47	300	20	U	22	U	14	U	6.8	U
003-Pest-Piers	Methoxychlor	72-43-5	µg/kg	29.6	5700000	200	U	220	U	140	U	110	U
003-Pest-Piers	Toxaphene	8001-35-2	µg/kg	536	3000	390	U	430	U	270	U	130	U
005-Aroclors-Piers	Aroclor 1016	12674-11-2	µg/kg	7	1000	330	U	360	U	69	U	56	U
005-Aroclors-Piers	Aroclor 1221	11104-28-2	µg/kg	23	1000	330	U	360	U	69	U	56	U
005-Aroclors-Piers	Aroclor 1232	11141-16-5	µg/kg	23	1000	330	U	360	U	69	U	56	U
005-Aroclors-Piers	Aroclor 1242	53469-21-9	µg/kg	23	1000	3200	J	12000	J	69	U	56	U
005-Aroclors-Piers	Aroclor 1248	12672-29-6	µg/kg	30	1000	330	U	360	U	920	J	2300	J
005-Aroclors-Piers	Aroclor 1254	11097-69-1	µg/kg	60	1000	330	U	360	U	69	U	56	U
005-Aroclors-Piers	Aroclor 1260	11096-82-5	µg/kg	5	1000	1100	J	1300	J	320	J	610	J
005-Aroclors-Piers	Aroclor 1262	37324-23-5	µg/kg	23	1000	330	U	360	U	69	U	56	U
005-Aroclors-Piers	Aroclor 1268	11100-14-4	µg/kg	23	1000	330	U	360	U	69	U	56	U
005-Aroclors-Piers	Total Aroclors	TARO	µg/kg	23	1000	4300	J	13300	J	1240	J	2910	J
007-Dioxin/Furan-Pier	1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	ng/kg										
007-Dioxin/Furan-Pier	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	ng/kg										
007-Dioxin/Furan-Pier	2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	ng/kg										

Appendix H-1
Analytical Results for Sediment
Pierson's Creek Superfund Site
Newark, New Jersey

					Location	D3		D3		D4		D4		D4		D4		D4	
					Sample #	D3-SE-B		D3-SE-C		D4-SE-A		D4-SE-B		D4-SE-C		D4-SE-D		D4-SE-E	
					Start Depth	0.5		1		0		0.5		1		2		3	
					End Depth	1		2.5		0.5		1		2		3		4	
					Depth Unit	ft bgs		ft bgs		ft bgs		ft bgs		ft bgs		ft bgs		ft bgs	
					Sample Type	N		N		N		N		N		N		N	
					Parent Sample #														
					Sample Date	8/6/2019		8/6/2019		7/18/2019		7/18/2019		7/18/2019		7/18/2019		7/18/2019	
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
007-Dioxin/Furan-Pier	2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	ng/kg																
007-Dioxin/Furan-Pier	2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	ng/kg																
007-Dioxin/Furan-Pier	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	ng/kg	3.6	22														
007-Dioxin/Furan-Pier	Octachlorodibenzofuran	39001-02-0	ng/kg																
007-Dioxin/Furan-Pier	Octachlorodibenzo-p-dioxin	3268-87-9	ng/kg																
007-Dioxin/Furan-Pier	Total HxCDF	38998-75-3	ng/kg																
007-Dioxin/Furan-Pier	Total HpCDD	37871-00-4	ng/kg																
007-Dioxin/Furan-Pier	Total HxCDD	34465-46-8	ng/kg																
007-Dioxin/Furan-Pier	Total HxCDF	55684-94-1	ng/kg																
007-Dioxin/Furan-Pier	Total PeCDD	36088-22-9	ng/kg																
007-Dioxin/Furan-Pier	Total PeCDF	30402-15-4	ng/kg																
007-Dioxin/Furan-Pier	Total TCDD	41903-57-5	ng/kg																
007-Dioxin/Furan-Pier	Total TCDF	55722-27-5	ng/kg																
007-Dioxin/Furan-Pier	2,3,7,8-TCDD TEQ	TEQ	ng/kg	3.6	22														
011-Inorganics-Piers	Aluminum	7429-90-5	mg/kg	18000	3900	18700		21400		15100		21800		17900		24900		7730	
011-Inorganics-Piers	Antimony	7440-36-0	mg/kg	9.3	450	17.7		21.6		4.73 J		5.3 J		2.74 J		6.93 J		0.68 J	
011-Inorganics-Piers	Arsenic	7440-38-2	mg/kg	8.2	19	507		623		18.7		24.8		13		23.6		8.22	
011-Inorganics-Piers	Barium	7440-39-3	mg/kg	48	59000	402		509		1210		1560		752		1440		207	
011-Inorganics-Piers	Beryllium	7440-41-7	mg/kg	2300	140	0.862		0.919		0.59		0.621		0.634		0.608		0.549	
011-Inorganics-Piers	Cadmium	7440-43-9	mg/kg	1.2	78	9.68		32.5		6.15		10.8		5.17		13.9		0.685	
011-Inorganics-Piers	Calcium	7440-70-2	mg/kg			14100		13600		9750		22800		14600		19800		11200	
011-Inorganics-Piers	Chromium	7440-47-3	mg/kg	81	3600000	110		201		52.8		81.1		53.4		252		41.1	
011-Inorganics-Piers	Cobalt	7440-48-4	mg/kg	10	590	35.4		49.1		13.3		18.7		12.6		36.6		7.97	
011-Inorganics-Piers	Copper	7440-50-8	mg/kg	34	45000	503		1020		505 J		1260 J		769 J		2380 J		99.6 J	
011-Inorganics-Piers	Cyanide	57-12-5	mg/kg	150	680	4.4		4.4		17 U		14 U		1.7 J		19		2 U	
011-Inorganics-Piers	Iron	7439-89-6	mg/kg	820000	820000	49700		51100		107000 J		235000 J		107000 J		120000 J		40600 J	
011-Inorganics-Piers	Lead	7439-92-1	mg/kg	47	800	863		2520		414		637		342		792		115	
011-Inorganics-Piers	Magnesium	7439-95-4	mg/kg			9110		7980		5340		4870		3510		2510		4800	
011-Inorganics-Piers	Manganese	7439-96-5	mg/kg	260	5900	1050		850		345 J		731 J		411 J		993 J		678 J	
011-Inorganics-Piers	Mercury	7439-97-6	mg/kg	0.15	65	154		7710		0.775 J		0.536 J		0.285 J		57.8 J		1.22 J	
011-Inorganics-Piers	Mercury	7439-97-6	ng/g	150	65000	134000		4050		977									
011-Inorganics-Piers	Methyl Mercury	22967-92-6	ng/g			14.3		72.5		5.13		5.53		2.83		27.4		0.826	
011-Inorganics-Piers	Nickel	7440-02-0	mg/kg	21	23000	198		267		272 J		668 J		433 J		1830 J		70.1 J	
011-Inorganics-Piers	Potassium	7440-09-7	mg/kg			2420		1960		1730 J		1360 J		1150 J		1130 J		1520 J	
011-Inorganics-Piers	Selenium	7782-49-2	mg/kg	1	5700	1.44		3.04		4.79		8.73		4.58		7.86		0.625	
011-Inorganics-Piers	Silver	7440-22-4	mg/kg	1	5700	9.28		111		420 J		1220 J		757 J		1140 J		37.2 J	
011-Inorganics-Piers	Sodium	7440-23-5	mg/kg			1720		1170		661		726		349		264		181	
011-Inorganics-Piers	Thallium	7440-28-0	mg/kg	12	3	0.213		0.237		0.21 J		0.24 J		0.164		0.18 J		0.106	
011-Inorganics-Piers	Vanadium	7440-62-2	mg/kg	57	1100	91.2		102		46.3		57.1		36.3		58.1		22.9	
011-Inorganics-Piers	Zinc	7440-66-6	mg/kg	150	110000	2540		3820		927 J		1220 J		550 J		1170 J		142 J	
014-General Chemistr	Total Organic Carbon	TOC	µg/g			130000		140000		67000		92000		44000		120000		17000	

**Appendix H-1
Analytical Results for Sediment
Pierson's Creek Superfund Site
Newark, New Jersey**

						Location	D3	D3	D4	D4	D4	D4	D4	D4	
						Sample #	D3-SE-B	D3-SE-C	D4-SE-A	D4-SE-B	D4-SE-C	D4-SE-D	D4-SE-E		
						Start Depth	0.5	1	0	0.5	1	2	3		
						End Depth	1	2.5	0.5	1	2	3	4		
						Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs		
						Sample Type	N	N	N	N	N	N	N		
						Parent Sample #									
						Sample Date	8/6/2019	8/6/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019		
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
014-General Chemistr	TOTAL SOLIDS	TSOLIDS	%			50		46		24		49		39	
						50		46		24		49		39	
						50				24		29		67	
015-Grain Size-Piers	% COARSE SAND >.5 - 1 MM	COARSE SAND	%			0		0							
015-Grain Size-Piers	% Coarse Sand >0.5 - 1.0 mm	%COARSE SAND	%							2.66		6.07		2.62	
015-Grain Size-Piers	% Fine Sand >.125 - .25 mm	%FINE SAND	%							23.49		25.35		21.87	
015-Grain Size-Piers	% Medium Sand >.25 - .5 mm	%MEDIUM SAND	%							10.2		11.07		15.09	
015-Grain Size-Piers	% MEDIUM SAND >.25 - .5 MM	MEDIUM SAND	%			5.71		2.62							
015-Grain Size-Piers	0	HYD01	% Passing			12.27		19.67		14.56		17.86		14.31	
015-Grain Size-Piers	0	HYD02	% Passing			12.27		17.52		12.83		13.72		11.72	
015-Grain Size-Piers	0	HYD03	% Passing			10.67		14.31		8.51		7.63		8.26	
015-Grain Size-Piers	0	HYD04	% Passing			8.28		10.77		6.78		5.14		6.23	
015-Grain Size-Piers	0	HYD05	% Passing			7.23		9.7		4.19		3.19		5.37	
015-Grain Size-Piers	0	HYD06	% Passing			5.39		131.43		2.16		1.24		2.16	
015-Grain Size-Piers	0	HYD07	% Passing			3.24		2.95		0.99		0.95		2.47	
015-Grain Size-Piers	0.75 INCH SIEVE	SIEVE0.75IN	% Passing			100		100		100		100		100	
015-Grain Size-Piers	1.5 INCH SIEVE	SIEVE1.5IN	% Passing			100		100		100		100		100	
015-Grain Size-Piers	3 INCH SIEVE	SIEVE3IN	% Passing			100		100		100		100		100	
015-Grain Size-Piers	Clay	%CLAY	%			6.42		37.92		3.77		2.43		4.25	
015-Grain Size-Piers	GRAVEL	Gravel	%			0		0		2.66		6.07		0.66	
015-Grain Size-Piers	HYDROMETER, READING 1	HYD1-PARTICLE	um			35.77		35.37		34.93		27.63		34.5	
015-Grain Size-Piers	HYDROMETER, READING 2	HYD2-PARTICLE	um			22.62		22.62		22.35		21.82		22.31	
015-Grain Size-Piers	HYDROMETER, READING 3	HYD3-PARTICLE	um			13.21		13.21		13.14		13.66		12.32	

Appendix H-1
Analytical Results for Sediment
Pierson's Creek Superfund Site
Newark, New Jersey

					Location	D3	D3	D4	D4	D4	D4	D4	
					Sample #	D3-SE-B	D3-SE-C	D4-SE-A	D4-SE-B	D4-SE-C	D4-SE-D	D4-SE-E	
					Start Depth	0.5	1	0	0.5	1	2	3	
					End Depth	1	2.5	0.5	1	2	3	4	
					Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	
					Sample Type	N	N	N	N	N	N	N	
					Parent Sample #								
					Sample Date	8/6/2019	8/6/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	7/18/2019	
Method Group	Analyte	CAS #	Units	RI Sediment Screening Criteria	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q
015-Grain Size-Piers	HYDROMETER, READING 4	HYD4-PARTICLE	um			9.51		9.57		9.39		9.4	
015-Grain Size-Piers	HYDROMETER, READING 5	HYD5-PARTICLE	um			6.76		6.76		6.76		6.65	
015-Grain Size-Piers	HYDROMETER, READING 6	HYD6-PARTICLE	um			3.43		2.25		3.43		3.43	
015-Grain Size-Piers	HYDROMETER, READING 7	HYD7-PARTICLE	um			1.42		1.43		1.41		1.39	
015-Grain Size-Piers	Percent Passing Sieve#10	SIEVE10	% Passing			100		100		94.68		87.86	
015-Grain Size-Piers	Percent Passing Sieve#20	SIEVE20	% Passing			98.03		99.42		91.58		84.29	
015-Grain Size-Piers	Percent Passing Sieve#40	SIEVE40	% Passing			94.29		97.38		84.48		76.79	
015-Grain Size-Piers	Percent Passing Sieve#60	SIEVE60	% Passing			90.75		95.06		76.06		67.15	
015-Grain Size-Piers	Sand Fine	FINE SAND	%			12.59		11.34					
015-Grain Size-Piers	Sieve 0.25 inch, % passing	SIEVE0.25IN	% Passing			100		100		100		95.72	
015-Grain Size-Piers	SIEVE 1 inch, Percent Finer	SIEVE1INCH	% Passing			100		100		100		100	
015-Grain Size-Piers	SIEVE 2 inch, Percent Finer	SIEVE2INCH	% Passing			100		100		100		100	
015-Grain Size-Piers	SIEVE NO. 80, PERCENT PASSING	SIEVE80	% Passing			88.39		93.31		71.63		62.16	
015-Grain Size-Piers	SIEVE, 0.15 mm, PERCENT PASSING	SIEVEUS100	% Passing			87.01		92.15		68.97		59.66	
015-Grain Size-Piers	SIEVE, 4.75 mm, PERCENT PASSING	SIEVEUS4	% Passing			100		100		97.34		93.93	
015-Grain Size-Piers	Sieve-U.S. Std. No. 200 (0.075 mm)	SIEVEUS200	% Passing			81.7		86.04		60.99		51.45	
015-Grain Size-Piers	%SILT	%	%							57.22		49.01	
015-Grain Size-Piers	SILT	445	%			75.28		48.12				55.51	
017-MerSpec-Piers	MINERAL-BOUND HG	M-G-HG	ng/g							312			
017-MerSpec-Piers	ORGANO-COMPLEXED HG	OG-C-HG	ng/g							157			
017-MerSpec-Piers	STRONGLY COMPLEXED AND ELEMENTAL HG	S-B-HG	ng/g							1520			
017-MerSpec-Piers	VOLATILE HG	V-E-HG	ng/g			99.5	U			210	U	180	U
017-MerSpec-Piers	WATER SOLUBLE HG	W-S-HG	ng/g							84.9			
017-MerSpec-Piers	WEAK ACID-SOLUBLE HG	SAS-HG	ng/g							38.2			

Notes:

- Results that are greater than the RI sediment screening criteria are bolded.
- Results that are greater than the RI soil screening criteria are highlighted yellow.

Acronyms:

FD - field duplicate
ft bgs - feet below ground surface
J - estimated
J+ - estimated, biased high
J- - estimated, biased low
J-EMPC - estimated maximum possible concentration
mg/kg - milligram per kilogram
N - normal
ng/g - nanogram per gram

ng/kg - nanogram per kilogram
Q - qualifier
R - rejected
RI - remedial investigation
U - nondetect
UJ - nondetect, estimated
µg/kg - microgram per kilogram

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

					Location Sample #	PC35 PC35(5-5.5)	PC36 PC36(0-0.5)	PC36 PC36(3-3.5)	PC36 PC36(5-5.5)	PC5V PC5V(2.5-3)	PC5V PC5V(5-5.5)	PC5V PC5V(7-7.5)	SO-01 SO-01-9B	
					Start Depth	5	0	3	5	2.5	5	7	0.5	
					End Depth	5.5	0.5	3.5	5.5	3	5.5	7.5	1.5	
					Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	
					Sample Type	N	N	N	N	N	N	N	FD	
					Parent Sample #								SO-01-B	
					Sample Date	2/22/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	8/7/2019	
Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
001-VOCs-Piers	1,1,1-Trichloroethane	71-55-6	µg/kg	200	7.4	U	6.6	U	7.2	UJ	15	U	5.9	U
001-VOCs-Piers	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	3000	7.4	U	6.6	U	6	U	15	U	5.9	U
001-VOCs-Piers	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	µg/kg	28000000	7.4	U	6.6	U	6	U	15	U	5.9	U
001-VOCs-Piers	1,1,2-Trichloroethane	79-00-5	µg/kg	6000	7.4	U	6.6	U	7.2	UJ	15	U	5.9	U
001-VOCs-Piers	1,1-Dichloroethane	75-34-3	µg/kg	24000	7.4	U	6.6	U	6	U	15	U	5.9	U
001-VOCs-Piers	1,1-Dichloroethene	75-35-4	µg/kg	150000	7.4	U	6.6	U	6	U	15	U	5.9	U
001-VOCs-Piers	1,2,3-Trichlorobenzene	87-61-6	µg/kg	930000	7.4	UJ	6.6	UJ	7.2	UJ	15	U	5.9	UJ
001-VOCs-Piers	1,2,4-Trichlorobenzene	120-82-1	µg/kg	820000	7.4	UJ	6.6	UJ	7.2	UJ	15	U	5.9	UJ
001-VOCs-Piers	1,2-Dibromo-3-chloropropane	96-12-8	µg/kg	200	7.4	UJ	6.6	UJ	7.2	UJ	15	U	5.9	UJ
001-VOCs-Piers	1,2-Dibromoethane	106-93-4	µg/kg	40	7.4	U	6.6	U	7.2	UJ	15	U	5.9	U
001-VOCs-Piers	1,2-Dichlorobenzene	95-50-1	µg/kg	59000000	7.4	UJ	6.6	UJ	7.2	UJ	15	U	5.9	UJ
001-VOCs-Piers	1,2-Dichloroethane	107-06-2	µg/kg	3000	7.4	U	6.6	U	6	U	15	U	5.9	U
001-VOCs-Piers	1,2-Dichloropropane	78-87-5	µg/kg	5000	7.4	U	6.6	U	7.2	UJ	15	U	5.9	U
001-VOCs-Piers	1,3-Dichlorobenzene	541-73-1	µg/kg	59000000	7.4	UJ	6.6	UJ	7.2	UJ	15	U	5.9	UJ
001-VOCs-Piers	1,4-Dichlorobenzene	106-46-7	µg/kg	13000	7.4	UJ	6.6	UJ	7.2	UJ	15	U	5.9	UJ
001-VOCs-Piers	2-Butanone	78-93-3	µg/kg	44000000	15	U	13	U	12	U	30	U	12	U
001-VOCs-Piers	2-Hexanone	591-78-6	µg/kg	1300000	15	U	13	U	14	UJ	30	U	12	U
001-VOCs-Piers	4-Methyl-2-pentanone	108-10-1	µg/kg	140000000	15	U	13	U	14	UJ	30	U	12	U
001-VOCs-Piers	Acetone	67-64-1	µg/kg	12000	15	U	13	U	12	U	30	U	12	U
001-VOCs-Piers	Benzene	71-43-2	µg/kg	5000	7.4	U	6.6	U	7.2	UJ	15	U	5.9	U
001-VOCs-Piers	Bromochloromethane	74-97-5	µg/kg	630000	7.4	U	6.6	U	6	U	15	U	5.9	U
001-VOCs-Piers	Bromodichloromethane	75-27-4	µg/kg	3000	7.4	U	6.6	U	7.2	UJ	15	U	5.9	U
001-VOCs-Piers	Bromoform	75-25-2	µg/kg	280000	7.4	UJ	6.6	UJ	7.2	UJ	15	U	5.9	UJ
001-VOCs-Piers	Bromomethane	74-83-9	µg/kg	59000	7.4	U	6.6	U	6	U	15	U	5.9	U
001-VOCs-Piers	Carbon Disulfide	75-15-0	µg/kg	110000000	7.4	U	6.6	U	6	U	15	UJ	5.9	U
001-VOCs-Piers	Carbon Tetrachloride	56-23-5	µg/kg	4000	7.4	U	6.6	U	7.2	UJ	15	U	5.9	U
001-VOCs-Piers	Chlorobenzene	108-90-7	µg/kg	7400000	7.4	U	6.6	U	7.2	UJ	15	U	5.9	U
001-VOCs-Piers	Chloroethane	75-00-3	µg/kg	1100000	7.4	U	6.6	U	6	U	15	U	5.9	U
001-VOCs-Piers	Chloroform	67-66-3	µg/kg	2000	7.4	U	6.6	U	6	U	15	U	5.9	U
001-VOCs-Piers	Chloromethane	74-87-3	µg/kg	12000	7.4	U	6.6	U	6	U	15	U	5.9	U
001-VOCs-Piers	cis-1,2-Dichloroethene	156-59-2	µg/kg	560000	7.4	U	6.6	U	6	U	15	U	5.9	U
001-VOCs-Piers	cis-1,3-Dichloropropene	10061-01-5	µg/kg	7000	7.4	U	6.6	U	7.2	UJ	15	U	5.9	U
001-VOCs-Piers	Cyclohexane	110-82-7	µg/kg	27000000	7.4	U	6.6	U	7.2	UJ	15	U	5.9	U
001-VOCs-Piers	Dibromochloromethane	124-48-1	µg/kg	8000	7.4	U	6.6	U	7.2	UJ	15	U	5.9	U
001-VOCs-Piers	Dichlorodifluoromethane	75-71-8	µg/kg	230000000	7.4	U	6.6	U	6	U	15	U	5.9	U
001-VOCs-Piers	Ethylbenzene	100-41-4	µg/kg	110000000	7.4	U	6.6	U	7.2	UJ	15	U	5.9	U
001-VOCs-Piers	Isopropylbenzene	98-82-8	µg/kg	9900000	7.4	U	6.6	U	7.2	UJ	15	U	5.9	U
001-VOCs-Piers	m,p-Xylene	179601-23-1	µg/kg	170000000	7.4	U	6.6	U	7.2	UJ	15	U	5.9	U
001-VOCs-Piers	M,P-XYLENE (SUM OF ISOMERS)	XYLMP	µg/kg	170000000										
														53

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	PC35		PC36		PC36		PC36		PC36		PCSV		PCSV		PCSV		SO-01	
					Sample #	Q	Sample #	Q	Sample #	Q	Sample #	Q	Sample #	Q	Sample #	Q	Sample #	Q	Sample #	Q	Sample #	Q
					PC35(5-5.5)		PC36(0-0.5)		PC36(3-3.5)		PC36(5-5.5)		PC36(5-5.5)		PCSV(2.5-3)		PCSV(5-5.5)		PCSV(7-7.5)		SO-01-9B	
					5		0		3		5		5		2.5		5		7		0.5	
					End Depth		0.5		3.5		5.5		3		5.5		5.5		7.5		1.5	
					Depth Unit		ft bgs		ft bgs		ft bgs		ft bgs		ft bgs		ft bgs		ft bgs		ft bgs	
					Sample Type		N		N		N		N		N		N		N		FD	
					Parent Sample #																SO-01-B	
					Sample Date		2/22/2018		2/21/2018		2/21/2018		2/21/2018		2/21/2018		2/21/2018		2/21/2018		8/7/2019	
Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
001-VOCs-Piers	Methyl acetate	79-20-9	µg/kg	14000	7.4	U	6.6	U	6	U	15	U	5.9	U	33	U	6	U	6	U	6	U
001-VOCs-Piers	Methyl tert-Butyl Ether	1634-04-4	µg/kg	320000	7.4	U	6.6	U	6	U	15	U	5.9	U	33	U	6	U	6	U	6	U
001-VOCs-Piers	Methylcyclohexane	108-87-2	µg/kg		7.4	U	6.6	U	7.2	U	15	U	5.9	U	33	U	6	U	6	U	170	J
001-VOCs-Piers	Methylene Chloride	75-09-2	µg/kg	230000	7.4	U	6.6	U	6	U	15	U	5.9	U	33	U	6	U	6	U	30	U
001-VOCs-Piers	o-Xylene	95-47-6	µg/kg	170000000	7.4	U	6.6	U	7.2	U	15	U	5.9	U	33	U	6	U	6	U	34	J
001-VOCs-Piers	Styrene	100-42-5	µg/kg	260000	7.4	U	6.6	U	7.2	U	15	U	5.9	U	33	U	6	U	6	U	1.1	J
001-VOCs-Piers	Tetrachloroethene	127-18-4	µg/kg	1500000	7.4	U	6.6	U	7.2	U	15	U	5.9	U	33	U	6	U	6	U	6	U
001-VOCs-Piers	Toluene	108-88-3	µg/kg	91000000	7.4	U	6.6	U	7.2	U	15	U	5.9	U	33	U	6	U	6	U	39	J
001-VOCs-Piers	trans-1,2-Dichloroethene	156-60-5	µg/kg	720000	7.4	U	6.6	U	6	U	15	U	5.9	U	33	U	6	U	6	U	6	U
001-VOCs-Piers	trans-1,3-Dichloropropene	10061-02-6	µg/kg	7000	7.4	U	6.6	U	7.2	U	15	U	5.9	U	33	U	6	U	6	U	6	U
001-VOCs-Piers	Trichloroethene	79-01-6	µg/kg	10000	7.4	U	6.6	U	7.2	U	15	U	5.9	U	33	U	6	U	6	U	1.6	J
001-VOCs-Piers	Trichlorofluoromethane	75-69-4	µg/kg	340000000	7.4	U	6.6	U	6	U	15	U	5.9	U	33	U	6	U	6	U	12	U
001-VOCs-Piers	Vinyl Chloride	75-01-4	µg/kg	2000	7.4	U	6.6	U	6	U	15	U	5.9	U	33	U	6	U	6	U	12	U
001-VOCs-Piers	Xylenes (TOTAL)	1330-20-7	µg/kg																		87	J
002-SVOCs-Piers	1,1'-Biphenyl	92-52-4	µg/kg	240000	200	U	230	U	190	U	260	U	200	U	200	U	200	U	230	U	510	U
002-SVOCs-Piers	1,2,4,5-Tetrachlorobenzene	95-94-3	µg/kg	350000	200	U	230	U	190	U	260	U	200	U	200	U	200	U	230	U	510	U
002-SVOCs-Piers	1,4-Dioxane	123-91-1	µg/kg	24000	80	U	91	U	76	U	100	U	78	U	79	U	90	U	90	U	510	U
002-SVOCs-Piers	2,2'-Oxybis(1-chloropropane)	108-60-1	µg/kg	67000	400	U	450	U	370	U	510	U	380	U	390	U	440	U	440	U	510	U
002-SVOCs-Piers	2,3,4,6-Tetrachlorophenol	58-90-2	µg/kg	25000000	200	U	230	U	190	U	260	U	200	U	200	U	200	U	230	U	510	U
002-SVOCs-Piers	2,4,5-Trichlorophenol	95-95-4	µg/kg	68000000	200	U	230	U	190	U	260	U	200	U	200	U	200	U	230	U	1300	U
002-SVOCs-Piers	2,4,6-Trichlorophenol	88-06-2	µg/kg	74000	200	U	230	U	190	U	260	U	200	U	200	U	200	U	230	U	510	U
002-SVOCs-Piers	2,4-Dichlorophenol	120-83-2	µg/kg	2100000	200	U	230	U	190	U	260	U	200	U	200	U	200	U	230	U	510	U
002-SVOCs-Piers	2,4-Dimethylphenol	105-67-9	µg/kg	14000000	200	U	230	U	190	U	260	U	200	U	200	U	200	U	230	U	510	U
002-SVOCs-Piers	2,4-Dinitrophenol	51-28-5	µg/kg	1400000	400	U	450	U	370	U	510	U	380	U	390	U	440	U	440	U	1300	U
002-SVOCs-Piers	2,4-Dinitrotoluene	121-14-2	µg/kg	3000	200	U	230	U	190	U	260	U	200	U	200	U	200	U	230	U	510	U
002-SVOCs-Piers	2,6-Dinitrotoluene	606-20-2	µg/kg	3000	200	U	230	U	190	U	260	U	200	U	200	U	200	U	230	U	510	U
002-SVOCs-Piers	2-Chloronaphthalene	91-58-7	µg/kg	60000000	200	U	230	U	190	U	260	U	200	U	200	U	200	U	230	U	510	U
002-SVOCs-Piers	2-Chlorophenol	95-57-8	µg/kg	2200000	200	U	230	U	190	U	260	U	200	U	200	U	200	U	230	U	510	U
002-SVOCs-Piers	2-Methylnaphthalene	91-57-6	µg/kg	2400000	200	U	230	U	190	U	260	U	200	U	64	J	230	U	230	U	510	U
002-SVOCs-Piers	2-Methylphenol	95-48-7	µg/kg	3400000	400	U	450	U	370	U	510	U	380	U	390	U	440	U	440	U	510	U
002-SVOCs-Piers	2-Nitroaniline	88-74-4	µg/kg	23000000	200	U	230	U	190	U	260	U	200	U	200	U	200	U	230	U	1300	U
002-SVOCs-Piers	2-Nitrophenol	88-75-5	µg/kg	1600	200	U	230	U	190	U	260	U	200	U	200	U	200	U	230	U	510	U
002-SVOCs-Piers	3,3'-Dichlorobenzidine	91-94-1	µg/kg	4000	400	U	450	U	370	U	510	U	380	U	390	U	440	U	440	U	510	U
002-SVOCs-Piers	3-Nitroaniline	99-09-2	µg/kg	3160	400	U	450	U	370	U	510	U	380	U	390	U	440	U	440	U	1300	U
002-SVOCs-Piers	4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	68000	400	U	450	U	370	U	510	U	380	U	390	U	440	U	440	U	1300	U
002-SVOCs-Piers	4-Bromophenyl-phenylether	101-55-3	µg/kg		200	U	230	U	190	U	260	U	200	U	200	U	200	U	230	U	510	U
002-SVOCs-Piers	4-Chloro-3-methylphenol	59-50-7	µg/kg	82000000	200	U	230	U	190	U	260	U	200	U	200	U	200	U	230	U	510	U
002-SVOCs-Piers	4-Chloroaniline	106-47-8	µg/kg	11000	400	U	450	U	370	U	510	U	380	U	390	U	440	U	440	U	510	U
002-SVOCs-Piers	4-Chlorophenyl-phenylether	7005-72-3	µg/kg		200	U	230	U	190	U	260	U	200	U	200	U	200	U	230	U	510	U

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

					Location Sample #	PC35 PC35(5-5.5)	PC36 PC36(0-0.5)	PC36 PC36(3-3.5)	PC36 PC36(5-5.5)	PC5V PC5V(2.5-3)	PC5V PC5V(5-5.5)	PC5V PC5V(7-7.5)	SO-01 SO-01-9B	
					Start Depth	5	0	3	5	2.5	5	7	0.5	
					End Depth	5.5	0.5	3.5	5.5	3	5.5	7.5	1.5	
					Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	
					Sample Type	N	N	N	N	N	N	N	FD	
					Parent Sample #								SO-01-B	
					Sample Date	2/22/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	8/7/2019	
Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
002-SVOCs-Piers	4-Methylphenol	106-44-5	µg/kg	340000	400	U	450	U	370	U	510	U	380	U
002-SVOCs-Piers	4-Nitroaniline	100-01-6	µg/kg	110000	400	U	450	U	2600	U	510	U	380	U
002-SVOCs-Piers	4-Nitrophenol	100-02-7	µg/kg	5120	400	U	450	U	370	U	510	U	380	U
002-SVOCs-Piers	Acenaphthene	83-32-9	µg/kg	37000000	220		150	J	190	U	210	J	150	J
002-SVOCs-Piers	Acenaphthylene	208-96-8	µg/kg	300000000	140	J	110	J	210		120	J	200	U
002-SVOCs-Piers	Acetophenone	98-86-2	µg/kg	5000	400	U	450	UJ	80	J	510	U	390	U
002-SVOCs-Piers	Anthracene	120-12-7	µg/kg	30000000	1200		380		220		640		310	
002-SVOCs-Piers	Atrazine	1912-24-9	µg/kg	2400000	400	U	450	U	370	U	510	U	380	U
002-SVOCs-Piers	Benzaldehyde	100-52-7	µg/kg	68000000	400	U	450	U	370	U	510	U	380	U
002-SVOCs-Piers	Benzo(a)anthracene	56-55-3	µg/kg	17000	2100		1200		980		1800		1100	
002-SVOCs-Piers	Benzo(a)pyrene	50-32-8	µg/kg	2000	1700		1000		1000		1500		900	
002-SVOCs-Piers	Benzo(b)fluoranthene	205-99-2	µg/kg	17000	2200		1200		1300		1900		1200	
002-SVOCs-Piers	Benzo(g,h,i)perylene	191-24-2	µg/kg	30000000	1100		620		830		960		520	
002-SVOCs-Piers	Benzo(k)fluoranthene	207-08-9	µg/kg	170000	750		470		380		580		320	
002-SVOCs-Piers	Bis(2-chloroethoxy)methane	111-91-1	µg/kg	2500000	200	U	230	U	190	U	260	U	200	U
002-SVOCs-Piers	Bis(2-chloroethyl)ether	111-44-4	µg/kg	2000	400	U	450	U	370	U	510	U	380	U
002-SVOCs-Piers	Bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	140000	200	U	130	J	190	U	260	U	200	U
002-SVOCs-Piers	Butylbenzylphthalate	85-68-7	µg/kg	14000000	200	U	230	U	190	U	260	U	200	U
002-SVOCs-Piers	Caprolactam	105-60-2	µg/kg	340000000	400	U	450	U	370	U	510	U	380	U
002-SVOCs-Piers	Carbazole	86-74-8	µg/kg	96000	550		230	J	84	J	330	J	130	J
002-SVOCs-Piers	Chrysene	218-01-9	µg/kg	1700000	1800		1200		960		1800		970	
002-SVOCs-Piers	CRESOLS, M & P	MEPH1314	µg/kg										670	
002-SVOCs-Piers	Dibenzo(a,h)anthracene	53-70-3	µg/kg	2000	350		210	J	240		330		210	
002-SVOCs-Piers	Dibenzofuran	132-64-9	µg/kg	1000000	310		88	J	190	U	140	J	53	J
002-SVOCs-Piers	Diethylphthalate	84-66-2	µg/kg	550000000	200	U	230	U	190	U	260	U	200	U
002-SVOCs-Piers	Dimethylphthalate	131-11-3	µg/kg	734000	250		570		230		280		300	
002-SVOCs-Piers	Di-n-butylphthalate	84-74-2	µg/kg	68000000	200	U	230	U	190	U	180	J	200	U
002-SVOCs-Piers	Di-n-octylphthalate	117-84-0	µg/kg	27000000	400	U	450	U	370	U	510	U	380	U
002-SVOCs-Piers	Fluoranthene	206-44-0	µg/kg	24000000	5600		2600		1900		3700		2100	
002-SVOCs-Piers	Fluorene	86-73-7	µg/kg	24000000	540		110	J	50	J	240	J	82	J
002-SVOCs-Piers	Hexachlorobenzene	118-74-1	µg/kg	1000	200	U	230	U	190	U	260	U	200	U
002-SVOCs-Piers	Hexachlorobutadiene	87-68-3	µg/kg	25000	200	U	230	U	190	U	260	U	200	U
002-SVOCs-Piers	Hexachlorocyclopentadiene	77-47-4	µg/kg	110000	400	UJ	450	UJ	370	UJ	510	U	380	U
002-SVOCs-Piers	Hexachloroethane	67-72-1	µg/kg	48000	200	U	230	U	190	U	260	U	200	U
002-SVOCs-Piers	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	17000	1100		660		760		980		590	
002-SVOCs-Piers	Isophorone	78-59-1	µg/kg	2000000	200	U	230	U	190	U	260	U	200	U
002-SVOCs-Piers	Naphthalene	91-20-3	µg/kg	17000	60	J	61	J	190	U	93	J	120	J
002-SVOCs-Piers	Nitrobenzene	98-95-3	µg/kg	14000	200	U	230	U	190	U	260	U	200	U
002-SVOCs-Piers	N-Nitroso-di-n-propylamine	621-64-7	µg/kg	300	200	U	230	U	190	U	260	U	200	U

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

					Location Sample #	PC35 PC35(5-5.5)	PC36 PC36(0-0.5)	PC36 PC36(3-3.5)	PC36 PC36(5-5.5)	PC5V PC5V(2.5-3)	PC5V PC5V(5-5.5)	PC5V PC5V(7-7.5)	SO-01 SO-01-9B	
					Start Depth	5	0	3	5	2.5	5	7	0.5	
					End Depth	5.5	0.5	3.5	5.5	3	5.5	7.5	1.5	
					Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	
					Sample Type	N	N	N	N	N	N	N	FD	
					Parent Sample #								SO-01-B	
					Sample Date	2/22/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	8/7/2019	
Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
002-SVOCs-Piers	N-Nitrosodiphenylamine	86-30-6	µg/kg	390000	200	U	230	U	190	U	260	U	200	U
002-SVOCs-Piers	Pentachlorophenol	87-86-5	µg/kg	3000	400	U	450	U	370	U	510	U	390	U
002-SVOCs-Piers	Phenanthrene	85-01-8	µg/kg	45700	5700		2000		790		3100		1400	
002-SVOCs-Piers	Phenol	108-95-2	µg/kg	210000000	400	U	210	J	370	U	510	U	110	J
002-SVOCs-Piers	Pyrene	129-00-0	µg/kg	180000000	4700		2500		2000		3300		1700	
003-Pest-Piers	4,4'-DDD	72-54-8	µg/kg	13000	4	UJ	4.5	UJ	2.9	J	5.1	UJ	3.9	UJ
003-Pest-Piers	4,4'-DDE	72-55-9	µg/kg	9000	2.9	J	4.5	UJ	2	J	5.1	UJ	14	J
003-Pest-Piers	4,4'-DDT	50-29-3	µg/kg	8000	4.5	NJ	4.5	UJ	3.7	UJ	5.1	UJ	11	J
003-Pest-Piers	Aldrin	309-00-2	µg/kg	200	2	UJ	2.3	UJ	1.9	U	2.6	UJ	2	UJ
003-Pest-Piers	alpha-BHC	319-84-6	µg/kg	500	2	UJ	2.3	UJ	1.9	UJ	2.6	UJ	2	UJ
003-Pest-Piers	alpha-Chlordane	5103-71-9	µg/kg	1000000	2	UJ	2.3	UJ	1.9	U	2.6	UJ	2	UJ
003-Pest-Piers	beta-BHC	319-85-7	µg/kg	2000	2	UJ	R		1.9	UJ	2.6	UJ	2	UJ
003-Pest-Piers	delta-BHC	319-86-8	µg/kg	1300	2	UJ	2.3	UJ	1.9	U	2.6	UJ	2	UJ
003-Pest-Piers	Dieldrin	60-57-1	µg/kg	200	11	NJ	4.5	UJ	3.7	U	R		3.9	UJ
003-Pest-Piers	Endosulfan I	959-98-8	µg/kg	6800000	2	UJ	2.3	UJ	1.9	U	2.6	UJ	2	UJ
003-Pest-Piers	Endosulfan II	33213-65-9	µg/kg	6800000	4	UJ	4.5	UJ	3.7	U	5.1	UJ	3.8	U
003-Pest-Piers	Endosulfan Sulfate	1031-07-8	µg/kg	6800000	4	UJ	4.5	UJ	3.7	U	5.1	UJ	3.8	U
003-Pest-Piers	Endrin	72-20-8	µg/kg	340000	4	UJ	4.5	UJ	3.7	UJ	1.8	J-	3.8	UJ
003-Pest-Piers	Endrin aldehyde	7421-93-4	µg/kg	1620	4	UJ	4.5	UJ	3.7	U	5.1	UJ	3.8	U
003-Pest-Piers	Endrin Ketone	53494-70-5	µg/kg	1620	4	UJ	4.5	UJ	3.7	U	5.1	UJ	3.8	U
003-Pest-Piers	gamma-BHC (Lindane)	58-89-9	µg/kg	2000	2	UJ	2.3	UJ	1.9	UJ	2.6	UJ	2	UJ
003-Pest-Piers	gamma-Chlordane	5103-74-2	µg/kg	1000000	2	UJ	2.3	UJ	1.9	U	2.6	UJ	2	UJ
003-Pest-Piers	Heptachlor	76-44-8	µg/kg	700	2	UJ	2.3	UJ	1.9	U	2.6	UJ	2	UJ
003-Pest-Piers	Heptachlor Epoxide	1024-57-3	µg/kg	300	2	UJ	2.3	J-	1.9	U	2.6	UJ	2	UJ
003-Pest-Piers	Methoxychlor	72-43-5	µg/kg	5700000	20	UJ	23	UJ	19	UJ	26	UJ	20	UJ
003-Pest-Piers	Toxaphene	8001-35-2	µg/kg	3000	200	U	230	UJ	190	U	260	UJ	200	U
005-Aroclors-Piers	Aroclor 1016	12674-11-2	µg/kg	1000	40	U	45	UJ	37	U	51	U	38	U
005-Aroclors-Piers	Aroclor 1221	11104-28-2	µg/kg	1000	40	U	45	UJ	37	U	51	U	38	U
005-Aroclors-Piers	Aroclor 1232	11141-16-5	µg/kg	1000	40	U	45	UJ	37	U	51	U	38	U
005-Aroclors-Piers	Aroclor 1242	53469-21-9	µg/kg	1000	40	U	45	UJ	37	U	51	U	38	U
005-Aroclors-Piers	Aroclor 1248	12672-29-6	µg/kg	1000	48		45	UJ	37	U	51	U	38	U
005-Aroclors-Piers	Aroclor 1254	11097-69-1	µg/kg	1000	40	U	45	UJ	40		51	U	38	U
005-Aroclors-Piers	Aroclor 1260	11096-82-5	µg/kg	1000	40	U	45	UJ	94	J	51	U	38	U
005-Aroclors-Piers	Aroclor 1262	37324-23-5	µg/kg	1000	40	U	45	UJ	37	U	51	U	38	U
005-Aroclors-Piers	Aroclor 1268	11100-14-4	µg/kg	1000	40	U	45	UJ	37	U	51	U	38	U
005-Aroclors-Piers	Total Aroclors	TARO	µg/kg	1000	48		0	U	134		0	U	0	U
011-Inorganics-Piers	Aluminum	7429-90-5	mg/kg	3900	5000		6800		6200		4400		6800	
011-Inorganics-Piers	Antimony	7440-36-0	mg/kg	450	15		2	U	9.3		10		30	
011-Inorganics-Piers	Arsenic	7440-38-2	mg/kg	19	22		3.9		17		6.6		17	

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	PC35 PC35(5-5.5)		PC36 PC36(0-0.5)		PC36 PC36(3-3.5)		PC36 PC36(5-5.5)		PC5V PC5V(2.5-3)		PC5V PC5V(5-5.5)		PC5V PC5V(7-7.5)		SO-01 SO-01-9B	
					Sample #	Start Depth	Sample #	Start Depth	Sample #	Start Depth	Sample #	Start Depth	Sample #	Start Depth	Sample #	Start Depth	Sample #	Start Depth	Sample #	Start Depth
					5	5.5	0	0.5	3	3.5	5	5.5	3	3	5	5.5	7	7.5	0.5	1.5
					ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs
					N	N	N	N	N	N	N	N	N	N	N	N	N	N	FD	FD
					Parent Sample #	Sample Date	Parent Sample #	Sample Date	Parent Sample #	Sample Date	Parent Sample #	Sample Date	Parent Sample #	Sample Date	Parent Sample #	Sample Date	Parent Sample #	Sample Date	Parent Sample #	Sample Date
					2/22/2018	2/22/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	2/21/2018	8/7/2019	8/7/2019
Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
011-Inorganics-Piers	Barium	7440-39-3	mg/kg	59000	440		110		800		850		620		110		250		182	
011-Inorganics-Piers	Beryllium	7440-41-7	mg/kg	140	0.33		0.43		0.38		0.35		0.4		0.25 U		0.56		0.769	
011-Inorganics-Piers	Cadmium	7440-43-9	mg/kg	78	3.2		0.99		5.3		5.5		11		0.36		0.71		1.98	
011-Inorganics-Piers	Calcium	7440-70-2	mg/kg		6500		3200		4700		12000		3600		6000		4900		30700 J	
011-Inorganics-Piers	Chromium	7440-47-3	mg/kg	3600000	35		21		66		40		93		29		130		71.6 J	
011-Inorganics-Piers	Cobalt	7440-48-4	mg/kg	590	11		6.2		7.1		10		7.8		1.7 U		4.1		13	
011-Inorganics-Piers	Copper	7440-50-8	mg/kg	45000	700		79		590		240		650		390		90		191	
011-Inorganics-Piers	Cyanide	57-12-5	mg/kg	680	0.46		0.26		0.57		0.92		0.18		0.42		0.19		2 U	
011-Inorganics-Piers	Iron	7439-89-6	mg/kg	820000	24000		16000		20000		24000		37000		12000		23000		20600	
011-Inorganics-Piers	Lead	7439-92-1	mg/kg	800	1600		170		2200		590		1800		100		230		421	
011-Inorganics-Piers	Magnesium	7439-95-4	mg/kg	1200			2900		1900		2900		2400		730		2100		7120	
011-Inorganics-Piers	Manganese	7439-96-5	mg/kg	5900	280		420		280		290		480		98		110		366	
011-Inorganics-Piers	Mercury	7439-97-6	mg/kg	65	2.1		2.1		1.2		0.43		1.7		0.25		0.24		39.9 J	
011-Inorganics-Piers	MethylMercury	22967-92-6	ng/g																11.7 J	
011-Inorganics-Piers	Nickel	7440-02-0	mg/kg	23000	780		22		76		45		110		140		34		43	
011-Inorganics-Piers	Potassium	7440-09-7	mg/kg		620		1700		660		540		880		320		740		1420	
011-Inorganics-Piers	Selenium	7782-49-2	mg/kg	5700	1.9 U		2 U		1.9 U		1.8 U		2.6		1.7 U		1.8 U		1.29	
011-Inorganics-Piers	Silver	7440-22-4	mg/kg	5700	12		27		11		1.1		2.9		0.42 U		0.46 U		4.01	
011-Inorganics-Piers	Sodium	7440-23-5	mg/kg		180		99 U		120		110		95		180		520		891	
011-Inorganics-Piers	Thallium	7440-28-0	mg/kg	3	1.9 U		2 U		1.9 U		1.8 U		1.8 U		1.7 U		1.8 U		0.146	
011-Inorganics-Piers	Vanadium	7440-62-2	mg/kg	1100	30		25		68		22		38		8.6		26		40.6	
011-Inorganics-Piers	Zinc	7440-66-6	mg/kg	110000	1600		160		1000		950		980		140		280		388	
014-General Chemistry-Piers	Total Organic Carbon	TOC	µg/g																33000	
014-General Chemistry-Piers	TOTAL SOLIDS	TSOLIDS	%																64	
																			64	
015-Grain Size-Piers	% COARSE SAND >.5 - 1 MM	COARSE SAND	%																	
015-Grain Size-Piers	% Coarse Sand >0.5 - 1.0 mm	%COARSE SAND	%																	
015-Grain Size-Piers	% Fine Sand >.125 - .25 mm	%FINE SAND	%																	
015-Grain Size-Piers	% Medium Sand >.25 - .5 mm	%MEDIUM SAND	%																	
015-Grain Size-Piers	% MEDIUM SAND >.25 - .5 MM	MEDIUM SAND	%																	
015-Grain Size-Piers	0	HYD01	% Passing																	
015-Grain Size-Piers	0	HYD02	% Passing																	
015-Grain Size-Piers	0	HYD03	% Passing																	
015-Grain Size-Piers	0	HYD04	% Passing																	
015-Grain Size-Piers	0	HYD05	% Passing																	
015-Grain Size-Piers	0	HYD06	% Passing																	
015-Grain Size-Piers	0	HYD07	% Passing																	
015-Grain Size-Piers	0.75 INCH SIEVE	SIEVE0.75IN	% Passing																	

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

[illegible]

Notes:

1. Results that are greater than the RI soil screening criteria are highlighted yellow.

Acronyms:

FD - field duplicate
ft bgs - feet below ground surface
J - estimated
J+ - estimated, biased high
J- - estimated, biased low
J-EMPC - estimated maximum possible concentration
mg/kg - milligram per kilogram
N - normal

ng/g - nanogram per gram
Q - qualifier
R - rejected
RI - remedial investigation
U - nondetect
UJ - nondetect, estimated
µg/kg - microgram per kilogram

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

					Location	SO-01	SO-01	SO-01	SO-02	SO-02	SO-02	SO-02	SO-03	
					Sample #	SO-01-A	SO-01-B	SO-01-C	SO-02-A	SO-02-B	SO-02-C	SO-02-D	SO-03-A	
					Start Depth	0	0.5	1.5	0	0.5	1.5	3	0	
					End Depth	0.5	1.5	3	0.5	1.5	3	4	0.5	
					Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	
					Sample Type	N	N	N	N	N	N	N	N	
					Parent Sample #									
					Sample Date	8/7/2019	8/7/2019	8/7/2019	8/6/2019	8/6/2019	8/6/2019	8/6/2019	8/6/2019	
Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
001-VOCs-Piers	1,1,1-Trichloroethane	71-55-6	µg/kg	200	22	UJ	5.5	UJ	4.8	U	18	U	4.7	J
001-VOCs-Piers	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	3000		R		R	4.8	U	18	U	7	U
001-VOCs-Piers	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	µg/kg	28000000	22	UJ	5.5	UJ	4.8	U	18	U	27	U
001-VOCs-Piers	1,1,2-Trichloroethane	79-00-5	µg/kg	6000	22	UJ	5.5	UJ	4.8	U	18	U	27	U
001-VOCs-Piers	1,1-Dichloroethane	75-34-3	µg/kg	24000	22	UJ	2.1	J	4.8	U	18	U	27	U
001-VOCs-Piers	1,1-Dichloroethene	75-35-4	µg/kg	150000	22	UJ	5.5	UJ	4.8	U	18	U	27	U
001-VOCs-Piers	1,2,3-Trichlorobenzene	87-61-6	µg/kg	930000		R		R	4.8	U	18	U	27	UJ
001-VOCs-Piers	1,2,4-Trichlorobenzene	120-82-1	µg/kg	820000	96	J	18	J	4.8	U	18	U	27	UJ
001-VOCs-Piers	1,2-Dibromo-3-chloropropane	96-12-8	µg/kg	200		R		R	4.8	U	18	U	27	UJ
001-VOCs-Piers	1,2-Dibromoethane	106-93-4	µg/kg	40	22	UJ	5.5	UJ	4.8	U	18	U	27	U
001-VOCs-Piers	1,2-Dichlorobenzene	95-50-1	µg/kg	59000000	3000	J	740	J	4.8	U	18	U	58	J
001-VOCs-Piers	1,2-Dichloroethane	107-06-2	µg/kg	3000	22	UJ	5.5	UJ	4.8	U	18	U	27	U
001-VOCs-Piers	1,2-Dichloropropane	78-87-5	µg/kg	5000	22	UJ	5.5	UJ	4.8	U	18	U	27	U
001-VOCs-Piers	1,3-Dichlorobenzene	541-73-1	µg/kg	59000000	2000	J	490	J	4.8	U	18	U	6.5	J
001-VOCs-Piers	1,4-Dichlorobenzene	106-46-7	µg/kg	13000	7800	J	1800	J	4.8	U	18	U	19	J
001-VOCs-Piers	2-Butanone	78-93-3	µg/kg	44000000	750	J	410	J	24	U	110		290	
001-VOCs-Piers	2-Hexanone	591-78-6	µg/kg	1300000	110	UJ	28	UJ	24	U	90	U	140	U
001-VOCs-Piers	4-Methyl-2-pentanone	108-10-1	µg/kg	140000000	110	UJ	28	UJ	24	U	90	U	140	U
001-VOCs-Piers	Acetone	67-64-1	µg/kg	12000	520	J	530	J	24	U	410		990	
001-VOCs-Piers	Benzene	71-43-2	µg/kg	5000	1100	J	370	J	2.8	J	18	J	73	
001-VOCs-Piers	Bromochloromethane	74-97-5	µg/kg	630000	22	UJ	5.5	UJ	4.8	U	18	U	27	U
001-VOCs-Piers	Bromodichloromethane	75-27-4	µg/kg	3000	22	UJ	5.5	UJ	4.8	U	18	U	27	U
001-VOCs-Piers	Bromoform	75-25-2	µg/kg	280000	22	UJ	5.5	UJ	4.8	U	18	U	27	U
001-VOCs-Piers	Bromomethane	74-83-9	µg/kg	59000	44	UJ	11	UJ	9.7	U	36	U	54	U
001-VOCs-Piers	Carbon Disulfide	75-15-0	µg/kg	110000000	24	J	16	J	1.4	J	7.4	J	16	J
001-VOCs-Piers	Carbon Tetrachloride	56-23-5	µg/kg	4000	22	UJ	5.5	UJ	4.8	U	18	U	27	U
001-VOCs-Piers	Chlorobenzene	108-90-7	µg/kg	7400000	1100	J	390	J	4.8	U	2.6	J	30	
001-VOCs-Piers	Chloroethane	75-00-3	µg/kg	1100000	44	UJ	3.9	J	9.7	U	36	U	54	U
001-VOCs-Piers	Chloroform	67-66-3	µg/kg	2000	22	UJ	5.5	UJ	4.8	U	18	U	27	U
001-VOCs-Piers	Chloromethane	74-87-3	µg/kg	12000	44	UJ	11	UJ	9.7	U	36	U	54	U
001-VOCs-Piers	cis-1,2-Dichloroethene	156-59-2	µg/kg	560000	33	J	17	J	4.8	U	6	J	55	
001-VOCs-Piers	cis-1,3-Dichloropropene	10061-01-5	µg/kg	7000	22	UJ	5.5	UJ	4.8	U	18	U	27	U
001-VOCs-Piers	Cyclohexane	110-82-7	µg/kg	27000000	540	J	200	J	4.8	U	18	U	27	U
001-VOCs-Piers	Dibromochloromethane	124-48-1	µg/kg	8000	22	UJ	5.5	UJ	4.8	U	18	U	27	U
001-VOCs-Piers	Dichlorodifluoromethane	75-71-8	µg/kg	230000000	44	UJ	11	UJ	9.7	U	36	U	54	U
001-VOCs-Piers	Ethylbenzene	100-41-4	µg/kg	110000000	280	J	85	J	4.8	U	18	U	16	J
001-VOCs-Piers	Isopropylbenzene	98-82-8	µg/kg	9900000	1800	J	520	J	4.8	U	18	U	27	UJ
001-VOCs-Piers	m,p-Xylene	179601-23-1	µg/kg	170000000									7	U
001-VOCs-Piers	M,P-XYLENE (SUM OF ISOMERS)	XYLMP	µg/kg	170000000	1200	J	350	J	9.7	U	36	U	30	J

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

					Location Sample # Start Depth End Depth Depth Unit Sample Type Parent Sample # Sample Date	SO-01 SO-01-A 0 0.5 ft bgs N 8/7/2019	SO-01 SO-01-B 0.5 1.5 ft bgs N 8/7/2019	SO-01 SO-01-C 1.5 3 ft bgs N 8/7/2019	SO-02 SO-02-A 0 0.5 ft bgs N 8/6/2019	SO-02 SO-02-B 0.5 1.5 ft bgs N 8/6/2019	SO-02 SO-02-C 1.5 3 ft bgs N 8/6/2019	SO-02 SO-02-D 3 4 ft bgs N 8/6/2019	SO-03 SO-03-A 0 0.5 ft bgs N 8/6/2019	
Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
001-VOCs-Piers	Methyl acetate	79-20-9	µg/kg	14000	22	UJ	5.5	UJ	4.8	U	18	U	7	U
001-VOCs-Piers	Methyl tert-Butyl Ether	1634-04-4	µg/kg	320000	22	UJ	5.5	UJ	4.8	U	18	U	7	U
001-VOCs-Piers	Methylcyclohexane	108-87-2	µg/kg		1400	J	510	J	4.8	U	18	U	3.5	J
001-VOCs-Piers	Methylene Chloride	75-09-2	µg/kg	230000	110	UJ	28	UJ	24	U	90	U	35	U
001-VOCs-Piers	o-Xylene	95-47-6	µg/kg	170000000	700	J	240	J	4.8	U	18	U	7	U
001-VOCs-Piers	Styrene	100-42-5	µg/kg	260000	9.5	J	3.4	J	4.8	U	18	U	7	U
001-VOCs-Piers	Tetrachloroethene	127-18-4	µg/kg	1500000	22	UJ	5.5	UJ	4.8	U	18	U	33	J
001-VOCs-Piers	Toluene	108-88-3	µg/kg	91000000	160	J	30	J	14		26	3000	2	J
001-VOCs-Piers	trans-1,2-Dichloroethene	156-60-5	µg/kg	720000	14	J	5.5	J	4.8	U	18	U	7	U
001-VOCs-Piers	trans-1,3-Dichloropropene	10061-02-6	µg/kg	7000	22	UJ	5.5	UJ	4.8	U	18	U	7	U
001-VOCs-Piers	Trichloroethene	79-01-6	µg/kg	10000	17	J	5.5	UJ	4.8	U	3.7	J	0.83	J
001-VOCs-Piers	Trichlorofluoromethane	75-69-4	µg/kg	340000000	44	UJ	11	UJ	9.7	U	36	U	14	U
001-VOCs-Piers	Vinyl Chloride	75-01-4	µg/kg	2000	44	UJ	3.1	J	9.7	U	36	U	54	U
001-VOCs-Piers	Xylenes (TOTAL)	1330-20-7	µg/kg		1900	J	590	J	14	U	54	U	30	J
002-SVOCs-Piers	1,1'-Biphenyl	92-52-4	µg/kg	240000	1100	U	500	U	160	J	1200	U	1100	U
002-SVOCs-Piers	1,2,4,5-Tetrachlorobenzene	95-94-3	µg/kg	350000	1100	U	500	U	400	U	1200	U	1100	U
002-SVOCs-Piers	1,4-Dioxane	123-91-1	µg/kg	24000	1100	U	500	U	400	U	1200	U	1100	U
002-SVOCs-Piers	2,2'-Oxybis(1-chloropropane)	108-60-1	µg/kg	67000	1100	U	500	U	400	U	1200	UJ	1100	UJ
002-SVOCs-Piers	2,3,4,6-Tetrachlorophenol	58-90-2	µg/kg	25000000	1100	U	500	U	400	U	1200	U	1100	U
002-SVOCs-Piers	2,4,5-Trichlorophenol	95-95-4	µg/kg	68000000	2700	U	1200	U	1000	U	3000	U	2800	U
002-SVOCs-Piers	2,4,6-Trichlorophenol	88-06-2	µg/kg	74000	1100	U	500	U	400	U	1200	U	1100	U
002-SVOCs-Piers	2,4-Dichlorophenol	120-83-2	µg/kg	2100000	1100	U	500	U	400	U	1200	U	1100	U
002-SVOCs-Piers	2,4-Dimethylphenol	105-67-9	µg/kg	14000000	1100	U	500	U	400	U	1200	U	1100	U
002-SVOCs-Piers	2,4-Dinitrophenol	51-28-5	µg/kg	1400000	2700	U	1200	U	1000	U	3000	U	2800	U
002-SVOCs-Piers	2,4-Dinitrotoluene	121-14-2	µg/kg	3000	1100	U	500	U	400	U	1200	U	1100	U
002-SVOCs-Piers	2,6-Dinitrotoluene	606-20-2	µg/kg	3000	1100	U	500	U	400	U	1200	U	1100	U
002-SVOCs-Piers	2-Chloronaphthalene	91-58-7	µg/kg	60000000	1100	U	500	U	400	U	1200	U	1100	U
002-SVOCs-Piers	2-Chlorophenol	95-57-8	µg/kg	2200000	1100	U	500	U	400	U	1200	U	1100	U
002-SVOCs-Piers	2-Methylnaphthalene	91-57-6	µg/kg	2400000	1100	U	500	U	500		1200	U	1100	U
002-SVOCs-Piers	2-Methylphenol	95-48-7	µg/kg	3400000	1100	U	500	U	400	U	1200	U	1100	U
002-SVOCs-Piers	2-Nitroaniline	88-74-4	µg/kg	23000000	2700	U	1200	U	1000	U	3000	U	2800	U
002-SVOCs-Piers	2-Nitrophenol	88-75-5	µg/kg	1600	1100	U	500	U	400	U	1200	U	1100	U
002-SVOCs-Piers	3,3'-Dichlorobenzidine	91-94-1	µg/kg	4000	1100	U	500	U	400	U	1200	U	1100	U
002-SVOCs-Piers	3-Nitroaniline	99-09-2	µg/kg	3160	2700	U	1200	U	1000	U	3000	U	2800	U
002-SVOCs-Piers	4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	68000	2700	U	1200	U	1000	U	3000	U	2800	U
002-SVOCs-Piers	4-Bromophenyl-phenylether	101-55-3	µg/kg		1100	U	500	U	400	U	1200	U	1100	U
002-SVOCs-Piers	4-Chloro-3-methylphenol	59-50-7	µg/kg	82000000	1100	U	500	U	400	U	1200	U	1100	U
002-SVOCs-Piers	4-Chloroaniline	106-47-8	µg/kg	11000	1100	U	500	U	400	U	1200	U	1100	U
002-SVOCs-Piers	4-Chlorophenyl-phenylether	7005-72-3	µg/kg		1100	U	500	U	400	U	1200	U	1100	U

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

Location					SO-01		SO-01		SO-01		SO-02		SO-02		SO-02		SO-02		SO-03	
Sample #					SO-01-A		SO-01-B		SO-01-C		SO-02-A		SO-02-B		SO-02-C		SO-02-D		SO-03-A	
Start Depth					0		0.5		1.5		0		0.5		1.5		3		0	
End Depth					0.5		1.5		3		0.5		1.5		3		4		0.5	
Depth Unit					ft bgs		ft bgs		ft bgs		ft bgs		ft bgs		ft bgs		ft bgs		ft bgs	
Sample Type					N		N		N		N		N		N		N		N	
Parent Sample #																				
Sample Date					8/7/2019		8/7/2019		8/7/2019		8/6/2019		8/6/2019		8/6/2019		8/6/2019		8/6/2019	
Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
002-SVOCs-Piers	4-Methylphenol	106-44-5	µg/kg	340000																
002-SVOCs-Piers	4-Nitroaniline	100-01-6	µg/kg	110000	2700	U	1200	U	1000	U	3000	U	2800	U	1200	U	1300	U	3200	U
002-SVOCs-Piers	4-Nitrophenol	100-02-7	µg/kg	5120	2700	U	1200	U	1000	U	3000	U	2800	U	1200	U	1300	U	3200	U
002-SVOCs-Piers	Acenaphthene	83-32-9	µg/kg	37000000	1100	U	150	J	1600		1200	U	1100	U	350	J	530	U	1300	U
002-SVOCs-Piers	Acenaphthylene	208-96-8	µg/kg	300000000	1100	U	500	U	140	J	1200	U	1100	U	480	U	530	U	1300	U
002-SVOCs-Piers	Acetophenone	98-86-2	µg/kg	5000	1100	U	500	U	400	U	1200	U	1100	U	480	U	530	U	1300	U
002-SVOCs-Piers	Anthracene	120-12-7	µg/kg	30000000	1100	U	460	J	2900		1200	U	1100	U	580		410	J	1300	U
002-SVOCs-Piers	Atrazine	1912-24-9	µg/kg	2400000	1100	UJ	500	UJ	400	UJ	1200	U	1100	U	480	U	530	U	1300	U
002-SVOCs-Piers	Benzaldehyde	100-52-7	µg/kg	68000000	1100	U	500	U	400	U	1200	U	1100	U	480	U	530	U	1300	U
002-SVOCs-Piers	Benzo(a)anthracene	56-55-3	µg/kg	17000	820	J	2200		7900		1200		1200		2400		3700	J	1900	
002-SVOCs-Piers	Benzo(a)pyrene	50-32-8	µg/kg	2000	1100	J	2300		6900		1500		1300		1900	J	2900	J	2400	
002-SVOCs-Piers	Benzo(b)fluoranthene	205-99-2	µg/kg	17000	1100	UJ	3300		8400		2300		2000		3200	J	4800	J	4000	
002-SVOCs-Piers	Benzo(g,h,i)perylene	191-24-2	µg/kg	30000000	850	J	1300		3100	J	1100	J	980	J	1100	J	1900	J	1500	
002-SVOCs-Piers	Benzo(k)fluoranthene	207-08-9	µg/kg	170000	1100	UJ	1300		3700	J	1000	J	930	J	1400	J	1900	J	1500	
002-SVOCs-Piers	Bis(2-chloroethoxy)methane	111-91-1	µg/kg	2500000	1100	U	500	U	400	U	1200	U	1100	U	480	U	530	U	1300	U
002-SVOCs-Piers	Bis(2-chloroethyl)ether	111-44-4	µg/kg	2000	1100	U	500	U	400	U	1200	U	1100	U	480	U	530	U	1300	U
002-SVOCs-Piers	Bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	140000	2400		690		410		4000		3600		1600		1800	J	1900	
002-SVOCs-Piers	Butylbenzylphthalate	85-68-7	µg/kg	14000000	360	J	500	UJ	400	UJ	1400		1100	J	480	U	530	UJ	770	J
002-SVOCs-Piers	Caprolactam	105-60-2	µg/kg	340000000	1100	U	500	U	400	U	1200	U	1100	U	480	U	530	U	1300	U
002-SVOCs-Piers	Carbazole	86-74-8	µg/kg	96000	1100	U	270	J	1600		1200	U	1100	U	270	J	300	J	1300	U
002-SVOCs-Piers	Chrysene	218-01-9	µg/kg	1700000	1200		2500		8300		1600		1400		2700		4500	J	2600	
002-SVOCs-Piers	CRESOLS, M & P	MEPH1314	µg/kg		1100	U	500	U	400	U	1200	U	1100	U	480	U	530	U	1300	U
002-SVOCs-Piers	Dibenzo(a,h)anthracene	53-70-3	µg/kg	2000	1100	UJ	500		1300	J	930	J	670	J	500	J	720	J	1300	U
002-SVOCs-Piers	Dibenzofuran	132-64-9	µg/kg	1000000	1100	U	500	U	1200		1200	U	1100	U	420	J	250	J	1300	U
002-SVOCs-Piers	Diethylphthalate	84-66-2	µg/kg	550000000	1100	U	500	U	400	U	1200	U	1100	U	480	U	530	U	1300	U
002-SVOCs-Piers	Dimethylphthalate	131-11-3	µg/kg	734000	1100	U	500	U	400	U	1200	U	1100	U	480	U	530	U	1300	U
002-SVOCs-Piers	Di-n-butylphthalate	84-74-2	µg/kg	68000000	1100	U	500	U	400	U	1200	U	1100	U	300	J	730		1300	U
002-SVOCs-Piers	Di-n-octylphthalate	117-84-0	µg/kg	27000000	1100	UJ	500	U	400	UJ	1200	U	1100	U	480	UJ	530	UJ	1300	U
002-SVOCs-Piers	Fluoranthene	206-44-0	µg/kg	24000000	1400		3600		15000		2000		1700		3700		5700		3500	
002-SVOCs-Piers	Fluorene	86-73-7	µg/kg	24000000	1100	U	180	J	1600		1200	U	1100	U	340	J	530	U	1300	U
002-SVOCs-Piers	Hexachlorobenzene	118-74-1	µg/kg	1000	1100	UJ	500	UJ	400	UJ	1200	U	1100	U	260	J	820		1300	U
002-SVOCs-Piers	Hexachlorobutadiene	87-68-3	µg/kg	25000	1100	U	500	U	400	U	1200	U	1100	U	480	U	530	U	1300	U
002-SVOCs-Piers	Hexachlorocyclopentadiene	77-47-4	µg/kg	110000	1100	U	500	U	400	U	1200	U	1100	U	480	U	530	U	1300	U
002-SVOCs-Piers	Hexachloroethane	67-72-1	µg/kg	48000	1100	U	500	U	400	U	1200	U	1100	U	480	U	530	U	1300	U
002-SVOCs-Piers	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	17000	820	J	1300		3200	J	1100	J	950	J	1100	J	2000	J	1400	
002-SVOCs-Piers	Isophorone	78-59-1	µg/kg	2000000	1100	U	500	U	400	U	1200	U	1100	U	480	U	530	U	1300	U
002-SVOCs-Piers	Naphthalene	91-20-3	µg/kg	17000	1100	U	160	J	1700		1200	U	1100	U	1300		590		1300	U
002-SVOCs-Piers	Nitrobenzene	98-95-3	µg/kg	14000	1100	U	500	U	400	U	1200	U	1100	U	480	U	530	U	1300	U
002-SVOCs-Piers	N-Nitroso-di-n-propylamine	621-64-7	µg/kg	300	1100	U	500	U	400	U	1200	U	1100	U	480	U	530	U	1300	U

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

					Location	SO-01	SO-01	SO-01	SO-02	SO-02	SO-02	SO-02	SO-03	
					Sample #	SO-01-A	SO-01-B	SO-01-C	SO-02-A	SO-02-B	SO-02-C	SO-02-D	SO-03-A	
					Start Depth	0	0.5	1.5	0	0.5	1.5	3	0	
					End Depth	0.5	1.5	3	0.5	1.5	3	4	0.5	
					Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	
					Sample Type	N	N	N	N	N	N	N	N	
					Parent Sample #									
					Sample Date	8/7/2019	8/7/2019	8/7/2019	8/6/2019	8/6/2019	8/6/2019	8/6/2019	8/6/2019	
Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
002-SVOCs-Piers	N-Nitrosodiphenylamine	86-30-6	µg/kg	390000	1100	U	650		420		1200	U	1100	U
002-SVOCs-Piers	Pentachlorophenol	87-86-5	µg/kg	3000	2700	U	1200	U	1000	U	3000	U	1200	U
002-SVOCs-Piers	Phenanthrene	85-01-8	µg/kg	45700	630	J	2200		13000		1100	J	2700	
002-SVOCs-Piers	Phenol	108-95-2	µg/kg	210000000	1100	U	500	U	400	U	1200	U	480	U
002-SVOCs-Piers	Pyrene	129-00-0	µg/kg	18000000	1900		4200		15000		2300		4300	
003-Pest-Piers	4,4'-DDD	72-54-8	µg/kg	13000	210	J	5500		2100		5600	J	2400	J
003-Pest-Piers	4,4'-DDE	72-55-9	µg/kg	9000	55	J	330		120	J	1900	J	900	J
003-Pest-Piers	4,4'-DDT	50-29-3	µg/kg	8000	220	J	160	J	110	J	4000	J	1500	J
003-Pest-Piers	Aldrin	309-00-2	µg/kg	200	28	U	13	U	10	U	3100	J	36	U
003-Pest-Piers	alpha-BHC	319-84-6	µg/kg	500	28	U	13	U	10	U	36	U	36	U
003-Pest-Piers	alpha-Chlordane	5103-71-9	µg/kg	1000000	57		31		15	J	2200		1200	J
003-Pest-Piers	beta-BHC	319-85-7	µg/kg	2000	28	U	13	U	10	U	36	U	36	U
003-Pest-Piers	delta-BHC	319-86-8	µg/kg	1300	28	J	5	J	4	J	36	U	36	U
003-Pest-Piers	Dieldrin	60-57-1	µg/kg	200	150	J	24	U	20	U	4700	J	2100	J
003-Pest-Piers	Endosulfan I	959-98-8	µg/kg	6800000	28	U	13	U	10	U	36	U	36	U
003-Pest-Piers	Endosulfan II	33213-65-9	µg/kg	6800000	54	U	24	U	20	U	70	U	69	U
003-Pest-Piers	Endosulfan Sulfate	1031-07-8	µg/kg	6800000	54	U	15	J	14	J	990	J	350	J
003-Pest-Piers	Endrin	72-20-8	µg/kg	340000	54	U	24	U	20	U	70	U	69	U
003-Pest-Piers	Endrin aldehyde	7421-93-4	µg/kg	1620	54	U	24	U	20	U	840	J	430	J
003-Pest-Piers	Endrin Ketone	53494-70-5	µg/kg	1620	130	J	24	U	20	U	70	U	69	U
003-Pest-Piers	gamma-BHC (Lindane)	58-89-9	µg/kg	2000	28	U	13	U	10	U	36	U	36	U
003-Pest-Piers	gamma-Chlordane	5103-74-2	µg/kg	1000000	110	J	440		180	J	3300	J	2300	
003-Pest-Piers	Heptachlor	76-44-8	µg/kg	700	28	U	13	U	10	U	36	U	36	U
003-Pest-Piers	Heptachlor Epoxide	1024-57-3	µg/kg	300	28	U	13	U	10	U	36	U	36	U
003-Pest-Piers	Methoxychlor	72-43-5	µg/kg	5700000	280	U	130	U	100	U	360	U	360	U
003-Pest-Piers	Toxaphene	8001-35-2	µg/kg	3000	540	U	240	U	200	U	700	U	690	U
005-Aroclors-Piers	Aroclor 1016	12674-11-2	µg/kg	1000	280	UJ	130	U	100	U	610	U	580	U
005-Aroclors-Piers	Aroclor 1221	11104-28-2	µg/kg	1000	280	UJ	130	U	100	U	610	U	580	U
005-Aroclors-Piers	Aroclor 1232	11141-16-5	µg/kg	1000	280	UJ	130	U	100	U	610	U	580	U
005-Aroclors-Piers	Aroclor 1242	53469-21-9	µg/kg	1000	280	UJ	130	U	100	U	610	U	580	U
005-Aroclors-Piers	Aroclor 1248	12672-29-6	µg/kg	1000	2900	J	130	U	100	U	100000		61000	
005-Aroclors-Piers	Aroclor 1254	11097-69-1	µg/kg	1000	280	UJ	1400	J	680	J	610	U	580	U
005-Aroclors-Piers	Aroclor 1260	11096-82-5	µg/kg	1000	1800	J	130	U	100	U	17000		12000	
005-Aroclors-Piers	Aroclor 1262	37324-23-5	µg/kg	1000	280	UJ	130	U	100	U	610	U	580	U
005-Aroclors-Piers	Aroclor 1268	11100-14-4	µg/kg	1000	280	UJ	130	U	100	U	610	U	580	U
005-Aroclors-Piers	Total Aroclors	TARO	µg/kg	1000	4700		1400		680		117000		73000	
011-Inorganics-Piers	Aluminum	7429-90-5	mg/kg	3900	25100		16800		15800		21500		19000	
011-Inorganics-Piers	Antimony	7440-36-0	mg/kg	450	32.1		7.18	J	1.19		76.6	J	39.7	J
011-Inorganics-Piers	Arsenic	7440-38-2	mg/kg	19	3000		376		82		2040		1050	

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

					Location Sample #	SO-01 SO-01-A	SO-01 SO-01-B	SO-01 SO-01-C	SO-02 SO-02-A	SO-02 SO-02-B	SO-02 SO-02-C	SO-02 SO-02-D	SO-03 SO-03-A		
					Start Depth	0	0.5	1.5	0	0.5	1.5	3	0		
					End Depth	0.5	1.5	3	0.5	1.5	3	4	0.5		
					Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs		
					Sample Type	N	N	N	N	N	N	N	N		
					Parent Sample #										
					Sample Date	8/7/2019	8/7/2019	8/7/2019	8/6/2019	8/6/2019	8/6/2019	8/6/2019	8/6/2019		
Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
011-Inorganics-Piers	Barium	7440-39-3	mg/kg	59000	251		278		188		1200		504		226
011-Inorganics-Piers	Beryllium	7440-41-7	mg/kg	140	1.45		0.667		0.638		0.981		1.17		0.698
011-Inorganics-Piers	Cadmium	7440-43-9	mg/kg	78	25.8		3.34		1.53		41.4		34.7		11.7
011-Inorganics-Piers	Calcium	7440-70-2	mg/kg		12000		15200 J		15900		8780		9610		6780
011-Inorganics-Piers	Chromium	7440-47-3	mg/kg	3600000	354		136 J		60.5		834		619		84.1
011-Inorganics-Piers	Cobalt	7440-48-4	mg/kg	590	61.5		14.4		10.3		73.8		84		31.9
011-Inorganics-Piers	Copper	7440-50-8	mg/kg	45000	2700		320		86		1990		2040		736
011-Inorganics-Piers	Cyanide	57-12-5	mg/kg	680	5.2 U		2.2 U		1.8 U		6 U		5.6 U		2.8 U
011-Inorganics-Piers	Iron	7439-89-6	mg/kg	820000	64600		23000		18800		49300 J		48500 J		31700 J
011-Inorganics-Piers	Lead	7439-92-1	mg/kg	800	3040		667		231		30700 J		9140 J		1110 J
011-Inorganics-Piers	Magnesium	7439-95-4	mg/kg		10500		6320		3680		4930 J		7240 J		455 J
011-Inorganics-Piers	Manganese	7439-96-5	mg/kg	5900	1030		274		252		527 J		690 J		29.6 J
011-Inorganics-Piers	Mercury	7439-97-6	mg/kg	65	1090		133 J		6.97		2280		611		35
011-Inorganics-Piers	MethylMercury	22967-92-6	ng/g		11.5		1.94 J		3.8		204		46.2		109
011-Inorganics-Piers	Nickel	7440-02-0	mg/kg	23000	683		67.2		28.3		243		408		16
011-Inorganics-Piers	Potassium	7440-09-7	mg/kg		2180		1570		1240		1610 J		1860 J		814 J
011-Inorganics-Piers	Selenium	7782-49-2	mg/kg	5700	3.26		1.25		0.49		4 J		3.1 J		25.4 J
011-Inorganics-Piers	Silver	7440-22-4	mg/kg	5700	72.8		6.9		1.01		165		92.8		2.46
011-Inorganics-Piers	Sodium	7440-23-5	mg/kg		1130		1010		646		986		1180		608
011-Inorganics-Piers	Thallium	7440-28-0	mg/kg	3	0.24 J		0.234		0.183		0.49		0.353		0.481
011-Inorganics-Piers	Vanadium	7440-62-2	mg/kg	1100	122		52.5		35.2		171 J		153 J		25.5 J
011-Inorganics-Piers	Zinc	7440-66-6	mg/kg	110000	3210		592		337		2040 J		2840 J		69.6 J
014-General Chemistry-Piers	Total Organic Carbon	TOC	µg/g		180000		32000		26000		130000		140000		65000
014-General Chemistry-Piers	TOTAL SOLIDS	TSOLIDS	%		30		66		80		27		28		67
					30		66		80		27		28		67
015-Grain Size-Piers	% COARSE SAND >.5 - 1 MM	COARSE SAND	%		0		11.08		9.39		0		3.37		3.28
015-Grain Size-Piers	% Coarse Sand >0.5 - 1.0 mm	%COARSE SAND	%												
015-Grain Size-Piers	% Fine Sand >.125 - .25 mm	%FINE SAND	%												
015-Grain Size-Piers	% Medium Sand >.25 - .5 mm	%MEDIUM SAND	%												
015-Grain Size-Piers	% MEDIUM SAND >.25 - .5 MM	MEDIUM SAND	%		13.32		17.9		17.04		8.74		17.99		15.68
015-Grain Size-Piers	0	HYD01	% Passing		8.9		10.51		14.79		15.33		18.02		22
015-Grain Size-Piers	0	HYD02	% Passing		8.9		9.76		13.38		13.42		15.44		19.7
015-Grain Size-Piers	0	HYD03	% Passing		7.58		8.26		10.38		9.08		12.19		17.41
015-Grain Size-Piers	0	HYD04	% Passing		7.58		7.31		8.97		9.08		12.19		14.34
015-Grain Size-Piers	0	HYD05	% Passing		5.91		6.56		8.27		9.08		8.94		11.85
015-Grain Size-Piers	0	HYD06	% Passing		2.92		4.66		5.08		4.24		5.69		7.82
015-Grain Size-Piers	0	HYD07	% Passing		1.25		2.96		2.78		-0.1		5.01		4.55
015-Grain Size-Piers	0.75 INCH SIEVE	SIEVE0.75IN	% Passing		100		100		100		100		100		100

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

					Location	SO-01	SO-01	SO-01	SO-02	SO-02	SO-02	SO-02	SO-02	SO-03
					Sample #	SO-01-A	SO-01-B	SO-01-C	SO-02-A	SO-02-B	SO-02-C	SO-02-D	SO-03-A	
					Start Depth	0	0.5	1.5	0	0.5	1.5	3	0	
					End Depth	0.5	1.5	3	0.5	1.5	3	4	0.5	
					Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	
					Sample Type	N	N	N	N	N	N	N	N	
					Parent Sample #									
					Sample Date	8/7/2019	8/7/2019	8/7/2019	8/6/2019	8/6/2019	8/6/2019	8/6/2019	8/6/2019	
Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
015-Grain Size-Piers	1.5 INCH SIEVE	SIEVE1.5IN	% Passing		100		100		100		100		100	
015-Grain Size-Piers	3 INCH SIEVE	SIEVE3IN	% Passing		100		100		100		100		100	
015-Grain Size-Piers	Clay	%CLAY	%		4.53		5.51		6.46		5.48		7.96	
015-Grain Size-Piers	GRAVEL	Gravel	%		0		29.12		16.49		0		5.62	
015-Grain Size-Piers	HYDROMETER, READING 1	HYD1-PARTICLE	um		36.63		35.5		34.05		36.4		32.73	
015-Grain Size-Piers	HYDROMETER, READING 2	HYD2-PARTICLE	um		23.16		22.45		21.79		23.02		23.26	
015-Grain Size-Piers	HYDROMETER, READING 3	HYD3-PARTICLE	um		13.51		13.06		12.49		13.08		13.51	
015-Grain Size-Piers	HYDROMETER, READING 4	HYD4-PARTICLE	um		9.56		9.39		9.22		9.4		9.56	
015-Grain Size-Piers	HYDROMETER, READING 5	HYD5-PARTICLE	um		6.8		6.64		6.57		6.76		6.87	
015-Grain Size-Piers	HYDROMETER, READING 6	HYD6-PARTICLE	um		3.46		3.39		3.39		3.46		3.46	
015-Grain Size-Piers	HYDROMETER, READING 7	HYD7-PARTICLE	um		1.43		1.4		1.4		1.43		1.39	
015-Grain Size-Piers	Percent Passing Sieve#10	SIEVE10	% Passing		100		59.8		74.12		100		91.01	
015-Grain Size-Piers	Percent Passing Sieve#20	SIEVE20	% Passing		95.01		52.13		66.36		97.38		85.38	
015-Grain Size-Piers	Percent Passing Sieve#40	SIEVE40	% Passing		86.68		41.91		57.08		91.26		73.02	
015-Grain Size-Piers	Percent Passing Sieve#60	SIEVE60	% Passing		78.36		32.53		48.78		84.28		53.9	
015-Grain Size-Piers	Sand Fine	FINE SAND	%		23.31		26.28		22.5		34.94		58.47	
015-Grain Size-Piers	Sieve 0.25 inch, % passing	SIEVE0.25IN	% Passing		100		76.85		88.1		100		100	
015-Grain Size-Piers	SIEVE 1 inch, Percent Finer	SIEVE1INCH	% Passing		100		100		100		100		100	
015-Grain Size-Piers	SIEVE 2 inch, Percent Finer	SIEVE2INCH	% Passing		100		100		100		100		100	
015-Grain Size-Piers	SIEVE NO. 80, PERCENT PASSING	SIEVE80	% Passing		73.92		26.71		43.97		79.91		39.29	
015-Grain Size-Piers	SIEVE, 0.15 mm, PERCENT PASSING	SIEVEUS100	% Passing		71.7		23.58		41.46		76.41		32.54	
015-Grain Size-Piers	SIEVE, 4.75 mm, PERCENT PASSING	SIEVEUS4	% Passing		100		70.88		83.51		100		94.38	
015-Grain Size-Piers	Sieve-U.S. Std. No. 200 (0.075 mm)	SIEVEUS200	% Passing		63.37		15.63		34.58		56.32		14.55	
015-Grain Size-Piers	Silt	%SILT	%											
015-Grain Size-Piers	SILT	445	%		58.84		10.12		28.12		50.84		6.59	

Notes:

1. Results that are greater than the RI soil screening criteria are highlighted yellow.

Acronyms:

FD - field duplicate
ft bgs - feet below ground surface
J - estimated
J+ - estimated, biased high
J- - estimated, biased low
J-EMPC - estimated maximum possible concentration
mg/kg - milligram per kilogram
N - normal

ng/g - nanogram per gram
Q - qualifier
R - rejected
RI - remedial investigation
U - nondetect
UJ - nondetect, estimated
µg/kg - microgram per kilogram

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

					Location Sample #	SO-03 SO-03-B	SO-03 SO-03-C	SO-03 SO-03-D	SO-04 SO-04-A	SO-04 SO-04-B	SO-04 SO-04-C	
					Start Depth	0.5	1.5	3	0	0.5	1.5	
					End Depth	1.5	3	4	0.5	1.5	3	
					Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	
					Sample Type	N	N	N	N	N	N	
					Parent Sample #							
					Sample Date	8/6/2019	8/6/2019	8/6/2019	7/2/2019	7/2/2019	7/2/2019	
Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q
001-VOCs-Piers	1,1,1-Trichloroethane	71-55-6	µg/kg	200	17	UJ	8	U	6.5	U	6	U
001-VOCs-Piers	1,1,2,2-Tetrachloroethane	79-34-5	µg/kg	3000	17	UJ	8	UJ	6.5	UJ	6	U
001-VOCs-Piers	1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	µg/kg	28000000	17	UJ	8	U	6.5	U	6	U
001-VOCs-Piers	1,1,2-Trichloroethane	79-00-5	µg/kg	6000	17	UJ	8	U	6.5	U	6	U
001-VOCs-Piers	1,1-Dichloroethane	75-34-3	µg/kg	24000	17	UJ	8	U	6.5	U	6	U
001-VOCs-Piers	1,1-Dichloroethene	75-35-4	µg/kg	150000	17	UJ	8	U	6.5	U	6	U
001-VOCs-Piers	1,2,3-Trichlorobenzene	87-61-6	µg/kg	930000	17	UJ	8	UJ	6.5	UJ	6	U
001-VOCs-Piers	1,2,4-Trichlorobenzene	120-82-1	µg/kg	820000	9.5	J	8	UJ	6.5	UJ	6	U
001-VOCs-Piers	1,2-Dibromo-3-chloropropane	96-12-8	µg/kg	200	17	UJ	8	UJ	6.5	UJ	6	U
001-VOCs-Piers	1,2-Dibromoethane	106-93-4	µg/kg	40	17	UJ	8	UJ	6.5	U	6	U
001-VOCs-Piers	1,2-Dichlorobenzene	95-50-1	µg/kg	59000000	84	J	2.4	J	6.5	UJ	6	U
001-VOCs-Piers	1,2-Dichloroethane	107-06-2	µg/kg	3000	17	UJ	8	U	6.5	U	6	UJ
001-VOCs-Piers	1,2-Dichloropropane	78-87-5	µg/kg	5000	17	UJ	8	U	6.5	U	6	U
001-VOCs-Piers	1,3-Dichlorobenzene	541-73-1	µg/kg	59000000	41	J	8	UJ	6.5	UJ	6	U
001-VOCs-Piers	1,4-Dichlorobenzene	106-46-7	µg/kg	13000	56	J	8	UJ	6.5	UJ	6	U
001-VOCs-Piers	2-Butanone	78-93-3	µg/kg	44000000	190	J	98	J	28	J	30	U
001-VOCs-Piers	2-Hexanone	591-78-6	µg/kg	1300000	85	UJ	40	UJ	32	U	30	U
001-VOCs-Piers	4-Methyl-2-pentanone	108-10-1	µg/kg	140000000	85	UJ	40	U	32	U	30	U
001-VOCs-Piers	Acetone	67-64-1	µg/kg	12000	610	J	340	J	120		30	U
001-VOCs-Piers	Benzene	71-43-2	µg/kg	5000	62	J	8	U	6.5	U	6	U
001-VOCs-Piers	Bromochloromethane	74-97-5	µg/kg	630000	17	UJ	8	U	6.5	U	6	U
001-VOCs-Piers	Bromodichloromethane	75-27-4	µg/kg	3000	17	UJ	8	U	6.5	U	6	U
001-VOCs-Piers	Bromoform	75-25-2	µg/kg	280000	17	UJ	8	UJ	6.5	U	6	U
001-VOCs-Piers	Bromomethane	74-83-9	µg/kg	59000	34	UJ	16	U	13	U	12	U
001-VOCs-Piers	Carbon Disulfide	75-15-0	µg/kg	110000000	17	UJ	6	J	6.5	U	6	U
001-VOCs-Piers	Carbon Tetrachloride	56-23-5	µg/kg	4000	17	UJ	8	U	6.5	U	6	U
001-VOCs-Piers	Chlorobenzene	108-90-7	µg/kg	7400000	18	J	8	UJ	6.5	U	6	U
001-VOCs-Piers	Chloroethane	75-00-3	µg/kg	1100000	34	UJ	16	U	13	U	12	U
001-VOCs-Piers	Chloroform	67-66-3	µg/kg	2000	17	UJ	8	U	6.5	U	6	U
001-VOCs-Piers	Chloromethane	74-87-3	µg/kg	12000	34	UJ	16	U	13	U	12	U
001-VOCs-Piers	cis-1,2-Dichloroethene	156-59-2	µg/kg	560000	9	J	15	J	1.7	J	6	U
001-VOCs-Piers	cis-1,3-Dichloropropene	10061-01-5	µg/kg	7000	17	UJ	8	U	6.5	U	6	U
001-VOCs-Piers	Cyclohexane	110-82-7	µg/kg	27000000	17	UJ	8	U	6.5	U	6	U
001-VOCs-Piers	Dibromochloromethane	124-48-1	µg/kg	8000	17	UJ	8	UJ	6.5	U	6	U
001-VOCs-Piers	Dichlorodifluoromethane	75-71-8	µg/kg	230000000	34	UJ	16	U	13	U	12	U
001-VOCs-Piers	Ethylbenzene	100-41-4	µg/kg	110000000	6.5	J	8	UJ	6.5	U	6	U
001-VOCs-Piers	Isopropylbenzene	98-82-8	µg/kg	9900000	17	UJ	8	UJ	6.5	UJ	6	U
001-VOCs-Piers	m,p-Xylene	179601-23-1	µg/kg	170000000								
001-VOCs-Piers	M,P-XYLENE (SUM OF ISOMERS)	XYLMP	µg/kg	170000000	6.6	J	16	UJ	13	U	12	U

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

					Location	SO-03	SO-03	SO-03	SO-04	SO-04	SO-04	
					Sample #	SO-03-B	SO-03-C	SO-03-D	SO-04-A	SO-04-B	SO-04-C	
					Start Depth	0.5	1.5	3	0	0.5	1.5	
					End Depth	1.5	3	4	0.5	1.5	3	
					Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	
					Sample Type	N	N	N	N	N	N	
					Parent Sample #							
					Sample Date	8/6/2019	8/6/2019	8/6/2019	7/2/2019	7/2/2019	7/2/2019	
Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q
001-VOCs-Piers	Methyl acetate	79-20-9	µg/kg	14000	17	UJ	8	U	6.5	U	6	U
001-VOCs-Piers	Methyl tert-Butyl Ether	1634-04-4	µg/kg	320000	17	UJ	8	U	6.5	U	6	U
001-VOCs-Piers	Methylcyclohexane	108-87-2	µg/kg		17	UJ	8	U	6.5	U	6	U
001-VOCs-Piers	Methylene Chloride	75-09-2	µg/kg	230000	85	UJ	40	U	32	U	30	U
001-VOCs-Piers	o-Xylene	95-47-6	µg/kg	170000000	17	UJ	8	UJ	6.5	U	6	U
001-VOCs-Piers	Styrene	100-42-5	µg/kg	260000	17	UJ	8	UJ	6.5	U	6	U
001-VOCs-Piers	Tetrachloroethene	127-18-4	µg/kg	1500000	17	UJ	8	U	6.5	U	6	U
001-VOCs-Piers	Toluene	108-88-3	µg/kg	91000000	100	J	4.5	J	6.5	U	6	U
001-VOCs-Piers	trans-1,2-Dichloroethene	156-60-5	µg/kg	720000	2.6	J	2.3	J	6.5	U	6	U
001-VOCs-Piers	trans-1,3-Dichloropropene	10061-02-6	µg/kg	7000	17	UJ	8	U	6.5	U	6	U
001-VOCs-Piers	Trichloroethene	79-01-6	µg/kg	10000	7.7	J	5.9	J	6.5	U	6	U
001-VOCs-Piers	Trichlorofluoromethane	75-69-4	µg/kg	340000000	34	UJ	16	U	13	U	12	UJ
001-VOCs-Piers	Vinyl Chloride	75-01-4	µg/kg	2000	3.8	J	8.1	J	13	U	12	U
001-VOCs-Piers	Xylenes (TOTAL)	1330-20-7	µg/kg		6.6	J	24	UJ	20	U	18	U
002-SVOCs-Piers	1,1'-Biphenyl	92-52-4	µg/kg	240000	1200	U	590	U	550	U	410	U
002-SVOCs-Piers	1,2,4,5-Tetrachlorobenzene	95-94-3	µg/kg	350000	1200	U	590	U	550	U	410	U
002-SVOCs-Piers	1,4-Dioxane	123-91-1	µg/kg	24000	1200	U	590	U	550	U	410	U
002-SVOCs-Piers	2,2'-Oxybis(1-chloropropane)	108-60-1	µg/kg	67000	1200	UJ	590	UJ	550	UJ	410	U
002-SVOCs-Piers	2,3,4,6-Tetrachlorophenol	58-90-2	µg/kg	25000000	1200	U	590	U	550	U	410	U
002-SVOCs-Piers	2,4,5-Trichlorophenol	95-95-4	µg/kg	68000000	3100	U	1500	U	1400	U	1000	U
002-SVOCs-Piers	2,4,6-Trichlorophenol	88-06-2	µg/kg	74000	1200	U	590	U	550	U	410	U
002-SVOCs-Piers	2,4-Dichlorophenol	120-83-2	µg/kg	2100000	1200	U	590	U	550	U	410	U
002-SVOCs-Piers	2,4-Dimethylphenol	105-67-9	µg/kg	14000000	1200	U	590	U	550	U	410	U
002-SVOCs-Piers	2,4-Dinitrophenol	51-28-5	µg/kg	1400000		R	1500	U	1400	U	1000	U
002-SVOCs-Piers	2,4-Dinitrotoluene	121-14-2	µg/kg	3000	600	J	820		4200		410	U
002-SVOCs-Piers	2,6-Dinitrotoluene	606-20-2	µg/kg	3000	500	J	590	U	900		410	U
002-SVOCs-Piers	2-Chloronaphthalene	91-58-7	µg/kg	60000000	1200	U	590	U	550	U	410	U
002-SVOCs-Piers	2-Chlorophenol	95-57-8	µg/kg	2200000	1200	U	590	U	550	U	410	U
002-SVOCs-Piers	2-Methylnaphthalene	91-57-6	µg/kg	2400000	1200	U	350	J	200	J	160	J
002-SVOCs-Piers	2-Methylphenol	95-48-7	µg/kg	3400000	1200	U	590	U	550	U	410	U
002-SVOCs-Piers	2-Nitroaniline	88-74-4	µg/kg	23000000	3100	U	1500	U	1400	U	1000	U
002-SVOCs-Piers	2-Nitrophenol	88-75-5	µg/kg	1600	1200	U	590	U	550	U	410	U
002-SVOCs-Piers	3,3'-Dichlorobenzidine	91-94-1	µg/kg	4000		R	590	U	550	U	410	U
002-SVOCs-Piers	3-Nitroaniline	99-09-2	µg/kg	3160	3100	U	1500	U	1400	U	1000	U
002-SVOCs-Piers	4,6-Dinitro-2-methylphenol	534-52-1	µg/kg	68000	3100	UJ	1500	U	1400	U	1000	U
002-SVOCs-Piers	4-Bromophenyl-phenylether	101-55-3	µg/kg		1200	U	590	U	550	U	410	U
002-SVOCs-Piers	4-Chloro-3-methylphenol	59-50-7	µg/kg	82000000	1200	U	590	U	550	U	410	U
002-SVOCs-Piers	4-Chloroaniline	106-47-8	µg/kg	11000	1200	U	590	U	550	U	410	U
002-SVOCs-Piers	4-Chlorophenyl-phenylether	7005-72-3	µg/kg		1200	U	590	U	550	U	410	U

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

					Location	SO-03		SO-03		SO-03		SO-04		SO-04		SO-04	
					Sample #	SO-03-B		SO-03-C		SO-03-D		SO-04-A		SO-04-B		SO-04-C	
					Start Depth	0.5		1.5		3		0		0.5		1.5	
					End Depth	1.5		3		4		0.5		1.5		3	
					Depth Unit	ft bgs		ft bgs		ft bgs		ft bgs		ft bgs		ft bgs	
					Sample Type	N		N		N		N		N		N	
					Parent Sample #												
					Sample Date	8/6/2019		8/6/2019		8/6/2019		7/2/2019		7/2/2019		7/2/2019	
Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
002-SVOCs-Piers	4-Methylphenol	106-44-5	µg/kg	340000													
002-SVOCs-Piers	4-Nitroaniline	100-01-6	µg/kg	110000	3100	U	1500	U	1400	U	1000	U	1000	U	1100	U	
002-SVOCs-Piers	4-Nitrophenol	100-02-7	µg/kg	5120	3100	U	1500	U	1400	U	1000	U	1000	U	1100	U	
002-SVOCs-Piers	Acenaphthene	83-32-9	µg/kg	37000000	1200	U	590	U	550	U	500		210	J	250	J	
002-SVOCs-Piers	Acenaphthylene	208-96-8	µg/kg	300000000	1200	U	590	U	550	U	110	J	410	U	440	U	
002-SVOCs-Piers	Acetophenone	98-86-2	µg/kg	5000	1200	U	590	U	550	U	420	U	410	U	440	U	
002-SVOCs-Piers	Anthracene	120-12-7	µg/kg	30000000	36000		22000		370	J	1400		510		560		
002-SVOCs-Piers	Atrazine	1912-24-9	µg/kg	2400000	1200	UJ	590	U	550	U	420	UJ	410	U	440	UJ	
002-SVOCs-Piers	Benzaldehyde	100-52-7	µg/kg	68000000	1200	UJ	590	U	550	UJ	420	UJ	410	UJ	440	UJ	
002-SVOCs-Piers	Benzo(a)anthracene	56-55-3	µg/kg	17000	2100	J	590	U	1100		6600		1800		2600		
002-SVOCs-Piers	Benzo(a)pyrene	50-32-8	µg/kg	2000	2700	J	720	J	1100		6000		1700	J	2400	J	
002-SVOCs-Piers	Benzo(b)fluoranthene	205-99-2	µg/kg	17000	4200	J	590	UJ	1600		8400		2500	J	3500	J	
002-SVOCs-Piers	Benzo(g,h,i)perylene	191-24-2	µg/kg	30000000	2200	J	600	J	640		3200	J	850	J	1500	J	
002-SVOCs-Piers	Benzo(k)fluoranthene	207-08-9	µg/kg	170000	1700	J	590	UJ	640		3300	J	1200	J	1400	J	
002-SVOCs-Piers	Bis(2-chloroethoxy)methane	111-91-1	µg/kg	2500000	1200	U	590	U	550	U	420	U	410	U	440	U	
002-SVOCs-Piers	Bis(2-chloroethyl)ether	111-44-4	µg/kg	2000	1200	U	590	U	550	U	420	U	410	U	440	U	
002-SVOCs-Piers	Bis(2-ethylhexyl)phthalate	117-81-7	µg/kg	140000	18000		590	U	440	J	670	U	1400	U	500		
002-SVOCs-Piers	Butylbenzylphthalate	85-68-7	µg/kg	14000000	3200	J	590	U	550	U	420	U	410	U	440	U	
002-SVOCs-Piers	Caprolactam	105-60-2	µg/kg	340000000	1200	U	590	U	550	U	420	U	410	U	440	U	
002-SVOCs-Piers	Carbazole	86-74-8	µg/kg	96000	1200	U	590	U	550	U	940		250	J	330	J	
002-SVOCs-Piers	Chrysene	218-01-9	µg/kg	1700000	3000	J	590	U	1300		7100		2100		3100		
002-SVOCs-Piers	CRESOLS, M & P	MEPH1314	µg/kg		1200	U	590	U	550	U	420	U	410	U	440	U	
002-SVOCs-Piers	Dibenzo(a,h)anthracene	53-70-3	µg/kg	2000	650	J	590	UJ	550	U	1200	J	340	J	520	J	
002-SVOCs-Piers	Dibenzofuran	132-64-9	µg/kg	1000000	1200	U	590	U	550	U	310	J	410	U	440	U	
002-SVOCs-Piers	Diethylphthalate	84-66-2	µg/kg	550000000	1200	U	590	U	550	U	420	U	410	U	440	U	
002-SVOCs-Piers	Dimethylphthalate	131-11-3	µg/kg	734000	1200	U	590	U	550	U	420	U	410	U	440	U	
002-SVOCs-Piers	Di-n-butylphthalate	84-74-2	µg/kg	68000000	1200	U	590	U	550	U	420	U	410	U	440	U	
002-SVOCs-Piers	Di-n-octylphthalate	117-84-0	µg/kg	27000000	1200	UJ	590	UJ	550	U	420	UJ	410	UJ	440	UJ	
002-SVOCs-Piers	Fluoranthene	206-44-0	µg/kg	24000000	3800	J	590	U	1700		12000		2600		3300		
002-SVOCs-Piers	Fluorene	86-73-7	µg/kg	24000000	1200	U	590	U	550	U	580		180	J	210	J	
002-SVOCs-Piers	Hexachlorobenzene	118-74-1	µg/kg	1000	1200	U	590	U	550	U	420	U	410	U	440	U	
002-SVOCs-Piers	Hexachlorobutadiene	87-68-3	µg/kg	25000	1200	U	590	U	550	U	420	U	410	U	440	U	
002-SVOCs-Piers	Hexachlorocyclopentadiene	77-47-4	µg/kg	110000		R	590	U	550	U	420	U	410	UJ	440	U	
002-SVOCs-Piers	Hexachloroethane	67-72-1	µg/kg	48000	1200	U	590	U	550	U	420	U	410	U	440	U	
002-SVOCs-Piers	Indeno(1,2,3-cd)pyrene	193-39-5	µg/kg	17000	1900	J	460	J	580		3500	J	980	J	1400	J	
002-SVOCs-Piers	Isophorone	78-59-1	µg/kg	2000000	1200	U	590	U	550	U	420	U	410	U	440	U	
002-SVOCs-Piers	Naphthalene	91-20-3	µg/kg	17000	1200	U	220	J	550	U	200	J	410	U	440	U	
002-SVOCs-Piers	Nitrobenzene	98-95-3	µg/kg	14000	800	J	240	J	550	U	420	U	410	U	440	U	
002-SVOCs-Piers	N-Nitroso-di-n-propylamine	621-64-7	µg/kg	300	1200	U	590	U	550	U	420	U	410	U	440	U	

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

					Location	SO-03	SO-03	SO-03	SO-04	SO-04	SO-04					
					Sample #	SO-03-B	SO-03-C	SO-03-D	SO-04-A	SO-04-B	SO-04-C					
					Start Depth	0.5	1.5	3	0	0.5	1.5					
					End Depth	1.5	3	4	0.5	1.5	3					
					Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs					
					Sample Type	N	N	N	N	N	N					
					Parent Sample #											
					Sample Date	8/6/2019	8/6/2019	8/6/2019	7/2/2019	7/2/2019	7/2/2019					
Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q				
002-SVOCs-Piers	N-Nitrosodiphenylamine	86-30-6	µg/kg	390000	1200	U	590	U	1400		420	U	440	U		
002-SVOCs-Piers	Pentachlorophenol	87-86-5	µg/kg	3000	3100	U	1500	U	1400	U	1000	U	1000	U		
002-SVOCs-Piers	Phenanthrene	85-01-8	µg/kg	45700	2000	J	590	U	630		8200		2200		2700	
002-SVOCs-Piers	Phenol	108-95-2	µg/kg	210000000	1200	U	590	U	550	U	420	U	410	U	440	U
002-SVOCs-Piers	Pyrene	129-00-0	µg/kg	18000000	6000		590	U	2400		12000		3800		4900	
003-Pest-Piers	4,4'-DDD	72-54-8	µg/kg	13000	2100		820	J	61	J	120	J	55		24	
003-Pest-Piers	4,4'-DDE	72-55-9	µg/kg	9000	300	J	84	J	33	U	150	J	110		61	
003-Pest-Piers	4,4'-DDT	50-29-3	µg/kg	8000	960	J	390	J	33	U	180	J	130	J	65	J
003-Pest-Piers	Aldrin	309-00-2	µg/kg	200	350	J	73	J	17	U	2.2	U	2.1	U	2.3	U
003-Pest-Piers	alpha-BHC	319-84-6	µg/kg	500	38	U	18	U	17	U	2.2	U	2.1	U	2.3	U
003-Pest-Piers	alpha-Chlordane	5103-71-9	µg/kg	1000000	800	J	91	J	51	J	2.2	U	4.8		2.1	J
003-Pest-Piers	beta-BHC	319-85-7	µg/kg	2000	38	U	18	U	17	U	2.2	U	2.1	U	2.3	U
003-Pest-Piers	delta-BHC	319-86-8	µg/kg	1300	450	J	110	J	17	U	2.2	U	2.1	U	2.3	U
003-Pest-Piers	Dieldrin	60-57-1	µg/kg	200	760	J	170	J	15	J	4.3	U	81	J	110	
003-Pest-Piers	Endosulfan I	959-98-8	µg/kg	6800000	38	U	18	U	17	U	2.4	J	1.1	J	2.3	U
003-Pest-Piers	Endosulfan II	33213-65-9	µg/kg	6800000	74	U	35	U	33	U	4.3	U	12	J	4.4	U
003-Pest-Piers	Endosulfan Sulfate	1031-07-8	µg/kg	6800000	190	J	35	U	33	U	4.3	U	4	U	4.4	U
003-Pest-Piers	Endrin	72-20-8	µg/kg	340000	74	U	35	U	33	U	4.3	U	4	U	4.4	U
003-Pest-Piers	Endrin aldehyde	7421-93-4	µg/kg	1620	220	J	35	U	33	U	4.3	U	4	U	4.4	U
003-Pest-Piers	Endrin Ketone	53494-70-5	µg/kg	1620	74	U	35	U	33	U	4.3	U	4	U	4.4	U
003-Pest-Piers	gamma-BHC (Lindane)	58-89-9	µg/kg	2000	38	U	18	U	17	U	2.2	U	2.1	U	2.3	U
003-Pest-Piers	gamma-Chlordane	5103-74-2	µg/kg	1000000	1100	J	130	J	20	J	2.2	U	2.1	U	2.3	U
003-Pest-Piers	Heptachlor	76-44-8	µg/kg	700	38	U	18	U	17	U	2.2	U	2.1	U	2.3	U
003-Pest-Piers	Heptachlor Epoxide	1024-57-3	µg/kg	300	38	U	18	U	17	U	2.2	U	4.2		2.3	U
003-Pest-Piers	Methoxychlor	72-43-5	µg/kg	5700000	380	U	180	U	170	U	22	U	21	U	23	U
003-Pest-Piers	Toxaphene	8001-35-2	µg/kg	3000	740	U	350	U	330	U	43	U	40	U	44	U
005-Aroclors-Piers	Aroclor 1016	12674-11-2	µg/kg	1000	630	U	310	U	140	UJ	110	U	100	U	110	UJ
005-Aroclors-Piers	Aroclor 1221	11104-28-2	µg/kg	1000	630	U	310	U	140	UJ	110	U	100	U	110	UJ
005-Aroclors-Piers	Aroclor 1232	11141-16-5	µg/kg	1000	630	U	310	U	140	UJ	110	U	100	U	110	UJ
005-Aroclors-Piers	Aroclor 1242	53469-21-9	µg/kg	1000	49000		7100		140	UJ	110	U	100	U	110	UJ
005-Aroclors-Piers	Aroclor 1248	12672-29-6	µg/kg	1000	630	U	310	U	140	UJ	110	U	100	U	110	UJ
005-Aroclors-Piers	Aroclor 1254	11097-69-1	µg/kg	1000	32000		310	U	140	UJ	110	U	100	U	110	UJ
005-Aroclors-Piers	Aroclor 1260	11096-82-5	µg/kg	1000	12000		3300		140	UJ	1900	J	620		240	J
005-Aroclors-Piers	Aroclor 1262	37324-23-5	µg/kg	1000	630	U	310	U	140	UJ	110	U	100	U	110	UJ
005-Aroclors-Piers	Aroclor 1268	11100-14-4	µg/kg	1000	630	U	310	U	140	UJ	110	U	100	U	110	UJ
005-Aroclors-Piers	Total Aroclors	TARO	µg/kg	1000	93000		10400		0	U	1900		620		240	
011-Inorganics-Piers	Aluminum	7429-90-5	mg/kg	3900	35700		8330		5530		9540		8930		12300	
011-Inorganics-Piers	Antimony	7440-36-0	mg/kg	450	55.6	J	46.4		1.58		15.4		9.18		17.8	
011-Inorganics-Piers	Arsenic	7440-38-2	mg/kg	19	651		589		1280		25.4		19.2		17.8	

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

					Location	SO-03		SO-03		SO-03		SO-04		SO-04		SO-04	
					Sample #	SO-03-B		SO-03-C		SO-03-D		SO-04-A		SO-04-B		SO-04-C	
					Start Depth	0.5		1.5		3		0		0.5		1.5	
					End Depth	1.5		3		4		0.5		1.5		3	
					Depth Unit	ft bgs		ft bgs		ft bgs		ft bgs		ft bgs		ft bgs	
					Sample Type	N		N		N		N		N		N	
					Parent Sample #												
					Sample Date	8/6/2019		8/6/2019		8/6/2019		7/2/2019		7/2/2019		7/2/2019	
Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	
011-Inorganics-Piers	Barium	7440-39-3	mg/kg	59000	825	J	339		140		2470		1270		1080		
011-Inorganics-Piers	Beryllium	7440-41-7	mg/kg	140	1.25		0.323		0.358		0.694		0.59		0.747		
011-Inorganics-Piers	Cadmium	7440-43-9	mg/kg	78	100	J	24.4		2.2		38.8		9.79		8.41		
011-Inorganics-Piers	Calcium	7440-70-2	mg/kg		25200		5620		1800		19700		9520		9990		
011-Inorganics-Piers	Chromium	7440-47-3	mg/kg	3600000	779		527		85.5		279		90.3		105		
011-Inorganics-Piers	Cobalt	7440-48-4	mg/kg	590	126		30.8		5.67		14.9		13		9.4		
011-Inorganics-Piers	Copper	7440-50-8	mg/kg	45000	3040		1760		586		2500		545		662		
011-Inorganics-Piers	Cyanide	57-12-5	mg/kg	680	5.6	UJ	14		1.1	J	0.64	U	1.2	U	1.1	U	
011-Inorganics-Piers	Iron	7439-89-6	mg/kg	820000	69600	J	31600		15100		45000		39800		31600		
011-Inorganics-Piers	Lead	7439-92-1	mg/kg	800	7820	J	4970		285		2980		2000		1940		
011-Inorganics-Piers	Magnesium	7439-95-4	mg/kg		9940		1610		797		3920		2470		3110		
011-Inorganics-Piers	Manganese	7439-96-5	mg/kg	5900	1060		211		65.3		584		447		435		
011-Inorganics-Piers	Mercury	7439-97-6	mg/kg	65	7110	J	612	J	21.3	J	8.26		109		4.5		
011-Inorganics-Piers	MethylMercury	22967-92-6	ng/g		762	J-	1280		1.48		2.37		2.89	J	6.47	J	
011-Inorganics-Piers	Nickel	7440-02-0	mg/kg	23000	345		79.8		18		207		85.7		79.6		
011-Inorganics-Piers	Potassium	7440-09-7	mg/kg		2420		498		1260		1310		1030		971		
011-Inorganics-Piers	Selenium	7782-49-2	mg/kg	5700	6.85		6.06		2.19		696		7.16		12.1		
011-Inorganics-Piers	Silver	7440-22-4	mg/kg	5700	195		69.7		0.818		11.2		13.6		5.68		
011-Inorganics-Piers	Sodium	7440-23-5	mg/kg		1510		381		298		341		216		227		
011-Inorganics-Piers	Thallium	7440-28-0	mg/kg	3	0.502		0.266	U	0.305	U	0.199		0.152		0.173		
011-Inorganics-Piers	Vanadium	7440-62-2	mg/kg	1100	208		91.5		22.1		55.8		34.2		41.3		
011-Inorganics-Piers	Zinc	7440-66-6	mg/kg	110000	7820		1590		480		2880		1510		2420		
014-General Chemistry-Piers	Total Organic Carbon	TOC	µg/g		240000	J	140000		51000		52000		110000		31000		
014-General Chemistry-Piers	TOTAL SOLIDS	TSOLIDS	%		26		54		60		77		81		74		
					26		54		60		77		81		74		
015-Grain Size-Piers	% COARSE SAND > .5 - 1 MM	COARSE SAND	%		0		10.1		11.53		11.88		11.18		12.33		
015-Grain Size-Piers	% Coarse Sand >0.5 - 1.0 mm	%COARSE SAND	%														
015-Grain Size-Piers	% Fine Sand >.125 - .25 mm	%FINE SAND	%														
015-Grain Size-Piers	% Medium Sand > .25 - .5 mm	%MEDIUM SAND	%														
015-Grain Size-Piers	% MEDIUM SAND > .25 - .5 MM	MEDIUM SAND	%		3.68		29.26		18.8		21.88		22.9		25.19		
015-Grain Size-Piers	0	HYD01	% Passing		25.48		6.96		8.64		8.22		14.15		14.5		
015-Grain Size-Piers	0	HYD02	% Passing		20.32		5.43		7.88		7.54		12.86		11.99		
015-Grain Size-Piers	0	HYD03	% Passing		16.44		3.91		6.37		6		10.7		8.85		
015-Grain Size-Piers	0	HYD04	% Passing		13.52		4.15		5.62		5.32		8.98		8.23		
015-Grain Size-Piers	0	HYD05	% Passing		10.94		2.62		5.1		3.96		7.69		6.8		
015-Grain Size-Piers	0	HYD06	% Passing		6.73		1.1		2.6		2.41		5.41		4.74		
015-Grain Size-Piers	0	HYD07	% Passing		2.51		0.86		1.61		0.94		3.07		2.13		
015-Grain Size-Piers	0.75 INCH SIEVE	SIEVE0.75IN	% Passing		100		100		85.47		100		100		100		

Appendix H-2
Analytical Results for Soil
Pierson's Creek Superfund Site
Newark, New Jersey

					Location	SO-03	SO-03	SO-03	SO-04	SO-04	SO-04	
					Sample #	SO-03-B	SO-03-C	SO-03-D	SO-04-A	SO-04-B	SO-04-C	
					Start Depth	0.5	1.5	3	0	0.5	1.5	
					End Depth	1.5	3	4	0.5	1.5	3	
					Depth Unit	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	ft bgs	
					Sample Type	N	N	N	N	N	N	
					Parent Sample #							
					Sample Date	8/6/2019	8/6/2019	8/6/2019	7/2/2019	7/2/2019	7/2/2019	
Method Group	Analyte	CAS #	Units	RI Soil Screening Criteria	Result	Q	Result	Q	Result	Q	Result	Q
015-Grain Size-Piers	1.5 INCH SIEVE	SIEVE1.5IN	% Passing		100		100		100		100	
015-Grain Size-Piers	3 INCH SIEVE	SIEVE3IN	% Passing		100		100		100		100	
015-Grain Size-Piers	Clay	%CLAY	%		8.62		2.12		3.81		6.56	
015-Grain Size-Piers	GRAVEL	Gravel	%		0		15.15		35.38		14.89	
015-Grain Size-Piers	HYDROMETER, READING 1	HYD1-PARTICLE	um		34.67		37.28		36.66		32.61	
015-Grain Size-Piers	HYDROMETER, READING 2	HYD2-PARTICLE	um		22.35		23.74		23.43		20.9	
015-Grain Size-Piers	HYDROMETER, READING 3	HYD3-PARTICLE	um		13.05		13.85		13.62		12.49	
015-Grain Size-Piers	HYDROMETER, READING 4	HYD4-PARTICLE	um		9.35		9.73		9.63		8.86	
015-Grain Size-Piers	HYDROMETER, READING 5	HYD5-PARTICLE	um		6.68		6.95		6.84		6.45	
015-Grain Size-Piers	HYDROMETER, READING 6	HYD6-PARTICLE	um		3.42		3.5		3.47		3.32	
015-Grain Size-Piers	HYDROMETER, READING 7	HYD7-PARTICLE	um		1.42		1.44		1.44		1.38	
015-Grain Size-Piers	Percent Passing Sieve#10	SIEVE10	% Passing		100		74.74		53.09		61.07	
015-Grain Size-Piers	Percent Passing Sieve#20	SIEVE20	% Passing		98.77		62.37		44.88		51.28	
015-Grain Size-Piers	Percent Passing Sieve#40	SIEVE40	% Passing		96.32		45.48		34.3		39.18	
015-Grain Size-Piers	Percent Passing Sieve#60	SIEVE60	% Passing		93.25		32.94		26.24		28.08	
015-Grain Size-Piers	Sand Fine	FINE SAND	%		15.96		32.23		25.59		27.05	
015-Grain Size-Piers	Sieve 0.25 inch, % passing	SIEVE0.25IN	% Passing		100		87.28		70.15		77.24	
015-Grain Size-Piers	SIEVE 1 inch, Percent Finer	SIEVE1INCH	% Passing		100		100		100		100	
015-Grain Size-Piers	SIEVE 2 inch, Percent Finer	SIEVE2INCH	% Passing		100		100		100		100	
015-Grain Size-Piers	SIEVE NO. 80, PERCENT PASSING	SIEVE80	% Passing		91.41		26.32		18.82		22.58	
015-Grain Size-Piers	SIEVE, 0.15 mm, PERCENT PASSING	SIEVEUS100	% Passing		89.57		22.49		15.03		19.39	
015-Grain Size-Piers	SIEVE, 4.75 mm, PERCENT PASSING	SIEVEUS4	% Passing		100		84.85		64.62		72.95	
015-Grain Size-Piers	Sieve-U.S. Std. No. 200 (0.075 mm)	SIEVEUS200	% Passing		80.36		13.25		8.71		12.13	
015-Grain Size-Piers	Silt	%SILT	%									
015-Grain Size-Piers	SILT	445	%		71.74		11.14		4.9		8.86	

Notes:

1. Results that are greater than the RI soil screening criteria are highlighted yellow.

Acronyms:

FD - field duplicate	ng/g - nanogram per gram
ft bgs - feet below ground surface	Q - qualifier
J - estimated	R - rejected
J+ - estimated, biased high	RI - remedial investigation
J- estimated, biased low	U - nondetect
J-EMPC - estimated maximum possible concentration	UJ - nondetect, estimated
mg/kg - milligram per kilogram	µg/kg - microgram per kilogram
N - normal	

Appendix F
Salomone Limited Phase II Report



October 10, 2019

Joseph Salomone
366-394 Wilson Ave, LLC
17 Demarest Drive
Wayne, NJ 07470

**RE: Limited Phase II Environmental Site Assessment
Due Diligence Investigation
Industrial Property
366-394 Wilson Avenue Rear
Newark, NJ 07105**

Dear Mr. Salomone:

Environmental and Geotechnical Services (EGS) is providing this summary letter report to document the results of our Limited Phase-II Environmental Site Assessment (ESA) performed at the subject property on September 26, 2019.

In the course of historical data gathering for the Phase-I ESA, please note that the subject property is not identified as a known contaminated site (KCS) and is not listed with open or active site remediation cases in the New Jersey Department of Environmental Protection Site Remediation Program (SRP). EGS noted two potential areas of concern (discussed in the previous Phase-I report) or Recognized Environmental Conditions (RECs) at the site. The following RECs were further investigated via soil borings and soil sampling.

- REC-1-Historical Precious Metal Recycling and Smelting Operations (4 soil borings)
REC-2-Historical Ultramarine Manufacturing Operations (4 soil borings)

A total of four (4) soil borings were conducted on site. The soil boring locations are shown on the attached Site Plan.

The following scope of work was recommended by EGS and authorized by 366-394 Wilson Ave, LLC and is beyond the scope of the ASTM Standard E1527-13 (Phase-I ESA). The results of the latest scope of work are discussed in this report. The methodology used in the Phase-II ESA and the results are discussed below.

Limited Phase-II ESA Purpose

On September 26, 2019 EGS conducted a limited Phase II ESA or site investigation ("SI") at the subject property in order to investigate the RECs that were identified in our Phase-I ESA .

Soil Boring Installation

On September 26, 2019 limited SI activities consisted of advancing four (4) soil borings throughout the subject property to address RECs identified during the Phase-I ESA. The September 26, 2019 soil borings were advanced by Salomone Bros., Inc. (“SBI”) utilizing a direct-push probe drill rig (AMS PowerProbe model# 9630 VTR). A dual tube macro-core sampler assembly was used to limit potential cross contamination between sampling depths. The stainless steel sampler assembly and probe rods were decontaminated (via usage ofalconox and water) in between each soil sample location. Four soil samples were collected from the following soil borings to address REC-1 and REC-2: (N, NE, E and SW). An EGS Geologist performed site assessment and soil sampling. Upon completion of all sampling activities, the boreholes were filled by SBI with soil cuttings and sealed with bentonite. The soil samples were sent to a state-certified laboratory for analysis.

Completed soil boring depths on September 26, 2019 consisted of the following:

- N (REC-1 and REC-2): 8 feet below grade
- NE (REC-1 and REC-2): 10 feet below grade
- E (REC-1 and REC-2): 12 feet below grade
- SW (REC-1 and REC-2): 8 feet below grade

Sample Collection and Handling-Soil Boring Sampling

Soil sampling procedures and sample handling were based on the New Jersey Department of Environmental Protection (“NJDEP”) *Field Sampling Procedures Manual* (2005). To prevent cross-contamination, the sampler wore dedicated, disposable, latex gloves and dedicated sampling devices at each sampling point. The soil samples were analyzed for a comprehensive suite of parameters which included United States Environmental Protection Agency (USEPA) target compound list/target analyte list (TCL/TAL) and Category 1 extractable petroleum hydrocarbons (EPH). Each soil sample for volatile organic compound (VOC) analysis was collected in the field using dedicated disposable Encore^R samplers, while the aliquots for EPH, semi-volatile organic compounds (SVOCs), target analyte list (TAL) metals, pesticides, polychlorinated biphenyls (PCBs) and cyanide were collected by transferring soil directly into a laboratory-provided glass jars.

The sample containers were labeled, and then temporarily stored in a chilled cooler with ice packs for transport to the laboratory. A chain-of-custody record was initiated and accompanied the sample jars to the laboratory for completion. A state-certified lab, Accredited Analytical Resources, LLC (“AAR”) of Carteret, NJ (NJDEP Certification #12007), performed all analytical work.

Site Assessment Activities

September 26, 2019

The soil cores were extensively field-screened using a portable photoionization detector (PID; RKI Instruments model GX-6000) calibrated for isobutylene. No indications of significant contamination (e.g., staining, odors) were noted from the soil borings advanced to address REC-1 and REC-2. No PID readings were recorded from the soil borings advanced on September 26, 2019. The soil samples were collected from the following depth intervals:

Soil sample N: Based on the absence of field indicators of contamination (no PID readings, staining or odors) and to address the “worst case” depth interval with regard to potential contamination, the 366-394 Wilson Avenue Rear Limited Phase II ESA

uppermost six inches of surficial soils, soil sample N was collected from 0.0-0.5 feet below grade (fbg). This soil sample was collected to address historical site operations and was further located adjacent to the onsite holding tank with force main pit.

Soil sample NE: Based on the absence of field indicators of contamination (no PID readings, staining or odors) and to address the “worst case” depth interval with regard to potential contamination, the uppermost six inches of surficial soils, soil sample NE was collected from 0.0-0.5 fbg.. This soil sample was collected to address historical site operations and was further located in the area of soil piles that were observed in historical aerial photographs.

Soil sample E: Based on the absence of field indicators of contamination (no PID readings, staining or odors) and to address the “worst case” depth interval with regard to potential contamination, the uppermost six inches of surficial soils, soil sample E was collected from 0.0-0.5 fbg. This soil sample was collected to address historical site operations and was further located at the edge of the concrete pad which historically was used to store precious metal in drums and other containers.

Soil sample SW: Based on the absence of field indicators of contamination (no PID readings, staining or odors) and to address the “worst case” depth interval with regard to potential contamination, the uppermost six inches of surficial soils, soil sample SW was collected from 0.0-0.5 fbg. This soil sample was collected to address historical site operations and was further located in the area of appreciable precious metal and other unknown materials observed in historical aerial photographs.

Results-Soil Boring Samples

REC-1 and REC-2 Historical Precious Metal Recycling and Smelting Operations and Historical Ultramarine Manufacturing Operations)

Attachment 1 consists of a site plan depicting the soil boring locations.

The NJDEP has developed procedures to determine the site-specific impact-to-groundwater soil remediation standard (IGWSRS) for certain contaminants using results from a Synthetic Precipitation Leaching Procedure (SPLP) test. The SPLP procedure is an acceptable methodology by the NJDEP in determining alternative cleanup standards for inorganic and low mobility organic compounds, such as benzo(a)pyrene and metals.

Aside from comparing soil contaminant concentrations to residential (direct contact) soil standards (RDCSRS), the NJDEP also requires evaluation of contamination in terms of impact-to-groundwater. In many cases, the NJDEP’s default impact-to-groundwater soil screening levels (DIGWSSLs) are more stringent than residential standards. When a contaminant in a sample exceeds its DIGWSSL, the NJDEP allows reevaluation of such contamination and obtaining an alternative or site-specific IGWSRS.

Since the SVOC benzo(a)pyrene and the metals cadmium, lead and mercury were detected above their respective DIGWSSLs in some of the soil samples, SPLP analysis was performed by the lab on vadose zone soil samples N, NE, E and SW. SPLP is a USEPA test method that can be used with soil samples to estimate the site-specific adsorption-desorption potential of a contaminant that may impact groundwater. The procedure consists of a batch equilibrium experiment in which contaminant is partitioned between soil solids and an extracting solution, using a 20:1 ratio of solution to solid. The resulting solution is known as the leachate. Contaminant concentrations in the SPLP leachate are compared to appropriate criteria to determine whether the soil represents an unacceptable leaching threat. This evaluation is facilitated by using the NJDEP’s SPLP spreadsheet (calculator) and, if successful, site-specific standards are determined.

For determination of New Jersey IGWSRS, the results from this test are first used to estimate the leachate concentration of a contaminant in soil solution under natural conditions in the field. Then, the estimated field leachate concentration is compared to an appropriate leachate criterion (LC) to determine whether the contaminated soil represents a potential threat to groundwater quality. If the estimated field leachate concentration exceeds the leachate criterion, the NJDEP has developed procedures to determine a site-specific impact to groundwater soil remediation standard (IGWSRS) using results from the SPLP test. The SPLP procedure is acceptable by the NJDEP in determining cleanup standards for inorganic and low mobility organic compounds, such as benzo(a)pyrene and metals that were detected above their very low DIGWSSLs during the Phase II investigation.

After the lab's SPLP analysis and using the NJDEP's SPLP Spreadsheet (V. 3.1, November 2013), the site-specific IGWSRS for benzo(a)pyrene, cadmium, lead and mercury were determined to be:

- Benzo(a)pyrene (**0.414 ppm**)
- Cadmium (**8 ppm**)
- Lead (**150 ppm**)
- Mercury (**12.4 ppm**)

Based on the above alternative standards, all sampling results for benzo(a)pyrene, cadmium, lead and mercury are in compliance with the respective site-specific IGWSRS. Thus, the impact-to-groundwater pathway has been reevaluated and the alternative standards indicate compliance.

The following is a summation of the additional soil sampling results for this limited Phase-II ESA:

Soil sample N:

- All VOC, EPH, PCB, pesticides, and cyanide concentrations were detected below their respective NJDEP Residential Direct Contact Soil Remediation Standards (RDCSRS) and Non-Residential Direct Contact Soil Remediation Standards (NRDCSRS). The following metals were detected above their NJDEP Default Impact-to-Groundwater Soil Screening Levels (DIGWSSLs):
- Aluminum. It should be noted that per NJDEP's Frequently Asked Questions for the Impact-to-Groundwater Pathway in Soil Remediation Standards, aluminum is considered a secondary metal (not a health consideration, but rather an aesthetic consideration, i.e., based on taste, odor or appearance) and the Impact-to-Groundwater Pathway does not have to be addressed unless there is reason to believe that the presence of aluminum is related to a site discharge.
- Manganese. It should be noted that per NJDEP's Frequently Asked Questions for the Impact-to-Groundwater Pathway in Soil Remediation Standards, manganese is considered a secondary metal (not a health consideration, but rather an aesthetic consideration, i.e., based on taste, odor or appearance) and the Impact-to-Groundwater Pathway does not have to be addressed unless there is reason to believe that the presence of manganese is related to a site discharge.
- Silver. It should be noted that per NJDEP's Frequently Asked Questions for the Impact-to-Groundwater Pathway in Soil Remediation Standards, silver is considered a secondary metal (not a health consideration, but rather an aesthetic consideration, i.e., based on taste, odor or appearance) and the Impact-to-Groundwater Pathway does not have to be addressed unless there is reason to believe that the presence of silver is related to a site discharge.

The metals aluminum, manganese, and silver were detected above NJDEP's DIGWSSL. Aluminum, manganese and silver are known to occur at elevated levels in natural soils in New Jersey. (See "*Ambient Levels of Metals in New Jersey Soils*" by Paul F. Sanders, 2003.) The site is considered to be located in the Urban Piedmont region of New Jersey. Based on a review of

such published literature, the concentration of aluminum is lower than the median concentration in the Urban Piedmont region of New Jersey. The concentration of aluminum is also below the 90th percentile concentration in the Urban Piedmont region of New Jersey. Based on a review of such published literature, the concentration of manganese is lower than the median concentration in the Urban Piedmont region of New Jersey. The concentration of manganese is also below the 90th percentile concentration in the Urban Piedmont region of New Jersey. Based on a review of such published literature, the concentration of silver is above the 90th percentile concentration in the Urban Piedmont region of New Jersey.

Soil sample NE:

- All VOC, EPH, PCB, pesticides, and cyanide concentrations were detected below their respective NJDEP RDCSRS and NRDCSRS. The following metals were detected above their NJDEP DIGWSSLs:
- Aluminum and manganese.

The metals aluminum and manganese were detected above NJDEP's DIGWSSL. Based on a review of *Ambient Levels of Metals in New Jersey Soils* the concentration of aluminum is lower than the median concentration in the Urban Piedmont region of New Jersey. The concentration of aluminum is also below the 90th percentile concentration in the Urban Piedmont region of New Jersey. Based on a review of such published literature, the concentration of manganese is lower than the median concentration in the Urban Piedmont region of New Jersey. The concentration of manganese is also below the 90th percentile concentration in the Urban Piedmont region of New Jersey.

Soil sample E:

- All VOC, EPH, PCB, pesticides, and cyanide concentrations were detected below their respective NJDEP RDCSRS and NRDCSRS. The following metals were detected above their NJDEP DIGWSSLs:
- Aluminum and manganese.

The metals aluminum and manganese were detected above NJDEP's DIGWSSL. Based on a review of *Ambient Levels of Metals in New Jersey Soils* the concentration of aluminum is lower than the median concentration in the Urban Piedmont region of New Jersey. The concentration of aluminum is also below the 90th percentile concentration in the Urban Piedmont region of New Jersey. Based on a review of such published literature, the concentration of manganese is lower than the median concentration in the Urban Piedmont region of New Jersey. The concentration of manganese is also below the 90th percentile concentration in the Urban Piedmont region of New Jersey.

Soil sample SW:

- All VOC, EPH, PCB, pesticides, and cyanide concentrations were detected below their respective NJDEP RDCSRS and NRDCSRS. The following metals were detected above their NJDEP DIGWSSLs:
- Aluminum, manganese, and silver.

The metals aluminum, manganese and silver were detected above NJDEP's DIGWSSL. Based on a review of *Ambient Levels of Metals in New Jersey Soils* the concentration of aluminum is lower than the median concentration in the Urban Piedmont region of New Jersey. The concentration of aluminum is also below the 90th percentile concentration in the Urban Piedmont region of New Jersey. Based on a review of such published literature, the concentration of

manganese is lower than the median concentration in the Urban Piedmont region of New Jersey. The concentration of manganese is also below the 90th percentile concentration in the Urban Piedmont region of New Jersey. Based on a review of such published literature, the concentration of silver is above the 90th percentile concentration in the Urban Piedmont region of New Jersey.

Attachment table 2 through attachment table 5 summarizes the sampling results of soil borings N, NE, E, and SW.

Conclusions & Recommendations

- Based on the results of our Limited Phase-II ESA, all VOC, SVOC, pesticides PCBs, metals and cyanide concentrations were detected below their respective NJDEP residential and non-residential direct contact soil remediation standards.
- Certain contaminants exceeded the NJDEP Default Impact-to-Groundwater Soil Screening Levels (DIGWSSLs). These included the metals aluminum, manganese, and silver. However, NJDEP's Frequently Asked Questions for the Impact-to-Groundwater Pathway in Soil Remediation Standards indicates that aluminum, manganese, and silver are considered secondary metals (not a health consideration, but rather an aesthetic consideration, i.e., based on taste, odor or appearance) and the Impact-to-Groundwater Pathway does not have to be addressed unless there is reason to believe that their presence is related to a site discharge. Based on a historical and regulatory review completed during the Phase I ESA, including a review of NJDEP Community Right-to-Know (CRTK) surveys for a former site operator (Globe Metals), aluminum, manganese, and silver were not identified as being used in conjunction with historical onsite operations. Since these metals were not detected above NJDEP residential and non-residential direct contact soil remediation standards and since their presence is not attributed to a site discharge based on a historical and regulatory review, they are considered background contaminants. Therefore no further investigation of the impact-to-groundwater pathway for aluminum, manganese, and silver is recommended.
- Other contaminants that exceeded their respective DIGWSSLs were the SVOC benzo(a)pyrene and the metals cadmium, lead and mercury. However, based on the results of Synthetic Precipitation Leaching Procedure (SPLP) analysis and evaluation of all benzo(a)pyrene, cadmium, lead and mercury concentrations, all concentrations in the four soil samples are in compliance with their site-specific Impact to Ground Water Soil Remediation Standards (IGWSRS). Based on a historical and regulatory review completed during the Phase I ESA, including a review of NJDEP Community Right-to-Know CRTK surveys for a former site operator (Globe Metals), benzo(a)pyrene, cadmium, lead and mercury were not identified as being used in conjunction with the historical onsite operations.
- All contaminant concentrations in the samples collected for the Limited Phase-II ESA are in compliance with their corresponding RDCSRS, NRDCSRS and their site-specific IGWSRS (based on SPLP analysis and evaluation).
- To reiterate the findings from our Phase-I ESA, although groundwater contamination in association with the adjacent Troy Chemical facility has been delineated and does not extend onto the subject property per a NJDEP CEA Fact Sheet and CEA extent map, EGS recommends that the status of the Troy Chemical USEPA/NJDEP case be monitored on a periodic basis in order to determine any potential future impacts to the environmental condition of the subject property.

Sincerely yours,



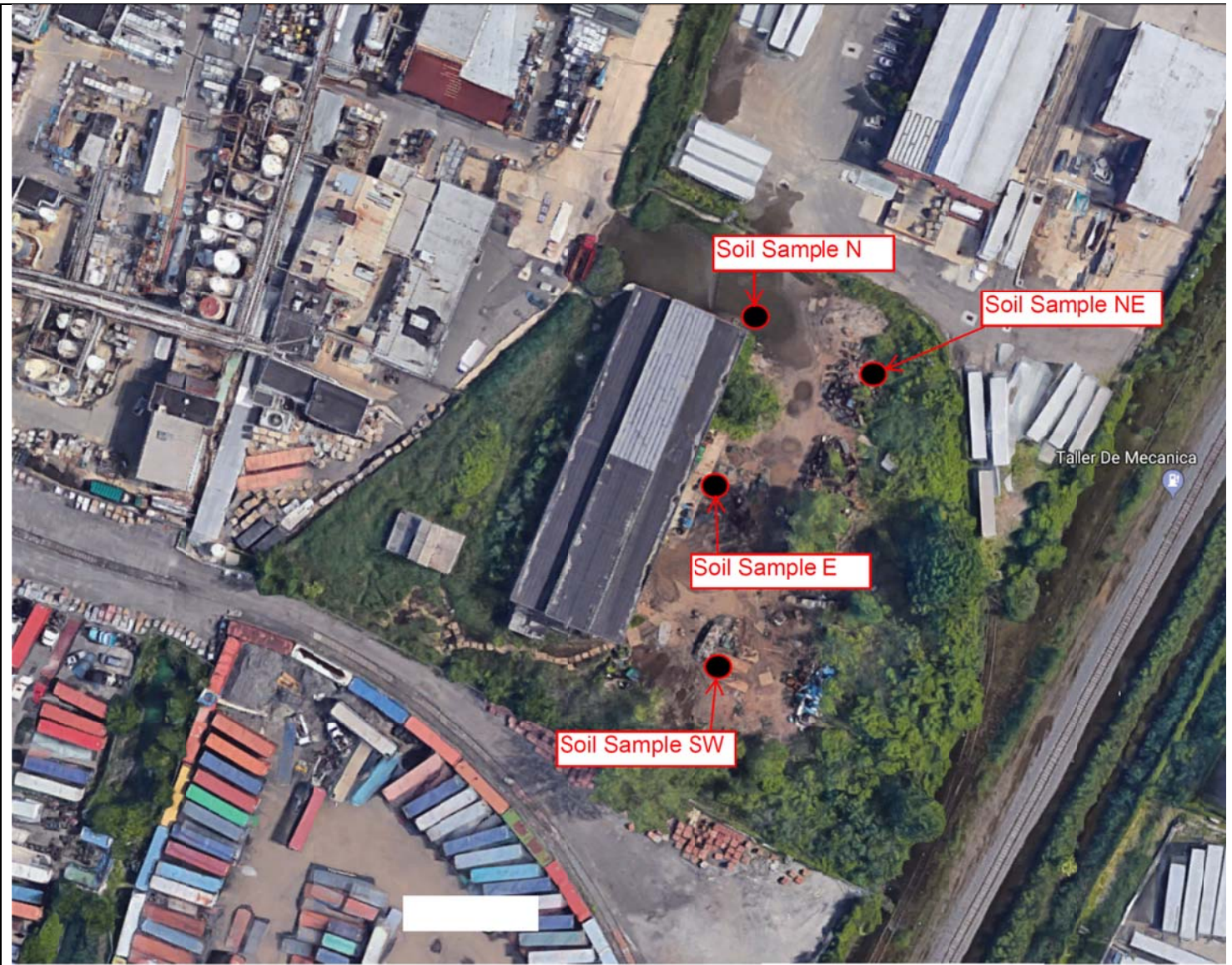
James Kelly
Project Manager

Attachments:

Site Plan: Soil Sample Locations
Tabulations of Phase II Soil Samples
Map Depicting Phase-I REC Locations
Laboratory Reports and Chain-of-Custody Forms
SPLP Spreadsheets

Attachment 1

-Site Plan: Soil Sample Locations



50 ft



Industrial Property
366-394 Wilson Avenue Rear
Newark, NJ 07105

September 2019 Phase II Sample Location Map

Environmental & Geotechnical Services, LLC



301 Fairfield Rd, Fairfield, NJ 07004

Block:	Lot:	Prepared By:	Reviewed By:
5038	97	JK	MA

Attachment 2

-Tabulation of Phase II Soil Sample N

Table 2**Lab: Accredited Analytical Resources LLC****Client: ENVIRONMENTAL & GEOTECHNICAL - 366-394 Wilson Ave Rear**

					Result Qualifier <u>Sample No.</u>	Result Qualifier <u>Sample No.</u>
CAS#	Compound	IPTGW	NJNRDCSRS	NJRDCSRS	N 09/26/19	N 09/26/19
EPA Method SW846 8081B/8082A (mg/kg)						
72-54-8	4,4'-DDD	4	13	3	0.0595 PE	0.0862 D
72-55-9	4,4'-DDE	18	9	2	0.0757 PE	0.113 D
50-29-3	4,4'-DDT	11	8	2	0.117 PE	0.175 D
309-00-2	Aldrin	0.2	0.2	0.04	0.000543 U	0.00271 U
319-84-6	alpha-BHC	0.002	0.5	0.1	0.000543 U	0.00271 U
12674-11-2	Aroclor-1016	0.2	1	0.2	0.0137 U	0.0683 U
11104-28-2	Aroclor-1221	0.2	1	0.2	0.0137 U	0.0683 U
11141-16-5	Aroclor-1232	0.2	1	0.2	0.0137 U	0.0683 U
53469-21-9	Aroclor-1242	0.2	1	0.2	0.0137 U	0.0683 U
12672-29-6	Aroclor-1248	0.2	1	0.2	0.0137 U	0.0683 U
11097-69-1	Aroclor-1254	0.2	1	0.2	0.0137 U	0.0683 U
11096-82-5	Aroclor-1260	0.2	1	0.2	0.0137 U	0.0683 U
37324-23-5	Aroclor-1262	0.2	1	0.2	0.0137 U	0.0683 U
11100-14-4	Aroclor-1268	0.2	1	0.2	0.0137 U	0.0683 U
319-85-7	beta-BHC	0.002	2	0.4	0.000543 U	0.00271 U
319-86-8	delta-BHC	NA	NA	NA	0.000543 U	0.00271 U
5566-34-7	Chlordane (alpha and gamma)	0.05	1	0.2	0.041 DE	0.0297 D
60-57-1	Dieldrin	0.003	0.2	0.04	0.00109 U	0.00547 U
959-98-8	Endosulfan I	2	3400	235	0.000543 U	0.00271 U
33213-65-9	Endosulfan II	2	3400	235	0.00109 U	0.00547 U
1031-07-8	Endosulfan sulfate	2	6800	470	0.00109 U	0.00547 U
72-20-8	Endrin	1	340	23	0.00109 U	0.00547 U
7421-93-4	Endrin aldehyde	NA	NA	NA	0.00109 U	0.00547 U
53494-70-5	Endrin ketone	NA	NA	NA	0.00109 U	0.00547 U
58-89-9	gamma-BHC [Lindane]	0.002	2	0.4	0.000543 U	0.00271 U
76-44-8	Heptachlor	0.5	0.7	0.1	0.000543 U	0.00271 U
1024-57-3	Heptachlor Epoxide	0.01	0.3	0.07	0.000543 U	0.00271 U
72-43-5	Methoxychlor	160	5700	390	0.00164 U	0.00822 U
8001-35-2	Toxaphene	0.3	3	0.6	0.0274 U	0.137 U

Extractable Petroleum Hydrocarbons by NJ EPH (mg/kg)					
Extractable Petroleum Hydrocarbons (E		NA	NA	NA	241
Semivolatile Organic Compounds EPA Method SW846 8270D (mg/kg)					
92-52-4	1,1-Biphenyl	140	240	61	0.0548 U
95-94-3	1,2,4,5-Tetrachlorobenzene	NA	NA	NA	0.0548 U
122-66-7	1,2-Diphenylhydrazine	0.7	2	0.7	0.0548 U
58-90-2	2,3,4,6-Tetrachlorophenol	NA	NA	NA	0.0548 U
95-95-4	2,4,5-Trichlorophenol	68	68000	6100	0.0548 U
88-06-2	2,4,6-Trichlorophenol	0.2	74	19	0.0548 U
120-83-2	2,4-Dichlorophenol	0.2	2100	180	0.0548 U
105-67-9	2,4-Dimethylphenol	1	14000	1200	0.0548 U
51-28-5	2,4-Dinitrophenol	0.3	1400	120	0.0548 U
121-14-2	2,4-Dinitrotoluene	0.1	3	0.7	0.0548 U
606-20-2	2,6-Dinitrotoluene	0.1	3	0.7	0.0548 U
91-58-7	2-Chloronaphthalene	NA	NA	NA	0.0548 U
95-57-8	2-Chlorophenol	0.8	2200	310	0.0548 U
91-57-6	2-Methylnaphthylene	8	2400	230	0.0548 U
95-48-7	2-Methylphenol	NA	3400	310	0.0548 U
88-74-4	2-Nitroaniline	NA	23000	39	0.0548 U
88-75-5	2-Nitrophenol	NA	NA	NA	0.0548 U
106-44-5	3 & 4-Methylphenol	NA	340	31	0.0548 U
91-94-1	3,3'-Dichlorobenzidine	0.2	4	1	0.137 U
99-09-2	3-Nitroaniline	NA	NA	NA	0.0548 U
534-52-1	4,6-Dinitro-2-methylphenol	0.3	68	6	0.0548 U
101-55-3	4-Bromophenyl-phenylether	NA	NA	NA	0.0548 U
59-50-7	4-Chloro-3-methylphenol	NA	NA	NA	0.0548 U
106-47-8	4-Chloroaniline	NA	NA	NA	0.0548 U
7005-72-3	4-Chlorophenyl-phenylether	NA	NA	NA	0.0548 U
100-01-6	4-Nitroaniline	NA	NA	NA	0.0548 U
100-02-7	4-Nitrophenol	NA	NA	NA	0.0548 U
83-32-9	Acenaphthene	110	37000	3400	0.0548 U
208-96-8	Acenaphthylene	NA	300000	NA	0.0548 U
98-86-2	Acetophenone	3	5	2	0.0548 U
120-12-7	Anthracene	2400	30000	17000	0.0548 U
1912-24-9	Atrazine	0.2	2400	210	0.0548 U
103-33-3	Azobenzene	0.7	2	0.7	0.0548 U

100-52-7	Benzaldehyde	NA	68000	6100	0.0548 U
92-87-5	Benidine	0.7	0.7	0.7	0.137 U
56-55-3	Benzo[a]anthracene	0.8	17	5	0.258
50-32-8	Benzo[a]pyrene	0.2	2	0.5	0.319
205-99-2	Benzo[b]fluoranthene	2	17	5	0.578
191-24-2	Benzo[ghi]perylene	NA	30000	380000	0.166
207-08-9	Benzo[k]fluoranthene	25	170	45	0.253
111-91-1	bis(2-chloroethoxy)methane	NA	NA	NA	0.0548 U
111-44-4	bis(2-chloroethyl)ether	0.2	2	0.4	0.0548 U
39638-32-9	bis(2-chloroisopropyl)ether	5	67	23	0.0548 U
117-81-7	bis(2-ethylhexyl)phthalate	1200	140	35	0.285
85-68-7	Butylbenzylphthalate	230	14000	1200	0.0548 U
105-60-2	Caprolactam	12	340000	31000	0.0548 U
86-74-8	Carbazole	NA	96	24	0.0548 U
218-01-9	Chrysene	80	1700	450	0.334
53-70-3	Dibenzo(a,h)anthracene	0.8	2	0.5	0.0548 U
132-64-9	Dibenzofuran	NA	NA	NA	0.0548 U
84-66-2	Diethyl phthalate	88	550000	49000	0.0548 U
131-11-3	Dimethylphthalate	NA	NA	NA	0.0548 U
84-74-2	Di-n-butyl phthalate	760	68000	6100	0.0548 U
117-84-0	Di-n-octyl phthalate	3300	27000	2400	0.0548 U
206-44-0	Fluoranthene	1300	24000	2300	0.439
86-73-7	Fluorene	170	24000	2300	0.0548 U
118-74-1	Hexachlorobenzene	0.2	1	0.3	0.0548 U
87-68-3	Hexachlorobutadiene	0.9	25	6	0.0548 U
77-47-4	Hexachlorocyclopentadiene	320	110	45	0.0548 U
67-72-1	Hexachloroethane	0.2	48	12	0.0548 U
193-39-5	Indeno(1,2,3-cd)pyrene	7	17	5	0.143
78-59-1	Isophorone	0.2	2000	510	0.0548 U
91-20-3	Naphthalene	25	17	6	0.0548 U
98-95-3	Nitrobenzene	0.2	14	5	0.0548 U
62-75-9	N-Nitrosodimethylamine	0.7	0.7	0.7	0.0548 U
621-64-7	N-Nitroso-di-n-propylamine	0.2	0.3	0.2	0.0548 U
86-30-6	N-Nitrosodiphenylamine	0.4	390	99	0.0548 U
87-86-5	Pentachlorophenol	0.3	3	0.9	0.0548 U

85-01-8	Phenanthrene	NA	300000	NA	0.255	
108-95-2	Phenol	8	210000	18000	0.0548 U	
129-00-0	Pyrene	840	18000	1700	0.697	
	TIC Summary	NA	NA	NA	9.125	
Total Mercury by SW846 7471B (mg/kg)						
7439-97-6	Mercury	0.1	65	23	12.4 D	
Total Metals by EPA Method SW846 6010D (mg/kg)						
7429-90-5	Aluminum	6000	NA	78000	7110 D	
7440-36-0	Antimony	6	450	31	2.21 U	
7440-38-2	Arsenic	19	19	19	18.0	
7440-39-3	Barium	2100	59000	16000	117	
7440-41-7	Beryllium	0.7	140	16	0.515	
7440-43-9	Cadmium	2	78	78	8.00	
7440-70-2	Calcium	NA	NA	NA	9370 D	
7440-47-3	Chromium	NA	NA	NA	23.6	
7440-48-4	Cobalt	90	590	1600	8.38	
7440-50-8	Copper	11000	45000	3100	140	
7439-89-6	Iron	NA	NA	NA	20100 D	
7439-92-1	Lead	90	800	400	149	
7439-95-4	Magnesium	NA	NA	NA	3020 D	
7439-96-5	Manganese	65	5900	11000	200	
7440-02-0	Nickel	48	23000	1600	42.8	
7440-09-7	Potassium	NA	NA	NA	747	
7782-49-2	Selenium	11	5700	390	2.29	
7440-22-4	Silver	1	5700	390	2.41	
7440-23-5	Sodium	NA	NA	NA	225	
7440-28-0	Thallium	3	NA	NA	1.65 U	
7440-62-2	Vanadium	NA	1100	78	32.3	
7440-66-6	Zinc	930	110000	23000	696 D	
Volatile Organic Compounds EPA Method SW846 8260C (mg/kg)						
71-55-6	1,1,1-Trichloroethane	0.3	NA	160000	0.00150 U	
79-34-5	1,1,2,2-Tetrachloroethane	0.007	3	1	0.00150 U	
79-00-5	1,1,2-Trichloroethane	0.02	6	2	0.00150 U	
75-34-3	1,1-Dichloroethane	0.2	24	8	0.00150 U	
75-35-4	1,1-Dichloroethene	0.008	150	11	0.00150 U	

87-61-6	1,2,3-Trichlorobenzene	NA	NA	NA	0.00150 U
120-82-1	1,2,4-Trichlorobenzene	0.7	820	73	0.00150 U
96-12-8	1,2-Dibromo-3-chloropropane	0.005	0.2	0.08	0.00150 U
106-93-4	1,2-Dibromoethane	0.005	0.04	0.008	0.00150 U
95-50-1	1,2-Dichlorobenzene	17	59000	5300	0.00150 U
107-06-2	1,2-Dichloroethane	0.005	3	0.9	0.00150 U
78-87-5	1,2-Dichloropropane	0.005	5	2	0.00150 U
541-73-1	1,3-Dichlorobenzene	19	59000	5300	0.00150 U
106-46-7	1,4-Dichlorobenzene	2	13	5	0.00150 U
78-93-3	2-Butanone	0.9	44000	3100	0.00150 U
591-78-6	2-Hexanone	NA	NA	NA	0.00150 U
108-10-1	4-Methyl-2-pentanone	NA	NA	NA	0.00150 U
67-64-1	Acetone	19	NA	70000	0.00150 U
107-02-8	Acrolein	0.5	1	0.5	0.00899 U
107-13-1	Acrylonitrile	0.5	3	0.9	0.00300 U
71-43-2	Benzene	0.005	5	2	0.00150 U
74-97-5	Bromochloromethane	NA	NA	NA	0.00150 U
75-27-4	Bromodichloromethane	0.005	3	1	0.00150 U
75-25-2	Bromoform	0.03	280	81	0.00150 U
74-83-9	Bromomethane	0.04	59	25	0.00150 U
75-15-0	Carbon disulfide	6	110000	7800	0.00150 U
56-23-5	Carbon Tetrachloride	0.005	4	2	0.00150 U
108-90-7	Chlorobenzene	0.6	7400	510	0.00150 U
75-00-3	Chloroethane	NA	1100	220	0.00150 U
67-66-3	Chloroform	0.4	2	0.6	0.00150 U
74-87-3	Chloromethane	NA	12	4	0.00150 U
156-59-4	cis-1,2-Dichloroethene	0.3	560	230	0.00150 U
10061-01-5	cis-1,3-Dichloropropene	0.0025	3.5	1	0.00150 U
110-82-7	Cyclohexane	NA	NA	NA	0.00150 U
124-48-1	Dibromochloromethane	0.005	8	3	0.00150 U
75-71-8	Dichlorodifluoromethane	39	230000	490	0.00150 U
100-41-4	Ethylbenzene	13	110000	7800	0.00150 U
76-13-1	Freon 113	NA	NA	NA	0.00150 U
98-82-8	Isopropylbenzene	NA	NA	NA	0.00150 U
108-38-3/106	m,p-Xylenes	9.5	85000	6000	0.00300 U
79-20-9	Methyl Acetate	22	NA	78000	0.00150 U

1634-04-4	Methyl tert-Butyl Ether	0.2	320	110	0.00300 U	
108-87-2	Methylcyclohexane	NA	NA	NA	0.00150 U	
75-09-2	Methylene Chloride	0.01	230	46	0.00150 U	
95-47-6	o-Xylene	9.5	85000	6000	0.00300 U	
100-42-5	Styrene	3	260	90	0.00150 U	
75-65-0	t-Butyl alcohol	0.3	11000	1400	0.00749 U	
127-18-4	Tetrachloroethene	0.005	1500	43	0.00150 U	
108-88-3	Toluene	7	91000	6300	0.00150 U	
156-60-5	trans-1,2-Dichloroethene	0.6	720	300	0.00150 U	
10061-02-6	trans-1,3-Dichloropropene	0.0025	3.5	1	0.00150 U	
79-01-6	Trichloroethene	0.01	10	3	0.00150 U	
75-69-4	Trichlorofluoromethane	34	340000	23000	0.00150 U	
75-01-4	Vinyl chloride	0.005	2	0.7	0.00150 U	
	TIC Summary	NA	NA	NA	0.00946	
Wet Chemistry (%)						
	Percent Solids	NA	NA	NA	91.2	
Wet Chemistry (mg/kg)						
	Cyanide (total)	20	680	47	1.10 U	

IPTGW = NJDEP Default Impact to Ground Water Soil Screening Level

NJNRDCSRS = NJDEP Non-Residential Direct Contact Soil Remediation Standards

NJRDCSRS = NJDEP Residential Direct Contact Soil Remediation Standards

Qualifiers:

E - Concentration exceeds highest calibration standard

B - Indicates compound found in associated blank

D - Indicates result is based on a dilution

H - Alternate peak selection upon analytical review

J - Indicates estimated value for TICs and all results when detected below the RL

U - Indicates compound analyzed for but not detected

P - Greater than 25% diff between 2 GC columns

VC - The container(s) provided by the client for soil volatiles do not meet the requirements of EPA SW846-5035A. Results reported below 200 ug/kg may be biased low due to samples not being collected according to EPA SW846 5035A requirements.

mg/kg - parts per million

Regulatory limits listed in this document have been obtained from the latest version of the regulations cited and are used for advisory purposes only. Accredited Analytical assumes no responsibility for errors in regulatory documents or changes to criteria detailed in later versions of the referenced regulation. It is the responsibility of the user to verify these limits before using or reporting any data.

Attachment 3

-Tabulation of Phase II Soil Sample NE

Table 3

Lab: Accredited Analytical Resources LLC

Client: ENVIRONMENTAL & GEOTECHNICAL - 366-394 Wilson Ave Rear

					Result Qualifier
					<u>Sample No.</u>
CAS#	Compound	IPTGW	NJNRDCSRS	NJRDCSRS	NE
EPA Method SW846 8081B/8082A (mg/kg)					09/26/19
72-54-8	4,4'-DDD	4	13	3	0.00231
72-55-9	4,4'-DDE	18	9	2	0.00385 P
50-29-3	4,4'-DDT	11	8	2	0.0136 P
309-00-2	Aldrin	0.2	0.2	0.04	0.000519 U
319-84-6	alpha-BHC	0.002	0.5	0.1	0.000519 U
5103-71-9	alpha-Chlordane	0.025	0.5	0.1	0.00288 P
12674-11-2	Aroclor-1016	0.2	1	0.2	0.0131 U
11104-28-2	Aroclor-1221	0.2	1	0.2	0.0131 U
11141-16-5	Aroclor-1232	0.2	1	0.2	0.0131 U
53469-21-9	Aroclor-1242	0.2	1	0.2	0.0131 U
12672-29-6	Aroclor-1248	0.2	1	0.2	0.0131 U
11097-69-1	Aroclor-1254	0.2	1	0.2	0.0131 U
11096-82-5	Aroclor-1260	0.2	1	0.2	0.0131 U
37324-23-5	Aroclor-1262	0.2	1	0.2	0.0131 U
11100-14-4	Aroclor-1268	0.2	1	0.2	0.0131 U
319-85-7	beta-BHC	0.002	2	0.4	0.000519 U
319-86-8	delta-BHC	NA	NA	NA	0.000519 U
60-57-1	Dieldrin	0.003	0.2	0.04	0.00105 U
959-98-8	Endosulfan I	2	3400	235	0.000519 U
33213-65-9	Endosulfan II	2	3400	235	0.00105 U
1031-07-8	Endosulfan sulfate	2	6800	470	0.00105 U
72-20-8	Endrin	1	340	23	0.00105 U
7421-93-4	Endrin aldehyde	NA	NA	NA	0.00105 U
53494-70-5	Endrin ketone	NA	NA	NA	0.00105 U
58-89-9	gamma-BHC [Lindane]	0.002	2	0.4	0.000519 U
5566-34-7	gamma-Chlordane	0.025	0.5	0.1	0.00210
76-44-8	Heptachlor	0.5	0.7	0.1	0.000519 U
1024-57-3	Heptachlor Epoxide	0.01	0.3	0.07	0.000519 U
72-43-5	Methoxychlor	160	5700	390	0.00157 U

8001-35-2	Toxaphene	0.3	3	0.6	0.0262 U
Extractable Petroleum Hydrocarbons by NJ EPH (mg/kg)					
	Extractable Petroleum Hydrocarbons (E	NA	NA	NA	148
Semivolatile Organic Compounds EPA Method SW846 8270D (mg/kg)					
92-52-4	1,1-Biphenyl	140	240	61	0.0524 U
95-94-3	1,2,4,5-Tetrachlorobenzene	NA	NA	NA	0.0524 U
122-66-7	1,2-Diphenylhydrazine	0.7	2	0.7	0.0524 U
58-90-2	2,3,4,6-Tetrachlorophenol	NA	NA	NA	0.0524 U
95-95-4	2,4,5-Trichlorophenol	68	68000	6100	0.0524 U
88-06-2	2,4,6-Trichlorophenol	0.2	74	19	0.0524 U
120-83-2	2,4-Dichlorophenol	0.2	2100	180	0.0524 U
105-67-9	2,4-Dimethylphenol	1	14000	1200	0.0524 U
51-28-5	2,4-Dinitrophenol	0.3	1400	120	0.0524 U
121-14-2	2,4-Dinitrotoluene	0.1	3	0.7	0.0524 U
606-20-2	2,6-Dinitrotoluene	0.1	3	0.7	0.0524 U
91-58-7	2-Chloronaphthalene	NA	NA	NA	0.0524 U
95-57-8	2-Chlorophenol	0.8	2200	310	0.0524 U
91-57-6	2-Methylnaphthylene	8	2400	230	0.0524 U
95-48-7	2-Methylphenol	NA	3400	310	0.0524 U
88-74-4	2-Nitroaniline	NA	23000	39	0.0524 U
88-75-5	2-Nitrophenol	NA	NA	NA	0.0524 U
106-44-5	3 & 4-Methylphenol	NA	340	31	0.0524 U
91-94-1	3,3'-Dichlorobenzidine	0.2	4	1	0.131 U
99-09-2	3-Nitroaniline	NA	NA	NA	0.0524 U
534-52-1	4,6-Dinitro-2-methylphenol	0.3	68	6	0.0524 U
101-55-3	4-Bromophenyl-phenylether	NA	NA	NA	0.0524 U
59-50-7	4-Chloro-3-methylphenol	NA	NA	NA	0.0524 U
106-47-8	4-Chloroaniline	NA	NA	NA	0.0524 U
7005-72-3	4-Chlorophenyl-phenylether	NA	NA	NA	0.0524 U
100-01-6	4-Nitroaniline	NA	NA	NA	0.0524 U
100-02-7	4-Nitrophenol	NA	NA	NA	0.0524 U
83-32-9	Acenaphthene	110	37000	3400	0.0524 U
208-96-8	Acenaphthylene	NA	300000	NA	0.0524 U
98-86-2	Acetophenone	3	5	2	0.0524 U
120-12-7	Anthracene	2400	30000	17000	0.0524 U
1912-24-9	Atrazine	0.2	2400	210	0.0524 U

103-33-3	Azobenzene	0.7	2	0.7	0.0524 U
100-52-7	Benzaldehyde	NA	68000	6100	0.0524 U
92-87-5	Benzidine	0.7	0.7	0.7	0.131 U
56-55-3	Benzo[a]anthracene	0.8	17	5	0.227
50-32-8	Benzo[a]pyrene	0.2	2	0.5	0.322
205-99-2	Benzo[b]fluoranthene	2	17	5	0.603
191-24-2	Benzo[ghi]perylene	NA	30000	380000	0.211
207-08-9	Benzo[k]fluoranthene	25	170	45	0.176
111-91-1	bis(2-chloroethoxy)methane	NA	NA	NA	0.0524 U
111-44-4	bis(2-chloroethyl)ether	0.2	2	0.4	0.0524 U
39638-32-9	bis(2-chloroisopropyl)ether	5	67	23	0.0524 U
117-81-7	bis(2-ethylhexyl)phthalate	1200	140	35	0.945
85-68-7	Butylbenzylphthalate	230	14000	1200	0.0524 U
105-60-2	Caprolactam	12	340000	31000	0.0524 U
86-74-8	Carbazole	NA	96	24	0.0524 U
218-01-9	Chrysene	80	1700	450	0.290
53-70-3	Dibenzo(a,h)anthracene	0.8	2	0.5	0.0524 U
132-64-9	Dibenzofuran	NA	NA	NA	0.0524 U
84-66-2	Diethyl phthalate	88	550000	49000	0.0524 U
131-11-3	Dimethylphthalate	NA	NA	NA	0.0524 U
84-74-2	Di-n-butyl phthalate	760	68000	6100	0.0524 U
117-84-0	Di-n-octyl phthalate	3300	27000	2400	0.0524 U
206-44-0	Fluoranthene	1300	24000	2300	0.300
86-73-7	Fluorene	170	24000	2300	0.0524 U
118-74-1	Hexachlorobenzene	0.2	1	0.3	0.0524 U
87-68-3	Hexachlorobutadiene	0.9	25	6	0.0524 U
77-47-4	Hexachlorocyclopentadiene	320	110	45	0.0524 U
67-72-1	Hexachloroethane	0.2	48	12	0.0524 U
193-39-5	Indeno(1,2,3-cd)pyrene	7	17	5	0.176
78-59-1	Isophorone	0.2	2000	510	0.0524 U
91-20-3	Naphthalene	25	17	6	0.0524 U
98-95-3	Nitrobenzene	0.2	14	5	0.0524 U
62-75-9	N-Nitrosodimethylamine	0.7	0.7	0.7	0.0524 U
621-64-7	N-Nitroso-di-n-propylamine	0.2	0.3	0.2	0.0524 U
86-30-6	N-Nitrosodiphenylamine	0.4	390	99	0.0524 U
87-86-5	Pentachlorophenol	0.3	3	0.9	0.0524 U

85-01-8	Phenanthrene	NA	300000	NA	0.131
108-95-2	Phenol	8	210000	18000	0.0524 U
129-00-0	Pyrene	840	18000	1700	0.825
	TIC Summary	NA	NA	NA	5.059
Total Mercury by SW846 7471B (mg/kg)					
7439-97-6	Mercury	0.1	65	23	0.709
Total Metals by EPA Method SW846 6010D (mg/kg)					
7429-90-5	Aluminum	6000	NA	78000	9110 D
7440-36-0	Antimony	6	450	31	2.10 U
7440-38-2	Arsenic	19	19	19	6.15
7440-39-3	Barium	2100	59000	16000	93.3
7440-41-7	Beryllium	0.7	140	16	0.325
7440-43-9	Cadmium	2	78	78	1.39
7440-70-2	Calcium	NA	NA	NA	5180 D
7440-47-3	Chromium	NA	NA	NA	30.7
7440-48-4	Cobalt	90	590	1600	6.18
7440-50-8	Copper	11000	45000	3100	71.8
7439-89-6	Iron	NA	NA	NA	27600 D
7439-92-1	Lead	90	800	400	82.7
7439-95-4	Magnesium	NA	NA	NA	3580 D
7439-96-5	Manganese	65	5900	11000	197
7440-02-0	Nickel	48	23000	1600	18.7
7440-09-7	Potassium	NA	NA	NA	590
7782-49-2	Selenium	11	5700	390	2.10 U
7440-22-4	Silver	1	5700	390	0.270
7440-23-5	Sodium	NA	NA	NA	299
7440-28-0	Thallium	3	NA	NA	1.57 U
7440-62-2	Vanadium	NA	1100	78	38.3
7440-66-6	Zinc	930	110000	23000	201
Volatile Organic Compounds EPA Method SW846 8260C (mg/kg)					
71-55-6	1,1,1-Trichloroethane	0.3	NA	160000	0.00114 U
79-34-5	1,1,2,2-Tetrachloroethane	0.007	3	1	0.00114 U
79-00-5	1,1,2-Trichloroethane	0.02	6	2	0.00114 U
75-34-3	1,1-Dichloroethane	0.2	24	8	0.00114 U
75-35-4	1,1-Dichloroethene	0.008	150	11	0.00114 U

87-61-6	1,2,3-Trichlorobenzene	NA	NA	NA	0.00114 U
120-82-1	1,2,4-Trichlorobenzene	0.7	820	73	0.00114 U
96-12-8	1,2-Dibromo-3-chloropropane	0.005	0.2	0.08	0.00114 U
106-93-4	1,2-Dibromoethane	0.005	0.04	0.008	0.00114 U
95-50-1	1,2-Dichlorobenzene	17	59000	5300	0.00114 U
107-06-2	1,2-Dichloroethane	0.005	3	0.9	0.00114 U
78-87-5	1,2-Dichloropropane	0.005	5	2	0.00114 U
541-73-1	1,3-Dichlorobenzene	19	59000	5300	0.00114 U
106-46-7	1,4-Dichlorobenzene	2	13	5	0.00114 U
78-93-3	2-Butanone	0.9	44000	3100	0.00114 U
591-78-6	2-Hexanone	NA	NA	NA	0.00114 U
108-10-1	4-Methyl-2-pentanone	NA	NA	NA	0.00114 U
67-64-1	Acetone	19	NA	70000	0.00114 U
107-02-8	Acrolein	0.5	1	0.5	0.00687 U
107-13-1	Acrylonitrile	0.5	3	0.9	0.00229 U
71-43-2	Benzene	0.005	5	2	0.00114 U
74-97-5	Bromochloromethane	NA	NA	NA	0.00114 U
75-27-4	Bromodichloromethane	0.005	3	1	0.00114 U
75-25-2	Bromoform	0.03	280	81	0.00114 U
74-83-9	Bromomethane	0.04	59	25	0.00114 U
75-15-0	Carbon disulfide	6	110000	7800	0.00114 U
56-23-5	Carbon Tetrachloride	0.005	4	2	0.00114 U
108-90-7	Chlorobenzene	0.6	7400	510	0.00114 U
75-00-3	Chloroethane	NA	1100	220	0.00114 U
67-66-3	Chloroform	0.4	2	0.6	0.00114 U
74-87-3	Chloromethane	NA	12	4	0.00114 U
156-59-4	cis-1,2-Dichloroethene	0.3	560	230	0.00114 U
10061-01-5	cis-1,3-Dichloropropene	0.0025	3.5	1	0.00114 U
110-82-7	Cyclohexane	NA	NA	NA	0.00114 U
124-48-1	Dibromochloromethane	0.005	8	3	0.00114 U
75-71-8	Dichlorodifluoromethane	39	230000	490	0.00114 U
100-41-4	Ethylbenzene	13	110000	7800	0.00114 U
76-13-1	Freon 113	NA	NA	NA	0.00114 U
98-82-8	Isopropylbenzene	NA	NA	NA	0.00114 U
108-38-3/106	m,p-Xylenes	9.5	85000	6000	0.00229 U
79-20-9	Methyl Acetate	22	NA	78000	0.00114 U

1634-04-4	Methyl tert-Butyl Ether	0.2	320	110	0.00229 U
108-87-2	Methylcyclohexane	NA	NA	NA	0.00114 U
75-09-2	Methylene Chloride	0.01	230	46	0.00114 U
95-47-6	o-Xylene	9.5	85000	6000	0.00229 U
100-42-5	Styrene	3	260	90	0.00114 U
75-65-0	t-Butyl alcohol	0.3	11000	1400	0.00572 U
127-18-4	Tetrachloroethene	0.005	1500	43	0.00114 U
108-88-3	Toluene	7	91000	6300	0.00114 U
156-60-5	trans-1,2-Dichloroethene	0.6	720	300	0.00114 U
10061-02-6	trans-1,3-Dichloropropene	0.0025	3.5	1	0.00114 U
79-01-6	Trichloroethene	0.01	10	3	0.00114 U
75-69-4	Trichlorofluoromethane	34	340000	23000	0.00114 U
75-01-4	Vinyl chloride	0.005	2	0.7	0.00114 U
	TIC Summary	NA	NA	NA	0.0083
Wet Chemistry (%)					
	Percent Solids	NA	NA	NA	95.4
Wet Chemistry (mg/kg)					
	Cyanide (total)	20	680	47	1.05 U

IPTGW = NJDEP Default Impact to Ground Water Soil Screening Level

NJNRDCSRS = NJDEP Non-Residential Direct Contact Soil Remediation Standards

NJRDCSRS = NJDEP Residential Direct Contact Soil Remediation Standards

Qualifiers:

E - Concentration exceeds highest calibration standard

B - Indicates compound found in associated blank

D - Indicates result is based on a dilution

H - Alternate peak selection upon analytical review

J - Indicates estimated value for TICs and all results when detected below the RL

U - Indicates compound analyzed for but not detected

P - Greater than 25% diff between 2 GC columns

VC - The container(s) provided by the client for soil volatiles do not meet the requirements of EPA SW846-5035A. Results reported below 200 ug/kg may be biased low due to samples not being collected according to EPA SW846 5035A requirements.

mg/kg - parts per million

Regulatory limits listed in this document have been obtained from the latest version of the regulations cited and are used for advisory purposes only. Accredited Analytical assumes no responsibility for errors in regulatory documents or changes to criteria detailed in later versions of the referenced regulation. It is the responsibility of the user to verify these limits before using or reporting any data.

Attachment 4

-Tabulation of Phase II Soil Sample E

Table 4

Lab: Accredited Analytical Resources LLC

Result Qualifier
Sample No.

Client: ENVIRONMENTAL & GEOTECHNICAL - 366-394 Wilson Ave Rear

CAS#	Compound	IPTGW	NJNRDCSRS	NJRDCSRS	E 09/26/19
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EPA Method SW846 8081B/8082A (mg/kg)

72-54-8	4,4'-DDD	4	13	3	0.00400
72-55-9	4,4'-DDE	18	9	2	0.00496 P
50-29-3	4,4'-DDT	11	8	2	0.0171 P
309-00-2	Aldrin	0.2	0.2	0.04	0.000528 U
319-84-6	alpha-BHC	0.002	0.5	0.1	0.000528 U
5103-71-9	alpha-Chlordane	0.025	0.5	0.1	0.00235 P
12674-11-2	Aroclor-1016	0.2	1	0.2	0.0133 U
11104-28-2	Aroclor-1221	0.2	1	0.2	0.0133 U
11141-16-5	Aroclor-1232	0.2	1	0.2	0.0133 U
53469-21-9	Aroclor-1242	0.2	1	0.2	0.0133 U
12672-29-6	Aroclor-1248	0.2	1	0.2	0.0133 U
11097-69-1	Aroclor-1254	0.2	1	0.2	0.0133 U
11096-82-5	Aroclor-1260	0.2	1	0.2	0.0133 U
37324-23-5	Aroclor-1262	0.2	1	0.2	0.0133 U
11100-14-4	Aroclor-1268	0.2	1	0.2	0.0133 U
319-85-7	beta-BHC	0.002	2	0.4	0.000528 U
319-86-8	delta-BHC	NA	NA	NA	0.000528 U
60-57-1	Dieldrin	0.003	0.2	0.04	0.00106 U
959-98-8	Endosulfan I	2	3400	235	0.000528 U
33213-65-9	Endosulfan II	2	3400	235	0.00106 U
1031-07-8	Endosulfan sulfate	2	6800	470	0.00106 U
72-20-8	Endrin	1	340	23	0.00106 U
7421-93-4	Endrin aldehyde	NA	NA	NA	0.00106 U
53494-70-5	Endrin ketone	NA	NA	NA	0.00106 U
58-89-9	gamma-BHC [Lindane]	0.002	2	0.4	0.000528 U
5566-34-7	gamma-Chlordane	0.025	0.5	0.1	0.00216
76-44-8	Heptachlor	0.5	0.7	0.1	0.000528 U
1024-57-3	Heptachlor Epoxide	0.01	0.3	0.07	0.000528 U
72-43-5	Methoxychlor	160	5700	390	0.00160 U

8001-35-2	Toxaphene	0.3	3	0.6	0.0267 U
Extractable Petroleum Hydrocarbons by NJ EPH (mg/kg)					
	Extractable Petroleum Hydrocarbons (E	NA	NA	NA	225
Semivolatile Organic Compounds EPA Method SW846 8270D (mg/kg)					
92-52-4	1,1-Biphenyl	140	240	61	0.0533 U
95-94-3	1,2,4,5-Tetrachlorobenzene	NA	NA	NA	0.0533 U
122-66-7	1,2-Diphenylhydrazine	0.7	2	0.7	0.0533 U
58-90-2	2,3,4,6-Tetrachlorophenol	NA	NA	NA	0.0533 U
95-95-4	2,4,5-Trichlorophenol	68	68000	6100	0.0533 U
88-06-2	2,4,6-Trichlorophenol	0.2	74	19	0.0533 U
120-83-2	2,4-Dichlorophenol	0.2	2100	180	0.0533 U
105-67-9	2,4-Dimethylphenol	1	14000	1200	0.0533 U
51-28-5	2,4-Dinitrophenol	0.3	1400	120	0.0533 U
121-14-2	2,4-Dinitrotoluene	0.1	3	0.7	0.0533 U
606-20-2	2,6-Dinitrotoluene	0.1	3	0.7	0.0533 U
91-58-7	2-Chloronaphthalene	NA	NA	NA	0.0533 U
95-57-8	2-Chlorophenol	0.8	2200	310	0.0533 U
91-57-6	2-Methylnaphthylene	8	2400	230	0.0533 U
95-48-7	2-Methylphenol	NA	3400	310	0.0533 U
88-74-4	2-Nitroaniline	NA	23000	39	0.0533 U
88-75-5	2-Nitrophenol	NA	NA	NA	0.0533 U
106-44-5	3 & 4-Methylphenol	NA	340	31	0.0533 U
91-94-1	3,3'-Dichlorobenzidine	0.2	4	1	0.133 U
99-09-2	3-Nitroaniline	NA	NA	NA	0.0533 U
534-52-1	4,6-Dinitro-2-methylphenol	0.3	68	6	0.0533 U
101-55-3	4-Bromophenyl-phenylether	NA	NA	NA	0.0533 U
59-50-7	4-Chloro-3-methylphenol	NA	NA	NA	0.0533 U
106-47-8	4-Chloroaniline	NA	NA	NA	0.0533 U
7005-72-3	4-Chlorophenyl-phenylether	NA	NA	NA	0.0533 U
100-01-6	4-Nitroaniline	NA	NA	NA	0.0533 U
100-02-7	4-Nitrophenol	NA	NA	NA	0.0533 U
83-32-9	Acenaphthene	110	37000	3400	0.0533 U
208-96-8	Acenaphthylene	NA	300000	NA	0.0533 U
98-86-2	Acetophenone	3	5	2	0.0533 U
120-12-7	Anthracene	2400	30000	17000	0.0533 U
1912-24-9	Atrazine	0.2	2400	210	0.0533 U

103-33-3	Azobenzene	0.7	2	0.7	0.0533 U
100-52-7	Benzaldehyde	NA	68000	6100	0.0912 J
92-87-5	Benzidine	0.7	0.7	0.7	0.133 U
56-55-3	Benzo[a]anthracene	0.8	17	5	0.274
50-32-8	Benzo[a]pyrene	0.2	2	0.5	0.311
205-99-2	Benzo[b]fluoranthene	2	17	5	0.629
191-24-2	Benzo[ghi]perylene	NA	30000	380000	0.0533 U
207-08-9	Benzo[k]fluoranthene	25	170	45	0.250
111-91-1	bis(2-chloroethoxy)methane	NA	NA	NA	0.0533 U
111-44-4	bis(2-chloroethyl)ether	0.2	2	0.4	0.0533 U
39638-32-9	bis(2-chloroisopropyl)ether	5	67	23	0.0533 U
117-81-7	bis(2-ethylhexyl)phthalate	1200	140	35	0.507
85-68-7	Butylbenzylphthalate	230	14000	1200	0.0555 J
105-60-2	Caprolactam	12	340000	31000	0.0533 U
86-74-8	Carbazole	NA	96	24	0.0533 U
218-01-9	Chrysene	80	1700	450	0.326
53-70-3	Dibenzo(a,h)anthracene	0.8	2	0.5	0.0533 U
132-64-9	Dibenzofuran	NA	NA	NA	0.0533 U
84-66-2	Diethyl phthalate	88	550000	49000	0.0533 U
131-11-3	Dimethylphthalate	NA	NA	NA	0.0533 U
84-74-2	Di-n-butyl phthalate	760	68000	6100	0.0533 U
117-84-0	Di-n-octyl phthalate	3300	27000	2400	0.0875 J
206-44-0	Fluoranthene	1300	24000	2300	0.432
86-73-7	Fluorene	170	24000	2300	0.0533 U
118-74-1	Hexachlorobenzene	0.2	1	0.3	0.0533 U
87-68-3	Hexachlorobutadiene	0.9	25	6	0.0533 U
77-47-4	Hexachlorocyclopentadiene	320	110	45	0.0533 U
67-72-1	Hexachloroethane	0.2	48	12	0.0533 U
193-39-5	Indeno(1,2,3-cd)pyrene	7	17	5	0.160
78-59-1	Isophorone	0.2	2000	510	0.0533 U
91-20-3	Naphthalene	25	17	6	0.0533 U
98-95-3	Nitrobenzene	0.2	14	5	0.0533 U
62-75-9	N-Nitrosodimethylamine	0.7	0.7	0.7	0.0533 U
621-64-7	N-Nitroso-di-n-propylamine	0.2	0.3	0.2	0.0533 U
86-30-6	N-Nitrosodiphenylamine	0.4	390	99	0.0533 U
87-86-5	Pentachlorophenol	0.3	3	0.9	0.0533 U

85-01-8	Phenanthrene	NA	300000	NA	0.183
108-95-2	Phenol	8	210000	18000	0.0533 U
129-00-0	Pyrene	840	18000	1700	0.859
	TIC Summary	NA	NA	NA	20.47
Total Mercury by SW846 7471B (mg/kg)					
7439-97-6	Mercury	0.1	65	23	0.924
Total Metals by EPA Method SW846 6010D (mg/kg)					
7429-90-5	Aluminum	6000	NA	78000	7010 D
7440-36-0	Antimony	6	450	31	2.23 U
7440-38-2	Arsenic	19	19	19	5.17
7440-39-3	Barium	2100	59000	16000	102
7440-41-7	Beryllium	0.7	140	16	0.279 U
7440-43-9	Cadmium	2	78	78	1.33
7440-70-2	Calcium	NA	NA	NA	6290 D
7440-47-3	Chromium	NA	NA	NA	26.8
7440-48-4	Cobalt	90	590	1600	7.10
7440-50-8	Copper	11000	45000	3100	77.3
7439-89-6	Iron	NA	NA	NA	20300 D
7439-92-1	Lead	90	800	400	78.0
7439-95-4	Magnesium	NA	NA	NA	4040 D
7439-96-5	Manganese	65	5900	11000	206
7440-02-0	Nickel	48	23000	1600	27.6
7440-09-7	Potassium	NA	NA	NA	603
7782-49-2	Selenium	11	5700	390	2.23 U
7440-22-4	Silver	1	5700	390	0.299
7440-23-5	Sodium	NA	NA	NA	294
7440-28-0	Thallium	3	NA	NA	1.68 U
7440-62-2	Vanadium	NA	1100	78	37.5
7440-66-6	Zinc	930	110000	23000	168
Volatile Organic Compounds EPA Method SW846 8260C (mg/kg)					
71-55-6	1,1,1-Trichloroethane	0.3	NA	290	0.00107 U
79-34-5	1,1,2,2-Tetrachloroethane	0.007	3	1	0.00107 U
79-00-5	1,1,2-Trichloroethane	0.02	6	2	0.00107 U
75-34-3	1,1-Dichloroethane	0.2	24	8	0.00107 U
75-35-4	1,1-Dichloroethene	0.008	150	11	0.00107 U

87-61-6	1,2,3-Trichlorobenzene	NA	NA	NA	0.00107 U
120-82-1	1,2,4-Trichlorobenzene	0.7	820	73	0.00107 U
96-12-8	1,2-Dibromo-3-chloropropane	0.005	0.2	0.08	0.00107 U
106-93-4	1,2-Dibromoethane	0.005	0.04	0.008	0.00107 U
95-50-1	1,2-Dichlorobenzene	17	59000	5300	0.00107 U
107-06-2	1,2-Dichloroethane	0.005	3	0.9	0.00107 U
78-87-5	1,2-Dichloropropane	0.005	5	2	0.00107 U
541-73-1	1,3-Dichlorobenzene	19	59000	5300	0.00107 U
106-46-7	1,4-Dichlorobenzene	2	13	5	0.00107 U
78-93-3	2-Butanone	0.9	44000	3100	0.00107 U
591-78-6	2-Hexanone	NA	NA	NA	0.00107 U
108-10-1	4-Methyl-2-pentanone	NA	NA	NA	0.00107 U
67-64-1	Acetone	19	NA	70000	0.00107 U
107-02-8	Acrolein	0.5	1	0.5	0.00640 U
107-13-1	Acrylonitrile	0.5	3	0.9	0.00213 U
71-43-2	Benzene	0.005	5	2	0.00107 U
74-97-5	Bromochloromethane	NA	NA	NA	0.00107 U
75-27-4	Bromodichloromethane	0.005	3	1	0.00107 U
75-25-2	Bromoform	0.03	280	81	0.00107 U
74-83-9	Bromomethane	0.04	59	25	0.00107 U
75-15-0	Carbon disulfide	6	110000	7800	0.00107 U
56-23-5	Carbon Tetrachloride	0.005	4	2	0.00107 U
108-90-7	Chlorobenzene	0.6	7400	510	0.00107 U
75-00-3	Chloroethane	NA	1100	220	0.00107 U
67-66-3	Chloroform	0.4	2	0.6	0.00107 U
74-87-3	Chloromethane	NA	12	4	0.00107 U
156-59-4	cis-1,2-Dichloroethene	0.3	560	230	0.00107 U
10061-01-5	cis-1,3-Dichloropropene	0.0025	3.5	1	0.00107 U
110-82-7	Cyclohexane	NA	NA	NA	0.00107 U
124-48-1	Dibromochloromethane	0.005	8	3	0.00107 U
75-71-8	Dichlorodifluoromethane	39	230000	490	0.00107 U
100-41-4	Ethylbenzene	13	110000	7800	0.00107 U
76-13-1	Freon 113	NA	NA	NA	0.00107 U
98-82-8	Isopropylbenzene	NA	NA	NA	0.00107 U
108-38-3/106	m,p-Xylenes	9.5	85000	6000	0.00213 U
79-20-9	Methyl Acetate	22	NA	78000	0.00107 U

1634-04-4	Methyl tert-Butyl Ether	0.2	320	110	0.00213 U
108-87-2	Methylcyclohexane	NA	NA	NA	0.00107 U
75-09-2	Methylene Chloride	0.01	230	46	0.00107 U
95-47-6	o-Xylene	9.5	85000	6000	0.00213 U
100-42-5	Styrene	3	260	90	0.00107 U
75-65-0	t-Butyl alcohol	0.3	11000	1400	0.00534 U
127-18-4	Tetrachloroethene	0.005	1500	43	0.00107 U
108-88-3	Toluene	7	91000	6300	0.00107 U
156-60-5	trans-1,2-Dichloroethene	0.6	720	300	0.00107 U
10061-02-6	trans-1,3-Dichloropropene	0.0025	3.5	1	0.00107 U
79-01-6	Trichloroethene	0.01	10	3	0.00107 U
75-69-4	Trichlorofluoromethane	34	340000	23000	0.00107 U
75-01-4	Vinyl chloride	0.005	2	0.7	0.00107 U
	TIC Summary	NA	NA	NA	0.0125
Wet Chemistry (%)					
	Percent Solids	NA	NA	NA	93.7
Wet Chemistry (mg/kg)					
	Cyanide (total)	20	680	47	1.07 U

IPTGW = NJDEP Default Impact to Ground Water Soil Screening Level

NJNRDCSRS = NJDEP Non-Residential Direct Contact Soil Remediation Standards

NJRDCSRS = NJDEP Residential Direct Contact Soil Remediation Standards

Qualifiers:

E - Concentration exceeds highest calibration standard

B - Indicates compound found in associated blank

D - Indicates result is based on a dilution

H - Alternate peak selection upon analytical review

J - Indicates estimated value for TICs and all results when detected below the RL

U - Indicates compound analyzed for but not detected

P - Greater than 25% diff between 2 GC columns

VC - The container(s) provided by the client for soil volatiles do not meet the requirements of EPA SW846-5035A. Results reported below 200 ug/kg may be biased low due to samples not being collected according to EPA SW846 5035A requirements.

mg/kg - parts per million

Regulatory limits listed in this document have been obtained from the latest version of the regulations cited and are used for advisory purposes only. Accredited Analytical assumes no responsibility for errors in regulatory documents or changes to criteria detailed in later versions of the referenced regulation. It is the responsibility of the user to verify these limits before using or reporting any data.

Attachment 5

-Tabulation of Phase II Soil Sample SW

Table 5

Lab: Accredited Analytical Resources LLC

Client: ENVIRONMENTAL & GEOTECHNICAL - 366-394 Wilson Ave Rear

					Result Qualifier <u>Sample No.</u>	Result Qualifier <u>Sample No.</u>
CAS#	Compound	IPTGW	NJNRDCSRS	NJRDCSRS	SW 09/27/19	SW 09/27/19
EPA Method SW846 8081B/8082A (mg/kg)						
72-54-8	4,4'-DDD	4	13	3	0.0406	0.0617 D
72-55-9	4,4'-DDE	18	9	2	0.0463 PE	0.0759 D
50-29-3	4,4'-DDT	11	8	2	0.149 PE	0.247 D
309-00-2	Aldrin	0.2	0.2	0.04	0.000540 U	0.00540 U
319-84-6	alpha-BHC	0.002	0.5	0.1	0.000540 U	0.00540 U
5103-71-9	alpha-Chlordane	0.025	0.5	0.1	0.00401 P	0.00540 U
12674-11-2	Aroclor-1016	0.2	1	0.2	0.0136 U	0.136 U
11104-28-2	Aroclor-1221	0.2	1	0.2	0.0136 U	0.136 U
11141-16-5	Aroclor-1232	0.2	1	0.2	0.0136 U	0.136 U
53469-21-9	Aroclor-1242	0.2	1	0.2	0.0136 U	0.136 U
12672-29-6	Aroclor-1248	0.2	1	0.2	0.0136 U	0.136 U
11097-69-1	Aroclor-1254	0.2	1	0.2	0.0136 U	0.136 U
11096-82-5	Aroclor-1260	0.2	1	0.2	0.0136 U	0.136 U
37324-23-5	Aroclor-1262	0.2	1	0.2	0.0136 U	0.136 U
11100-14-4	Aroclor-1268	0.2	1	0.2	0.0136 U	0.136 U
319-85-7	beta-BHC	0.002	2	0.4	0.000540 U	0.00540 U
319-86-8	delta-BHC	NA	NA	NA	0.000540 U	0.00540 U
60-57-1	Dieldrin	0.003	0.2	0.04	0.00109 U	0.0109 U
959-98-8	Endosulfan I	2	3400	235	0.000540 U	0.00540 U
33213-65-9	Endosulfan II	2	3400	235	0.00109 U	0.0109 U
1031-07-8	Endosulfan sulfate	2	6800	470	0.00109 U	0.0109 U
72-20-8	Endrin	1	340	23	0.00109 U	0.0109 U
7421-93-4	Endrin aldehyde	NA	NA	NA	0.00109 U	0.0109 U
53494-70-5	Endrin ketone	NA	NA	NA	0.00109 U	0.0109 U
58-89-9	gamma-BHC [Lindane]	0.002	2	0.4	0.000540 U	0.00540 U
5566-34-7	gamma-Chlordane	0.025	0.5	0.1	0.00958	0.00540 U
76-44-8	Heptachlor	0.5	0.7	0.1	0.000540 U	0.00540 U
1024-57-3	Heptachlor Epoxide	0.01	0.3	0.07	0.000540 U	0.00540 U
72-43-5	Methoxychlor	160	5700	390	0.00164 U	0.0164 U

8001-35-2	Toxaphene	0.3	3	0.6	0.0273 U	0.273 U
Extractable Petroleum Hydrocarbons by NJ EPH (mg/kg)						
	Extractable Petroleum Hydrocarbons (E	NA	NA	NA	354	
Semivolatile Organic Compounds EPA Method SW846 8270D (mg/kg)						
92-52-4	1,1-Biphenyl	140	240	61	0.0545 U	
95-94-3	1,2,4,5-Tetrachlorobenzene	NA	NA	NA	0.0545 U	
122-66-7	1,2-Diphenylhydrazine	0.7	2	0.7	0.0545 U	
58-90-2	2,3,4,6-Tetrachlorophenol	NA	NA	NA	0.0545 U	
95-95-4	2,4,5-Trichlorophenol	68	68000	6100	0.0545 U	
88-06-2	2,4,6-Trichlorophenol	0.2	74	19	0.0545 U	
120-83-2	2,4-Dichlorophenol	0.2	2100	180	0.0545 U	
105-67-9	2,4-Dimethylphenol	1	14000	1200	0.0545 U	
51-28-5	2,4-Dinitrophenol	0.3	1400	120	0.0545 U	
121-14-2	2,4-Dinitrotoluene	0.1	3	0.7	0.0545 U	
606-20-2	2,6-Dinitrotoluene	0.1	3	0.7	0.0545 U	
91-58-7	2-Chloronaphthalene	NA	NA	NA	0.0545 U	
95-57-8	2-Chlorophenol	0.8	2200	310	0.0545 U	
91-57-6	2-Methylnaphthylene	8	2400	230	0.0545 U	
95-48-7	2-Methylphenol	NA	3400	310	0.0545 U	
88-74-4	2-Nitroaniline	NA	23000	39	0.0545 U	
88-75-5	2-Nitrophenol	NA	NA	NA	0.0545 U	
106-44-5	3 & 4-Methylphenol	NA	340	31	0.0545 U	
91-94-1	3,3'-Dichlorobenzidine	0.2	4	1	0.136 U	
99-09-2	3-Nitroaniline	NA	NA	NA	0.0545 U	
534-52-1	4,6-Dinitro-2-methylphenol	0.3	68	6	0.0545 U	
101-55-3	4-Bromophenyl-phenylether	NA	NA	NA	0.0545 U	
59-50-7	4-Chloro-3-methylphenol	NA	NA	NA	0.0545 U	
106-47-8	4-Chloroaniline	NA	NA	NA	0.0545 U	
7005-72-3	4-Chlorophenyl-phenylether	NA	NA	NA	0.0545 U	
100-01-6	4-Nitroaniline	NA	NA	NA	0.0545 U	
100-02-7	4-Nitrophenol	NA	NA	NA	0.0545 U	
83-32-9	Acenaphthene	110	37000	3400	0.0545 U	
208-96-8	Acenaphthylene	NA	300000	NA	0.0545 U	
98-86-2	Acetophenone	3	5	2	0.0545 U	
120-12-7	Anthracene	2400	30000	17000	0.0688 J	
1912-24-9	Atrazine	0.2	2400	210	0.0545 U	

103-33-3	Azobenzene	0.7	2	0.7	0.0545 U
100-52-7	Benzaldehyde	NA	68000	6100	0.118 J
92-87-5	Benzidine	0.7	0.7	0.7	0.136 U
56-55-3	Benzo[a]anthracene	0.8	17	5	0.374
50-32-8	Benzo[a]pyrene	0.2	2	0.5	0.414
205-99-2	Benzo[b]fluoranthene	2	17	5	0.761
191-24-2	Benzo[ghi]perylene	NA	30000	380000	0.252
207-08-9	Benzo[k]fluoranthene	25	170	45	0.225
111-91-1	bis(2-chloroethoxy)methane	NA	NA	NA	0.0545 U
111-44-4	bis(2-chloroethyl)ether	0.2	2	0.4	0.0545 U
39638-32-9	bis(2-chloroisopropyl)ether	5	67	23	0.0545 U
117-81-7	bis(2-ethylhexyl)phthalate	1200	140	35	0.328
85-68-7	Butylbenzylphthalate	230	14000	1200	0.0781 J
105-60-2	Caprolactam	12	340000	31000	0.0545 U
86-74-8	Carbazole	NA	96	24	0.0545 U
218-01-9	Chrysene	80	1700	450	0.444
53-70-3	Dibenzo(a,h)anthracene	0.8	2	0.5	0.0545 U
132-64-9	Dibenzofuran	NA	NA	NA	0.0545 U
84-66-2	Diethyl phthalate	88	550000	49000	0.0545 U
131-11-3	Dimethylphthalate	NA	NA	NA	0.0545 U
84-74-2	Di-n-butyl phthalate	760	68000	6100	0.0545 U
117-84-0	Di-n-octyl phthalate	3300	27000	2400	0.0545 U
206-44-0	Fluoranthene	1300	24000	2300	0.510
86-73-7	Fluorene	170	24000	2300	0.0545 U
118-74-1	Hexachlorobenzene	0.2	1	0.3	0.0545 U
87-68-3	Hexachlorobutadiene	0.9	25	6	0.0545 U
77-47-4	Hexachlorocyclopentadiene	320	110	45	0.0545 U
67-72-1	Hexachloroethane	0.2	48	12	0.0545 U
193-39-5	Indeno(1,2,3-cd)pyrene	7	17	5	0.209
78-59-1	Isophorone	0.2	2000	510	0.0545 U
91-20-3	Naphthalene	25	17	6	0.0545 U
98-95-3	Nitrobenzene	0.2	14	5	0.0545 U
62-75-9	N-Nitrosodimethylamine	0.7	0.7	0.7	0.0545 U
621-64-7	N-Nitroso-di-n-propylamine	0.2	0.3	0.2	0.0545 U
86-30-6	N-Nitrosodiphenylamine	0.4	390	99	0.0545 U
87-86-5	Pentachlorophenol	0.3	3	0.9	0.0545 U

85-01-8	Phenanthrene	NA	300000	NA	0.322	
108-95-2	Phenol	8	210000	18000	0.0545 U	
129-00-0	Pyrene	840	18000	1700	1.22	
	TIC Summary	NA	NA	NA	10.736	
Total Mercury by SW846 7471B (mg/kg)						
7439-97-6	Mercury	0.1	65	23	3.78 D	
Total Metals by EPA Method SW846 6010D (mg/kg)						
7429-90-5	Aluminum	6000	NA	78000	6200 D	
7440-36-0	Antimony	6	450	31	2.18 U	
7440-38-2	Arsenic	19	19	19	12.4	
7440-39-3	Barium	2100	59000	16000	83.8	
7440-41-7	Beryllium	0.7	140	16	0.294	
7440-43-9	Cadmium	2	78	78	5.23	
7440-70-2	Calcium	NA	NA	NA	6590 D	
7440-47-3	Chromium	NA	NA	NA	23.9	
7440-48-4	Cobalt	90	590	1600	7.61	
7440-50-8	Copper	11000	45000	3100	136	
7439-89-6	Iron	NA	NA	NA	16600 D	
7439-92-1	Lead	90	800	400	134	
7439-95-4	Magnesium	NA	NA	NA	3080 D	
7439-96-5	Manganese	65	5900	11000	215	
7440-02-0	Nickel	48	23000	1600	31.9	
7440-09-7	Potassium	NA	NA	NA	640	
7782-49-2	Selenium	11	5700	390	2.18 U	
7440-22-4	Silver	1	5700	390	2.23	
7440-23-5	Sodium	NA	NA	NA	195	
7440-28-0	Thallium	3	NA	NA	1.64 U	
7440-62-2	Vanadium	NA	1100	78	29.3	
7440-66-6	Zinc	930	110000	23000	408 D	
Volatile Organic Compounds EPA Method SW846 8260C (mg/kg)						
71-55-6	1,1,1-Trichloroethane	0.3	NA	160000	0.00147 U	
79-34-5	1,1,2,2-Tetrachloroethane	0.007	3	1	0.00147 U	
79-00-5	1,1,2-Trichloroethane	0.02	6	2	0.00147 U	
75-34-3	1,1-Dichloroethane	0.2	24	8	0.00147 U	
75-35-4	1,1-Dichloroethene	0.008	150	11	0.00147 U	

87-61-6	1,2,3-Trichlorobenzene	NA	NA	NA	0.00147 U
120-82-1	1,2,4-Trichlorobenzene	0.7	820	73	0.00147 U
96-12-8	1,2-Dibromo-3-chloropropane	0.005	0.2	0.08	0.00147 U
106-93-4	1,2-Dibromoethane	0.005	0.04	0.008	0.00147 U
95-50-1	1,2-Dichlorobenzene	17	59000	5300	0.00147 U
107-06-2	1,2-Dichloroethane	0.005	3	0.9	0.00147 U
78-87-5	1,2-Dichloropropane	0.005	5	2	0.00147 U
541-73-1	1,3-Dichlorobenzene	19	59000	5300	0.00147 U
106-46-7	1,4-Dichlorobenzene	2	13	5	0.00147 U
78-93-3	2-Butanone	0.9	44000	3100	0.00147 U
591-78-6	2-Hexanone	NA	NA	NA	0.00147 U
108-10-1	4-Methyl-2-pentanone	NA	NA	NA	0.00147 U
67-64-1	Acetone	19	NA	70000	0.00147 U
107-02-8	Acrolein	0.5	1	0.5	0.00883 U
107-13-1	Acrylonitrile	0.5	3	0.9	0.00294 U
71-43-2	Benzene	0.005	5	2	0.00147 U
74-97-5	Bromochloromethane	NA	NA	NA	0.00147 U
75-27-4	Bromodichloromethane	0.005	3	1	0.00147 U
75-25-2	Bromoform	0.03	280	81	0.00147 U
74-83-9	Bromomethane	0.04	59	25	0.00147 U
75-15-0	Carbon disulfide	6	110000	7800	0.00147 U
56-23-5	Carbon Tetrachloride	0.005	4	2	0.00147 U
108-90-7	Chlorobenzene	0.6	7400	510	0.00147 U
75-00-3	Chloroethane	NA	1100	220	0.00147 U
67-66-3	Chloroform	0.4	2	0.6	0.00147 U
74-87-3	Chloromethane	NA	12	4	0.00147 U
156-59-4	cis-1,2-Dichloroethene	0.3	560	230	0.00147 U
10061-01-5	cis-1,3-Dichloropropene	0.0025	3.5	1	0.00147 U
110-82-7	Cyclohexane	NA	NA	NA	0.00147 U
124-48-1	Dibromochloromethane	0.005	8	3	0.00147 U
75-71-8	Dichlorodifluoromethane	39	230000	490	0.00147 U
100-41-4	Ethylbenzene	13	110000	7800	0.00147 U
76-13-1	Freon 113	NA	NA	NA	0.00147 U
98-82-8	Isopropylbenzene	NA	NA	NA	0.00147 U
108-38-3/106	m,p-Xylenes	9.5	85000	6000	0.00294 U
79-20-9	Methyl Acetate	22	NA	78000	0.00147 U

1634-04-4	Methyl tert-Butyl Ether	0.2	320	110	0.00294 U	
108-87-2	Methylcyclohexane	NA	NA	NA	0.00147 U	
75-09-2	Methylene Chloride	0.01	230	46	0.00147 U	
95-47-6	o-Xylene	9.5	85000	6000	0.00294 U	
100-42-5	Styrene	3	260	90	0.00147 U	
75-65-0	t-Butyl alcohol	0.3	11000	1400	0.00736 U	
127-18-4	Tetrachloroethene	0.005	1500	43	0.00147 U	
108-88-3	Toluene	7	91000	6300	0.00147 U	
156-60-5	trans-1,2-Dichloroethene	0.6	720	300	0.00147 U	
10061-02-6	trans-1,3-Dichloropropene	0.0025	3.5	1	0.00147 U	
79-01-6	Trichloroethene	0.01	10	3	0.00147 U	
75-69-4	Trichlorofluoromethane	34	340000	23000	0.00147 U	
75-01-4	Vinyl chloride	0.005	2	0.7	0.00147 U	
	TIC Summary	NA	NA	NA	0.00829	
Wet Chemistry (%)						
	Percent Solids	NA	NA	NA	91.6	
Wet Chemistry (mg/kg)						
	Cyanide (total)	20	680	47	1.09 U	

IPTGW = NJDEP Default Impact to Ground Water Soil Screening Level

NJNRDCSRS = NJDEP Non-Residential Direct Contact Soil Remediation Standards

NJRDCSRS = NJDEP Residential Direct Contact Soil Remediation Standards

Qualifiers:

E - Concentration exceeds highest calibration standard

B - Indicates compound found in associated blank

D - Indicates result is based on a dilution

H - Alternate peak selection upon analytical review

J - Indicates estimated value for TICs and all results when detected below the RL

U - Indicates compound analyzed for but not detected

P - Greater than 25% diff between 2 GC columns

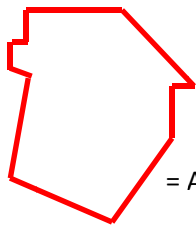
VC - The container(s) provided by the client for soil volatiles do not meet the requirements of EPA SW846-5035A. Results reported below 200 ug/kg may be biased low due to samples not being collected according to EPA SW846 5035A requirements.

mg/kg - parts per million

Regulatory limits listed in this document have been obtained from the latest version of the regulations cited and are used for advisory purposes only. Accredited Analytical assumes no responsibility for errors in regulatory documents or changes to criteria detailed in later versions of the referenced regulation. It is the responsibility of the user to verify these limits before using or reporting any data.

Attachment 6

-Map Depicting Phase I REC Locations



= Approximate subject property boundary



Environmental & Geotechnical Services, LLC

301 Fairfield Road
Fairfield, New Jersey 07004

SITE PLAN

(Subject Property)

Industrial Property

366-394 Wilson Avenue Rear
Newark, NJ 07105

Drawn By	Date Created	Reviewed By	Date Reviewed	Northing: 686059.39 Easting: 590790.49	Block: 5038 Lot: 97
JK	9/12/2019	MA	9/12/2019		

Attachment 7

- Laboratory Reports and Chain-of-Custody Forms



Accredited Analytical Resources, LLC.

10 October 2019

AAR Work Order: 1901594

James Kelly
ENVIRONMENTAL & GEOTECHNICAL
301 Fairfield Road
Fairfield, NJ 07004
Project: 366-394 Wilson Ave Rear

Enclosed are the results of analyses for samples received by the laboratory on 09/27/2019 13:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Daniel Miguel
Technical Director



New Jersey Certification Number: 12007
New York Certification Number: 11109

Pennsylvania Certification Number: 68-02799
CT Certification Number: PH-0219

This report shall not be reproduced, except in its entirety, without the written consent of Accredited Analytical Resources, LLC.
The test results included in this report relate only to the samples analyzed.

**ENVIRONMENTAL & GEOTECHNICAL**301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:43

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N	1901594-01	Soil	09/26/2019 13:13	09/27/2019 13:55

Notes and Definitions

* Values outside of QC limits

ND - Indicates compound analyzed for but not detected at or above the MDL

J - Indicates estimated value for TICs and all results when detected below the RL

B - Indicates compound found in associated blank

E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution

P - Greater than 25% diff. between 2 GC columns.

MDL - Minimum detection limit

RL - Reporting limit

VC - The container(s) provided by the client for soil volatiles do not meet the requirements of EPA SW846-5035A. Results reported below 200 ug/kg may be biased low due to samples not being collected according to EPA SW846 5035A requirements.

Conformance / Non-Conformance Summary**AAR Work Order:1901594**

Accredited Analytical Resources, LLC received 1 sample(s) from ENVIRONMENTAL & GEOTECHNICAL (Project: 366-394 Wilson Ave Rear) on 09/27/2019 13:55.

On 10/7/19, the client requested SPLP Benzo(a)pyrene, SPLP Cadmium, SPLP Lead and SPLP Mercury. The results are included in this data package.

All analyses were performed within the required holding time.

Except for the parameters tested AAR makes no representation as to the fitness or quality of the sample (s) taken.

"The laboratory has reviewed the quality assurance and quality control measurements for the sample analyses."

Daniel Miguel
Technical Director

Accredited Analytical Resources LLC

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:43

Methodology Summary

EPA Method SW846 8081B/8082A:

NY 8081B/8082A

Extractable Petroleum Hydrocarbons by NJ EPH:

NJDEP EPH

Semivolatile Organic Compounds EPA Method SW846 8270:

8270D

Semivolatile Organic Compounds in SPLP Extracts by GC/MS:

1312/8270D

SPLP Mercury by SW846 7470:

1312/7470

SPLP Metals by SW846 6010:

1312/6010D

Total Mercury by SW846 7471:

EPA 7471B

Total Metals by EPA Method SW846 6010:

6010D

Volatile Organic Compounds EPA Method SW846 8260:

8260C

Wet Chemistry:

Total Cyanide by EPA 9010C & EPA 9014

Percent Solids by SM 2540 G

Accredited Analytical Resources LLC

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:43

Condition of Samples on Receipt

Temperature °C	6.00
Chain of Custody Filled Out Properly	Yes
Received with Proper Containers	Yes
Received with Proper Volumes	Yes
Received Within Holding Time	Yes
Samples Received with Correct Preservation	Yes
Samples Received On Ice	Yes
Sample Received Via Field Services	Yes
Samples Hand Delivered	No

Accredited Analytical Resources LLC

Daniel Miguel, Technical Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:43

Client ID: N

Lab ID: 1901594-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Volatile Organic Compounds EPA Method SW846 8260C

Sample Prepared by Method:EPA 5035A

107-02-8	Acrolein	ND	8.99	15.0	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
107-13-1	Acrylonitrile	ND	3.00	15.0	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
67-64-1	Acetone	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
75-71-8	Dichlorodifluoromethane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
74-87-3	Chloromethane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
75-01-4	Vinyl chloride	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
74-83-9	Bromomethane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
75-00-3	Chloroethane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
75-69-4	Trichlorofluoromethane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
76-13-1	Freon 113	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
75-35-4	1,1-Dichloroethene	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
75-15-0	Carbon disulfide	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
79-20-9	Methyl Acetate	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
75-09-2	Methylene Chloride	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
156-60-5	trans-1,2-Dichloroethene	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
75-34-3	1,1-Dichloroethane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
78-93-3	2-Butanone	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
156-59-4	cis-1,2-Dichloroethene	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
67-66-3	Chloroform	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
74-97-5	Bromochloromethane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
110-82-7	Cyclohexane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
71-55-6	1,1,1-Trichloroethane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
75-65-0	t-Butyl alcohol	ND	7.49	30.0	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
56-23-5	Carbon Tetrachloride	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
107-06-2	1,2-Dichloroethane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
71-43-2	Benzene	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
79-01-6	Trichloroethene	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:43

Client ID: N

Lab ID: 1901594-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Volatile Organic Compounds EPA Method SW846 8260C

108-87-2	Methylcyclohexane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
78-87-5	1,2-Dichloropropane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
75-27-4	Bromodichloromethane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
10061-01-5	cis-1,3-Dichloropropene	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
108-88-3	Toluene	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
10061-02-6	trans-1,3-Dichloropropene	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
79-00-5	1,1,2-Trichloroethane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
108-10-1	4-Methyl-2-pentanone	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
106-93-4	1,2-Dibromoethane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
591-78-6	2-Hexanone	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
127-18-4	Tetrachloroethene	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
124-48-1	Dibromochloromethane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
100-41-4	Ethylbenzene	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
108-90-7	Chlorobenzene	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
108-38-3/106-4m,p-Xylenes		ND	3.00	5.99	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
95-47-6	o-Xylene	ND	3.00	5.99	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
100-42-5	Styrene	ND	1.50	5.99	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
75-25-2	Bromoform	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
98-82-8	Isopropylbenzene	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
541-73-1	1,3-Dichlorobenzene	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
106-46-7	1,4-Dichlorobenzene	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
95-50-1	1,2-Dichlorobenzene	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
120-82-1	1,2,4-Trichlorobenzene	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
87-61-6	1,2,3-Trichlorobenzene	ND	1.50	3.00	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
1634-04-4	Methyl tert-Butyl Ether	ND	3.00	5.99	ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	
NA	TIC: unknown	9.46			ug/kg dry	1	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C	J

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:43

Client ID: N

Lab ID: 1901594-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Volatile Organic Compounds EPA Method SW846 8260C

Surrogate: 1,2-Dichloroethane-d4	101 %	74-146	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C
Surrogate: Toluene-d8	94 %	70-121	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C
Surrogate: Bromofluorobenzene	65 %	28-133	09/30/19 19:35	09/30/19 19:35/DSM	EPA 8260C

Sum of Tentatively Identified Compounds	9.46
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Semivolatile Organic Compounds EPA Method SW846 8270D

Sample Prepared by Method:EPA 3546 GCMS

62-75-9	N-Nitrosodimethylamine	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
100-52-7	Benzaldehyde	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
108-95-2	Phenol	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
111-44-4	bis(2-chloroethyl)ether	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
95-57-8	2-Chlorophenol	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
95-48-7	2-Methylphenol	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
39638-32-9	bis(2-chloroisopropyl)ether	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
98-86-2	Acetophenone	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
106-44-5	3 & 4-Methylphenol	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
621-64-7	N-Nitroso-di-n-propylamine	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
67-72-1	Hexachloroethane	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
98-95-3	Nitrobenzene	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
78-59-1	Isophorone	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
88-75-5	2-Nitrophenol	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
105-67-9	2,4-Dimethylphenol	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
111-91-1	bis(2-chloroethoxy)methane	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
120-83-2	2,4-Dichlorophenol	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
91-20-3	Naphthalene	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
106-47-8	4-Chloroaniline	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
87-68-3	Hexachlorobutadiene	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
105-60-2	Caprolactam	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D

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ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:43

Client ID: N

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CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Semivolatile Organic Compounds EPA Method SW846 8270D

59-50-7	4-Chloro-3-methylphenol	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
91-57-6	2-Methylnaphthylene	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
77-47-4	Hexachlorocyclopentadiene	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
88-06-2	2,4,6-Trichlorophenol	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
95-95-4	2,4,5-Trichlorophenol	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
91-58-7	2-Chloronaphthalene	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
92-52-4	1,1-Biphenyl	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
88-74-4	2-Nitroaniline	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
131-11-3	Dimethylphthalate	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
208-96-8	Acenaphthylene	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
99-09-2	3-Nitroaniline	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
83-32-9	Acenaphthene	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
51-28-5	2,4-Dinitrophenol	ND	54.8	275	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
100-02-7	4-Nitrophenol	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
132-64-9	Dibenzofuran	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
606-20-2	2,6-Dinitrotoluene	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
121-14-2	2,4-Dinitrotoluene	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
84-66-2	Diethyl phthalate	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
7005-72-3	4-Chlorophenyl-phenylether	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
86-73-7	Fluorene	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
100-01-6	4-Nitroaniline	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
534-52-1	4,6-Dinitro-2-methylphenol	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
86-74-8	Carbazole	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
86-30-6	N-Nitrosodiphenylamine	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
122-66-7	1,2-Diphenylhydrazine	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
103-33-3	Azobenzene	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	

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ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:43

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CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Semivolatile Organic Compounds EPA Method SW846 8270D

101-55-3	4-Bromophenyl-phenylether	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
1912-24-9	Atrazine	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
118-74-1	Hexachlorobenzene	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
87-86-5	Pentachlorophenol	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
85-01-8	Phenanthrene	255	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
120-12-7	Anthracene	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
84-74-2	Di-n-butyl phthalate	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
206-44-0	Fluoranthene	439	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
92-87-5	Benzidine	ND	137	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
129-00-0	Pyrene	697	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
85-68-7	Butylbenzylphthalate	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
91-94-1	3,3'-Dichlorobenzidine	ND	137	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
56-55-3	Benzo[a]anthracene	258	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
117-81-7	bis(2-ethylhexyl)phthalate	285	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
218-01-9	Chrysene	334	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
117-84-0	Di-n-octyl phthalate	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
205-99-2	Benzo[b]fluoranthene	578	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
207-08-9	Benzo[k]fluoranthene	253	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
50-32-8	Benzo[a]pyrene	319	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
193-39-5	Indeno(1,2,3-cd)pyrene	143	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
53-70-3	Dibenzo(a,h)anthracene	ND	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
191-24-2	Benzo[ghi]perylene	166	54.8	137	ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	
000629-96-9	TIC: 1-Eicosanol (CAS) \$\$ n-Eicosanol	319			ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	J
001454-84-8	TIC: 1-Nonadecanol \$\$ Nonadecyl alcol	244			ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	J
000629-97-0	TIC: Docosane (CAS) \$\$ n-Docosane \$\$	1880			ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	J
000112-95-8	TIC: Eicosane (CAS) \$\$ n-Eicosane	519			ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	J
000629-94-7	TIC: Heneicosane (CAS) \$\$ n-Heneicos;	599			ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	J

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:43

Client ID: N

Lab ID: 1901594-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Semivolatile Organic Compounds EPA Method SW846 8270D

000057-10-3	TIC: Hexadecanoic acid (CAS) \$\$ Palm	604			ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	J
000638-66-4	TIC: Octadecanal (CAS) \$\$ Stearaldehy	596			ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	J
000057-11-4	TIC: Octadecanoic acid (CAS) \$\$ Steari	382			ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	J
055282-17-2	TIC: Tetracosane, 3-ethyl- (CAS) \$\$ 3-E	2000			ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	J
NA	TIC: unknown (01)	304			ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	J
NA	TIC: unknown (02)	876			ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	J
NA	TIC: unknown (03)	434			ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	J
NA	TIC: unknown hydrocarbon	368			ug/kg dry	1	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D	J

Surrogate: 2-Fluorophenol	33 %	41-102	*	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
Surrogate: Phenol-d5	35 %	47-113	*	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
Surrogate: Nitrobenzene-d5	35 %	38-100	*	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
Surrogate: 2-Fluorobiphenyl	34 %	38-88	*	10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
Surrogate: 2,4,6-Tribromophenol	40 %	40-129		10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D
Surrogate: Terphenyl-d14	69 %	31-145		10/02/19 05:34	10/02/19 19:44/DSM	EPA 8270D

Sum of Tentatively Identified Compounds 9,123.41

Semivolatile Organic Compounds in SPLP Extracts by GC/MS

Sample Prepared by Method:EPA 3510C GCMS

50-32-8	Benzo[a]pyrene	ND	0.0500	0.0500	ug/L	1	10/07/19 11:51	10/07/19 21:18/DSM	EPA 8270D SIM
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EPA Method SW846 8081B/8082A

Sample Prepared by Method:EPA 3546

319-84-6	alpha-BHC	ND	0.543	0.543	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A
319-85-7	beta-BHC	ND	0.543	0.543	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A
319-86-8	delta-BHC	ND	0.543	0.543	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A
58-89-9	gamma-BHC [Lindane]	ND	0.543	0.543	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:43

Client ID: N

Lab ID: 1901594-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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EPA Method SW846 8081B/8082A

76-44-8	Heptachlor	ND	0.543	0.543	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
309-00-2	Aldrin	ND	0.543	0.543	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
1024-57-3	Heptachlor Epoxide	ND	0.543	0.543	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
959-98-8	Endosulfan I	ND	0.543	0.543	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
60-57-1	Dieldrin	ND	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
72-55-9	4,4'-DDE	75.7	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	PE
72-20-8	Endrin	ND	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
33213-65-9	Endosulfan II	ND	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
72-54-8	4,4'-DDD	59.5	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	PE
1031-07-8	Endosulfan sulfate	ND	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
50-29-3	4,4'-DDT	117	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	PE
72-43-5	Methoxychlor	ND	1.64	5.48	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
53494-70-5	Endrin ketone	ND	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
7421-93-4	Endrin aldehyde	ND	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
5103-71-9	alpha-Chlordane	16.0	0.543	0.543	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	P
5566-34-7	gamma-Chlordane	25.0	0.543	0.543	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	E
8001-35-2	Toxaphene	ND	27.4	27.4	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
12674-11-2	Aroclor-1016	ND	13.7	27.4	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
11104-28-2	Aroclor-1221	ND	13.7	27.4	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
11141-16-5	Aroclor-1232	ND	13.7	27.4	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
53469-21-9	Aroclor-1242	ND	13.7	27.4	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
12672-29-6	Aroclor-1248	ND	13.7	27.4	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:43

Client ID: N

Lab ID: 1901594-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

EPA Method SW846 8081B/8082A

11097-69-1	Aroclor-1254	ND	13.7	27.4	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
11096-82-5	Aroclor-1260	ND	13.7	27.4	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
37324-23-5	Aroclor-1262	ND	13.7	27.4	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
11100-14-4	Aroclor-1268	ND	13.7	27.4	ug/kg dry	1	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
Surrogate: Tetrachloro-m-xylene			33.5 %	27-137			10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
Surrogate: Tetrachloro-m-xylene			36.5 %	39-138		*	10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
Surrogate: Decachlorobiphenyl			35.0 %	21-150			10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	
Surrogate: Decachlorobiphenyl			40.1 %	24-171			10/01/19 05:55	10/01/19 14:36/JAM	EPA 8081B/8082A	

Total Metals by EPA Method SW846 6010D

Sample Prepared by Method:EPA 3050B

7429-90-5	Aluminum	7110	54.3	551	mg/kg dry	50	10/01/19 09:06	10/01/19 17:41/LIT	EPA 6010D	D
7440-36-0	Antimony	ND	0.269	2.21	mg/kg dry	1	10/01/19 09:06	10/01/19 17:36/LIT	EPA 6010D	
7440-38-2	Arsenic	18.0	0.145	0.551	mg/kg dry	1	10/01/19 09:06	10/01/19 17:36/LIT	EPA 6010D	
7440-39-3	Barium	117	1.77	11.0	mg/kg dry	1	10/01/19 09:06	10/01/19 17:36/LIT	EPA 6010D	
7440-41-7	Beryllium	0.515	0.0243	0.276	mg/kg dry	1	10/01/19 09:06	10/01/19 17:36/LIT	EPA 6010D	
7440-43-9	Cadmium	8.00	0.0265	0.276	mg/kg dry	1	10/01/19 09:06	10/01/19 17:36/LIT	EPA 6010D	
7440-70-2	Calcium	9370	120	689	mg/kg dry	50	10/01/19 09:06	10/01/19 17:41/LIT	EPA 6010D	D
7440-47-3	Chromium	23.6	0.155	1.10	mg/kg dry	1	10/01/19 09:06	10/01/19 17:36/LIT	EPA 6010D	
7440-48-4	Cobalt	8.38	0.297	2.76	mg/kg dry	1	10/01/19 09:06	10/01/19 17:36/LIT	EPA 6010D	
7440-50-8	Copper	140	0.178	1.65	mg/kg dry	1	10/01/19 09:06	10/01/19 17:36/LIT	EPA 6010D	
7439-89-6	Iron	20100	77.7	689	mg/kg dry	50	10/01/19 09:06	10/01/19 17:41/LIT	EPA 6010D	D
7439-92-1	Lead	149	0.0557	0.551	mg/kg dry	1	10/01/19 09:06	10/01/19 17:36/LIT	EPA 6010D	
7439-95-4	Magnesium	3020	197	1380	mg/kg dry	50	10/01/19 09:06	10/01/19 17:41/LIT	EPA 6010D	D
7439-96-5	Manganese	200	0.184	1.10	mg/kg dry	1	10/01/19 09:06	10/01/19 17:36/LIT	EPA 6010D	

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ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear
Project Manager: James Kelly

Reported:
10/10/2019 15:43

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CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Total Metals by EPA Method SW846 6010D

7440-02-0	Nickel	42.8	0.271	2.21	mg/kg dry	1	10/01/19 09:06	10/01/19 17:36/LIT	EPA 6010D	
7440-09-7	Potassium	747	3.31	27.6	mg/kg dry	1	10/01/19 09:06	10/01/19 17:36/LIT	EPA 6010D	
7782-49-2	Selenium	2.29	0.235	2.21	mg/kg dry	1	10/01/19 09:06	10/01/19 17:36/LIT	EPA 6010D	
7440-22-4	Silver	2.41	0.0513	0.276	mg/kg dry	1	10/01/19 09:06	10/01/19 17:36/LIT	EPA 6010D	
7440-23-5	Sodium	225	2.48	27.6	mg/kg dry	1	10/01/19 09:06	10/01/19 17:36/LIT	EPA 6010D	
7440-28-0	Thallium	ND	0.162	1.65	mg/kg dry	1	10/01/19 09:06	10/02/19 13:20/LIT	EPA 6010D	
7440-62-2	Vanadium	32.3	1.03	2.76	mg/kg dry	1	10/01/19 09:06	10/01/19 17:36/LIT	EPA 6010D	
7440-66-6	Zinc	696	17.1	165	mg/kg dry	50	10/01/19 09:06	10/01/19 17:41/LIT	EPA 6010D	D

SPLP Metals by SW846 6010D

Sample Prepared by Method:EPA 3010A

7440-43-9	SPLP Cadmium	1.00	0.951	4.00	ug/L	1	10/07/19 09:35	10/07/19 17:00/LIT	1312/6010D	J
7439-92-1	SPLP Lead	41.4	1.59	5.00	ug/L	1	10/07/19 09:35	10/09/19 11:24/LIT	1312/6010D	

Total Mercury by SW846 7471B

Sample Prepared by Method:EPA 7471B

7439-97-6	Mercury	12.4	0.822	0.822	mg/kg dry	10	10/03/19 08:30	10/03/19 14:56/BFG	EPA 7471B	D
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SPLP Mercury by SW846 7470A

Sample Prepared by Method:EPA 7470A

7439-97-6	SPLP Mercury	ND	0.0200	0.500	ug/L	1	10/09/19 08:21	10/09/19 15:23/BFG	1312/7470A	
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Wet Chemistry

Sample Prepared by Method:EPA 9010C

NA	Cyanide (total)	ND	0.0548	1.10	mg/kg dry	1	09/30/19 09:00	09/30/19 15:43/NNM	EPA 9014	
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Sample Prepared by Method:Percent Solids

NA	Percent Solids	91.2	0.100	0.100	%	1	09/30/19 14:03	10/01/19 08:40/NIN	SM 2540 G	
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Extractable Petroleum Hydrocarbons by NJ EPH

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**ENVIRONMENTAL & GEOTECHNICAL**301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:43

Client ID: N**Lab ID: 1901594-01 (Soil)**

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC**Extractable Petroleum Hydrocarbons by NJ EPH**

Sample Prepared by Method:EPA 3546

NA	Extractable Petroleum Hydrocarbons (I	241	17.5	17.5	mg/kg dry	1	09/30/19 13:35	10/02/19 16:23/MS	NJDEP EPH	
<i>Surrogate: o-Terphenyl</i>				67.1 %	40-140		09/30/19 13:35	10/02/19 16:23/MS	NJDEP EPH	
<i>Surrogate: 1-Chlorooctadecane</i>				109 %	40-140		09/30/19 13:35	10/02/19 16:23/MS	NJDEP EPH	

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ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:43

Client ID: N

Lab ID: 1901594-01RE1 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Semivolatile Organic Compounds EPA Method SW846 8270D

Sample Prepared by Method:EPA 3546 GCMS

62-75-9	N-Nitrosodimethylamine	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
100-52-7	Benzaldehyde	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
108-95-2	Phenol	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
111-44-4	bis(2-chloroethyl)ether	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
95-57-8	2-Chlorophenol	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
95-48-7	2-Methylphenol	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
39638-32-9	bis(2-chloroisopropyl)ether	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
98-86-2	Acetophenone	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
106-44-5	3 & 4-Methylphenol	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
621-64-7	N-Nitroso-di-n-propylamine	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
67-72-1	Hexachloroethane	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
98-95-3	Nitrobenzene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
78-59-1	Isophorone	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
88-75-5	2-Nitrophenol	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
105-67-9	2,4-Dimethylphenol	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
111-91-1	bis(2-chloroethoxy)methane	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
120-83-2	2,4-Dichlorophenol	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
91-20-3	Naphthalene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
106-47-8	4-Chloroaniline	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
87-68-3	Hexachlorobutadiene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
105-60-2	Caprolactam	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
59-50-7	4-Chloro-3-methylphenol	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
91-57-6	2-Methylnaphthylene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
77-47-4	Hexachlorocyclopentadiene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
88-06-2	2,4,6-Trichlorophenol	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
95-95-4	2,4,5-Trichlorophenol	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:43

Client ID: N

Lab ID: 1901594-01RE1 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Semivolatile Organic Compounds EPA Method SW846 8270D

91-58-7	2-Chloronaphthalene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
92-52-4	1,1-Biphenyl	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
88-74-4	2-Nitroaniline	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
131-11-3	Dimethylphthalate	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
208-96-8	Acenaphthylene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
99-09-2	3-Nitroaniline	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
83-32-9	Acenaphthene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
51-28-5	2,4-Dinitrophenol	ND	274	1370	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
100-02-7	4-Nitrophenol	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
132-64-9	Dibenzofuran	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
606-20-2	2,6-Dinitrotoluene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
121-14-2	2,4-Dinitrotoluene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
84-66-2	Diethyl phthalate	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
7005-72-3	4-Chlorophenyl-phenylether	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
86-73-7	Fluorene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
100-01-6	4-Nitroaniline	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
534-52-1	4,6-Dinitro-2-methylphenol	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
86-74-8	Carbazole	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
86-30-6	N-Nitrosodiphenylamine	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
122-66-7	1,2-Diphenylhydrazine	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
103-33-3	Azobenzene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
101-55-3	4-Bromophenyl-phenylether	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
1912-24-9	Atrazine	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
118-74-1	Hexachlorobenzene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
87-86-5	Pentachlorophenol	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
85-01-8	Phenanthrene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
120-12-7	Anthracene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:43

Client ID: N

Lab ID: 1901594-01RE1 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Semivolatile Organic Compounds EPA Method SW846 8270D

84-74-2	Di-n-butyl phthalate	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
206-44-0	Fluoranthene	482	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	JD
92-87-5	Benzidine	ND	683	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
129-00-0	Pyrene	450	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	JD
85-68-7	Butylbenzylphthalate	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
91-94-1	3,3'-Dichlorobenzidine	ND	683	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
56-55-3	Benzo[a]anthracene	282	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	JD
117-81-7	bis(2-ethylhexyl)phthalate	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
218-01-9	Chrysene	340	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	JD
117-84-0	Di-n-octyl phthalate	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
205-99-2	Benzo[b]fluoranthene	581	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	JD
207-08-9	Benzo[k]fluoranthene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
50-32-8	Benzo[a]pyrene	302	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	JD
193-39-5	Indeno(1,2,3-cd)pyrene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
53-70-3	Dibenzo(a,h)anthracene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	
191-24-2	Benzo[ghi]perylene	ND	274	685	ug/kg dry	5	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D	

Surrogate: 2-Fluorophenol	33 %	41-102	*	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D
Surrogate: Phenol-d5	36 %	47-113	*	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D
Surrogate: Nitrobenzene-d5	34 %	38-100	*	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D
Surrogate: 2-Fluorobiphenyl	36 %	38-88	*	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D
Surrogate: 2,4,6-Tribromophenol	38 %	40-129	*	10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D
Surrogate: Terphenyl-d14	43 %	31-145		10/02/19 05:34	10/03/19 14:58/DSM	EPA 8270D

EPA Method SW846 8081B/8082A

Sample Prepared by Method:EPA 3546

319-84-6	alpha-BHC	ND	2.71	2.71	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
319-85-7	beta-BHC	ND	2.71	2.71	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:43

Client ID: N

Lab ID: 1901594-01RE1 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

EPA Method SW846 8081B/8082A

319-86-8	delta-BHC	ND	2.71	2.71	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
58-89-9	gamma-BHC [Lindane]	ND	2.71	2.71	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
76-44-8	Heptachlor	ND	2.71	2.71	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
309-00-2	Aldrin	ND	2.71	2.71	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
1024-57-3	Heptachlor Epoxide	ND	2.71	2.71	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
959-98-8	Endosulfan I	ND	2.71	2.71	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
60-57-1	Dieldrin	ND	5.47	5.47	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
72-55-9	4,4'-DDE	113	5.47	5.47	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	D
72-20-8	Endrin	ND	5.47	5.47	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
33213-65-9	Endosulfan II	ND	5.47	5.47	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
72-54-8	4,4'-DDD	86.2	5.47	5.47	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	D
1031-07-8	Endosulfan sulfate	ND	5.47	5.47	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
50-29-3	4,4'-DDT	175	5.47	5.47	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	D
72-43-5	Methoxychlor	ND	8.22	27.4	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
53494-70-5	Endrin ketone	ND	5.47	5.47	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
7421-93-4	Endrin aldehyde	ND	5.47	5.47	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
5103-71-9	alpha-Chlordane	ND	2.71	2.71	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
5566-34-7	gamma-Chlordane	29.7	2.71	2.71	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	D
8001-35-2	Toxaphene	ND	137	137	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
12674-11-2	Aroclor-1016	ND	68.3	137	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
11104-28-2	Aroclor-1221	ND	68.3	137	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
11141-16-5	Aroclor-1232	ND	68.3	137	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:43

Client ID: N

Lab ID: 1901594-01RE1 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

EPA Method SW846 8081B/8082A

53469-21-9	Aroclor-1242	ND	68.3	137	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
12672-29-6	Aroclor-1248	ND	68.3	137	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
11097-69-1	Aroclor-1254	ND	68.3	137	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
11096-82-5	Aroclor-1260	ND	68.3	137	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
37324-23-5	Aroclor-1262	ND	68.3	137	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
11100-14-4	Aroclor-1268	ND	68.3	137	ug/kg dry	5	10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
Surrogate: Tetrachloro-m-xylene			43.5 %	27-137			10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
Surrogate: Tetrachloro-m-xylene			51.5 %	39-138			10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
Surrogate: Decachlorobiphenyl			44.0 %	21-150			10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	
Surrogate: Decachlorobiphenyl			34.0 %	24-171			10/01/19 05:55	10/02/19 16:31/JAM	EPA 8081B/8082A	

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director

SPLP PREPARATION BENCH SHEET

B9J0601

Accredited Analytical Resources LLC

Printed: 10/10/2019 3:38:46PM

Prepared using: EPA 1312

Matrix: Solid

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	% Moisture	Extraction Comments
1901591-02	SPLP Extraction	10/06/2019 12:51	100	2000	19.80	pH on: 4.83 / pH off: 9.96
1901594-01	SPLP Extraction	10/06/2019 12:51	100	2000	8.80	pH on: 5.86 / pH off: 9.99
1901595-01	SPLP Extraction	10/06/2019 12:51	100	2000	6.30	pH on: 5.38 / pH off: 9.94
1901596-01	SPLP Extraction	10/06/2019 12:51	100	2000	8.40	pH on: 4.98 / pH off: 9.92
1901597-01	SPLP Extraction	10/06/2019 12:51	100	2000	4.60	pH on: 5.46 / pH off: 10.05
B9J0601-BLK1	QC	10/06/2019 12:51	100	2000		

Environmental & Geotechnical Services, LLC

Fairfield, NJ 07004

SITE NAME: 366-394 Wilson Ave Rear

ADDRESS:

6167

CHAIN OF CUSTODY RECORD

[illegible]



Customer Change Order

Initiator:	<u>Bernie</u>	Date:	<u>10-7-19</u>
Client:	<u>EGS</u>	Phone No.:	<u></u>
Contact:	<u>Jim K.</u>	Fax No.:	<u></u>
Work Order No.:	<u>1901594</u>	E-Mail Address:	<u></u>
Date Sampled:	<u>9-26-19</u>	Demand Date:	<u>10-10-19</u>
		Holding Time Up on:	<u>10-10-19</u>

Change Order Request:

Analyze sample 01 for SPLP benzo(a)pyrene/Hg/Cd/Pb

Remarks:

Rose, Neceta, Atoy, Betty

Kathy, Nydia

Bernie O'Gara

From: Jim Kelly [jkelly@eandgservices.com]
Sent: Friday, October 04, 2019 6:57 PM
To: Bernie O'Gara
Cc: (kberkowska@eandgservices.com); ccrum@eandgservices.com;
malcala@eandgservices.com; Daniel Miguel
Subject: Re: AAR Case 1901594, EGS, 366-394 Wilson Ave Rear Project Results and Spreadsheet
Attachments: 1901594 RFC 100419.pdf

Hi Bernie,

Sorry for the late notice; however please find attached a request for change for this work order. My e-mail was having issues over the last few hours.

Specifically, as indicated on the attached, please perform SPLP analysis on the following for this sample:
benzo(a)pyrene, mercury, cadmium and lead.

Please perform the SPLP analysis on a rush turnaround time. Please complete the SPLP analysis ASAP. Per a discussion with Danny earlier today, it was indicated that the SPLP results can be completed and sent to us by next Thursday 10/10/19.

Thanks,

Jim

James Kelly

Project Manager

Environmental and Geotechnical Services, LLC



Direct: 973-417-8599

Office: 973-808-6600

Fax: 888-707-7819

301 Fairfield Rd, Fairfield, NJ 07004

Email: jkelly@eandgservices.com

On Fri, Oct 4, 2019 at 3:19 PM Bernie O'Gara <Bernie@accreditedanalytical.com> wrote:

Bernie O'Gara

Accredited Analytical Resources, LLC
20 Pershing Ave. Carteret, NJ 07008
Ph. 732.969.6112 | Fx. 732.541.1383

www.accreditedanalytical.com

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Accredited Analytical Resources, LLC.

10 October 2019

AAR Work Order: 1901597

James Kelly
ENVIRONMENTAL & GEOTECHNICAL
301 Fairfield Road
Fairfield, NJ 07004
Project: 366-394 Wilson Ave Rear

Enclosed are the results of analyses for samples received by the laboratory on 09/27/2019 13:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Daniel Miguel
Technical Director



New Jersey Certification Number: 12007
New York Certification Number: 11109

Pennsylvania Certification Number: 68-02799
CT Certification Number: PH-0219

This report shall not be reproduced, except in its entirety, without the written consent of Accredited Analytical Resources, LLC.
The test results included in this report relate only to the samples analyzed.

**ENVIRONMENTAL & GEOTECHNICAL**301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 16:00

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
NE	1901597-01	Soil	09/26/2019 10:18	09/27/2019 13:55

Notes and Definitions

* Values outside of QC limits

ND - Indicates compound analyzed for but not detected at or above the MDL

J - Indicates estimated value for TICs and all results when detected below the RL

B - Indicates compound found in associated blank

E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution

P - Greater than 25% diff. between 2 GC columns.

MDL - Minimum detection limit

RL - Reporting limit

VC - The container(s) provided by the client for soil volatiles do not meet the requirements of EPA SW846-5035A. Results reported below 200 ug/kg may be biased low due to samples not being collected according to EPA SW846 5035A requirements.

Conformance / Non-Conformance Summary**AAR Work Order:1901597**

Accredited Analytical Resources, LLC received 1 sample(s) from ENVIRONMENTAL & GEOTECHNICAL (Project: 366-394 Wilson Ave Rear) on 09/27/2019 13:55.

On 10/7/19, the client requested SPLP Benzo(a)pyrene, SPLP Cadmium, SPLP Lead and SPLP Mercury. The results are included in this data package.

All analyses were performed within the required holding time.

Except for the parameters tested AAR makes no representation as to the fitness or quality of the sample (s) taken.

"The laboratory has reviewed the quality assurance and quality control measurements for the sample analyses."

Daniel Miguel
Technical Director

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 16:00

Methodology Summary

EPA Method SW846 8081B/8082A:

NY 8081B/8082A

Extractable Petroleum Hydrocarbons by NJ EPH:

NJDEP EPH

Semivolatile Organic Compounds EPA Method SW846 8270:

8270D

Semivolatile Organic Compounds in SPLP Extracts by GC/MS:

1312/8270D

SPLP Mercury by SW846 7470:

1312/7470

SPLP Metals by SW846 6010:

1312/6010D

Total Mercury by SW846 7471:

EPA 7471B

Total Metals by EPA Method SW846 6010:

6010D

Volatile Organic Compounds EPA Method SW846 8260:

8260C

Wet Chemistry:

Total Cyanide by EPA 9010C & EPA 9014

Percent Solids by SM 2540 G

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Daniel Miguel, Technical Director

ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

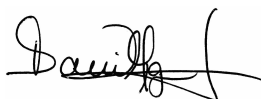
Reported:

10/10/2019 16:00

Condition of Samples on Receipt

Temperature °C	6.00
Chain of Custody Filled Out Properly	Yes
Received with Proper Containers	Yes
Received with Proper Volumes	Yes
Received Within Holding Time	Yes
Samples Received with Correct Preservation	Yes
Samples Received On Ice	Yes
Sample Received Via Field Services	Yes
Samples Hand Delivered	No

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Daniel Miguel, Technical Director

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ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 16:00

Client ID: NE

Lab ID: 1901597-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Volatile Organic Compounds EPA Method SW846 8260C

Sample Prepared by Method:EPA 5035A

107-02-8	Acrolein	ND	6.87	11.4	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
107-13-1	Acrylonitrile	ND	2.29	11.4	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
67-64-1	Acetone	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
75-71-8	Dichlorodifluoromethane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
74-87-3	Chloromethane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
75-01-4	Vinyl chloride	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
74-83-9	Bromomethane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
75-00-3	Chloroethane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
75-69-4	Trichlorofluoromethane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
76-13-1	Freon 113	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
75-35-4	1,1-Dichloroethene	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
75-15-0	Carbon disulfide	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
79-20-9	Methyl Acetate	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
75-09-2	Methylene Chloride	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
156-60-5	trans-1,2-Dichloroethene	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
75-34-3	1,1-Dichloroethane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
78-93-3	2-Butanone	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
156-59-4	cis-1,2-Dichloroethene	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
67-66-3	Chloroform	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
74-97-5	Bromochloromethane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
110-82-7	Cyclohexane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
71-55-6	1,1,1-Trichloroethane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
75-65-0	t-Butyl alcohol	ND	5.72	22.9	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
56-23-5	Carbon Tetrachloride	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
107-06-2	1,2-Dichloroethane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
71-43-2	Benzene	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
79-01-6	Trichloroethene	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 16:00

Client ID: NE

Lab ID: 1901597-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Volatile Organic Compounds EPA Method SW846 8260C

108-87-2	Methylcyclohexane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
78-87-5	1,2-Dichloropropane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
75-27-4	Bromodichloromethane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
10061-01-5	cis-1,3-Dichloropropene	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
108-88-3	Toluene	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
10061-02-6	trans-1,3-Dichloropropene	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
79-00-5	1,1,2-Trichloroethane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
108-10-1	4-Methyl-2-pentanone	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
106-93-4	1,2-Dibromoethane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
591-78-6	2-Hexanone	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
127-18-4	Tetrachloroethene	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
124-48-1	Dibromochloromethane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
100-41-4	Ethylbenzene	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
108-90-7	Chlorobenzene	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
108-38-3/106-4m,p-Xylenes		ND	2.29	4.58	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
95-47-6	o-Xylene	ND	2.29	4.58	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
100-42-5	Styrene	ND	1.14	4.58	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
75-25-2	Bromoform	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
98-82-8	Isopropylbenzene	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
541-73-1	1,3-Dichlorobenzene	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
106-46-7	1,4-Dichlorobenzene	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
95-50-1	1,2-Dichlorobenzene	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
120-82-1	1,2,4-Trichlorobenzene	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
87-61-6	1,2,3-Trichlorobenzene	ND	1.14	2.29	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
1634-04-4	Methyl tert-Butyl Ether	ND	2.29	4.58	ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	
NA	TIC: unknown hydrocarbon	8.30			ug/kg dry	1	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C	J

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 16:00

Client ID: NE

Lab ID: 1901597-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Volatile Organic Compounds EPA Method SW846 8260C

Surrogate: 1,2-Dichloroethane-d4	115 %	74-146	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C
Surrogate: Toluene-d8	96 %	70-121	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C
Surrogate: Bromofluorobenzene	72 %	28-133	09/30/19 21:03	09/30/19 21:03/DSM	EPA 8260C

Sum of Tentatively Identified Compounds	8.30
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Semivolatile Organic Compounds EPA Method SW846 8270D

Sample Prepared by Method:EPA 3546 GCMS

62-75-9	N-Nitrosodimethylamine	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
100-52-7	Benzaldehyde	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
108-95-2	Phenol	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
111-44-4	bis(2-chloroethyl)ether	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
95-57-8	2-Chlorophenol	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
95-48-7	2-Methylphenol	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
39638-32-9	bis(2-chloroisopropyl)ether	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
98-86-2	Acetophenone	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
106-44-5	3 & 4-Methylphenol	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
621-64-7	N-Nitroso-di-n-propylamine	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
67-72-1	Hexachloroethane	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
98-95-3	Nitrobenzene	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
78-59-1	Isophorone	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
88-75-5	2-Nitrophenol	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
105-67-9	2,4-Dimethylphenol	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
111-91-1	bis(2-chloroethoxy)methane	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
120-83-2	2,4-Dichlorophenol	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
91-20-3	Naphthalene	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
106-47-8	4-Chloroaniline	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
87-68-3	Hexachlorobutadiene	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D
105-60-2	Caprolactam	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 16:00

Client ID: NE

Lab ID: 1901597-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Semivolatile Organic Compounds EPA Method SW846 8270D

59-50-7	4-Chloro-3-methylphenol	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
91-57-6	2-Methylnaphthylene	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
77-47-4	Hexachlorocyclopentadiene	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
88-06-2	2,4,6-Trichlorophenol	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
95-95-4	2,4,5-Trichlorophenol	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
91-58-7	2-Chloronaphthalene	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
92-52-4	1,1-Biphenyl	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
88-74-4	2-Nitroaniline	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
131-11-3	Dimethylphthalate	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
208-96-8	Acenaphthylene	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
99-09-2	3-Nitroaniline	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
83-32-9	Acenaphthene	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
51-28-5	2,4-Dinitrophenol	ND	52.4	263	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
100-02-7	4-Nitrophenol	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
132-64-9	Dibenzofuran	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
606-20-2	2,6-Dinitrotoluene	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
121-14-2	2,4-Dinitrotoluene	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
84-66-2	Diethyl phthalate	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
7005-72-3	4-Chlorophenyl-phenylether	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
86-73-7	Fluorene	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
100-01-6	4-Nitroaniline	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
534-52-1	4,6-Dinitro-2-methylphenol	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
86-74-8	Carbazole	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
86-30-6	N-Nitrosodiphenylamine	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
122-66-7	1,2-Diphenylhydrazine	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
103-33-3	Azobenzene	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 16:00

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CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Semivolatile Organic Compounds EPA Method SW846 8270D

101-55-3	4-Bromophenyl-phenylether	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
1912-24-9	Atrazine	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
118-74-1	Hexachlorobenzene	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
87-86-5	Pentachlorophenol	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
85-01-8	Phenanthrene	131	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
120-12-7	Anthracene	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
84-74-2	Di-n-butyl phthalate	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
206-44-0	Fluoranthene	300	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
92-87-5	Benzidine	ND	131	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
129-00-0	Pyrene	825	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
85-68-7	Butylbenzylphthalate	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
91-94-1	3,3'-Dichlorobenzidine	ND	131	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
56-55-3	Benzo[a]anthracene	227	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
117-81-7	bis(2-ethylhexyl)phthalate	945	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
218-01-9	Chrysene	290	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
117-84-0	Di-n-octyl phthalate	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
205-99-2	Benzo[b]fluoranthene	603	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
207-08-9	Benzo[k]fluoranthene	176	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
50-32-8	Benzo[a]pyrene	322	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
193-39-5	Indeno(1,2,3-cd)pyrene	176	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
53-70-3	Dibenzo(a,h)anthracene	ND	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
191-24-2	Benzo[ghi]perylene	211	52.4	131	ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	
000000-00-0	TIC: 1-Hexacosanal	1060			ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	J
074685-33-9	TIC: 3-Eicosene, (E)- (CAS)	235			ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	J
000301-02-0	TIC: 9-Octadecenamide, (Z)- (CAS) \$\$\$	781			ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	J
000629-97-0	TIC: Docosane (CAS) \$\$\$ n-Docosane \$\$\$	972			ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	J
000544-76-3	TIC: Hexadecane (CAS) \$\$\$ n-Hexadecane \$\$\$	1590			ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	J

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 16:00

Client ID: NE

Lab ID: 1901597-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Semivolatile Organic Compounds EPA Method SW846 8270D

NA	TIC: unknown hydrocarbon	421			ug/kg dry	1	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D	J
	Surrogate: 2-Fluorophenol		37 %	41-102	*	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D		
	Surrogate: Phenol-d5		41 %	47-113	*	10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D		
	Surrogate: Nitrobenzene-d5		38 %	38-100		10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D		
	Surrogate: 2-Fluorobiphenyl		39 %	38-88		10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D		
	Surrogate: 2,4,6-Tribromophenol		45 %	40-129		10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D		
	Surrogate: Terphenyl-d14		123 %	31-145		10/02/19 05:34	10/02/19 21:56/DSM	EPA 8270D		
Sum of Tentatively Identified Compounds		5,051.91								

Semivolatile Organic Compounds in SPLP Extracts by GC/MS

Sample Prepared by Method:EPA 3510C GCMS

50-32-8	Benzo[a]pyrene	ND	0.0500	0.0500	ug/L	1	10/07/19 11:51	10/08/19 13:49/DSM	EPA 8270D SIM	
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EPA Method SW846 8081B/8082A

Sample Prepared by Method:EPA 3546

319-84-6	alpha-BHC	ND	0.519	0.519	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
319-85-7	beta-BHC	ND	0.519	0.519	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
319-86-8	delta-BHC	ND	0.519	0.519	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
58-89-9	gamma-BHC [Lindane]	ND	0.519	0.519	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
76-44-8	Heptachlor	ND	0.519	0.519	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
309-00-2	Aldrin	ND	0.519	0.519	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
1024-57-3	Heptachlor Epoxide	ND	0.519	0.519	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
959-98-8	Endosulfan I	ND	0.519	0.519	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
60-57-1	Dieldrin	ND	1.05	1.05	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
72-55-9	4,4'-DDE	3.85	1.05	1.05	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	P

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 16:00

Client ID: NE

Lab ID: 1901597-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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EPA Method SW846 8081B/8082A

72-20-8	Endrin	ND	1.05	1.05	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
33213-65-9	Endosulfan II	ND	1.05	1.05	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
72-54-8	4,4'-DDD	2.31	1.05	1.05	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
1031-07-8	Endosulfan sulfate	ND	1.05	1.05	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
50-29-3	4,4'-DDT	13.6	1.05	1.05	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	P
72-43-5	Methoxychlor	ND	1.57	5.24	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
53494-70-5	Endrin ketone	ND	1.05	1.05	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
7421-93-4	Endrin aldehyde	ND	1.05	1.05	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
5103-71-9	alpha-Chlordane	2.88	0.519	0.519	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	P
5566-34-7	gamma-Chlordane	2.10	0.519	0.519	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
8001-35-2	Toxaphene	ND	26.2	26.2	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
12674-11-2	Aroclor-1016	ND	13.1	26.2	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
11104-28-2	Aroclor-1221	ND	13.1	26.2	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
11141-16-5	Aroclor-1232	ND	13.1	26.2	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
53469-21-9	Aroclor-1242	ND	13.1	26.2	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
12672-29-6	Aroclor-1248	ND	13.1	26.2	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
11097-69-1	Aroclor-1254	ND	13.1	26.2	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
11096-82-5	Aroclor-1260	ND	13.1	26.2	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
37324-23-5	Aroclor-1262	ND	13.1	26.2	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
11100-14-4	Aroclor-1268	ND	13.1	26.2	ug/kg dry	1	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
Surrogate: Tetrachloro-m-xylene			42.9 %	27-137			10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	
Surrogate: Tetrachloro-m-xylene			47.2 %	39-138			10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A	

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 16:00

Client ID: NE

Lab ID: 1901597-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

EPA Method SW846 8081B/8082A

Surrogate: Decachlorobiphenyl	32.8 %	21-150	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A
Surrogate: Decachlorobiphenyl	39.2 %	24-171	10/01/19 05:55	10/01/19 15:39/JAM	EPA 8081B/8082A

Total Metals by EPA Method SW846 6010D

Sample Prepared by Method:EPA 3050B

7429-90-5	Aluminum	9110	51.6	524	mg/kg dry	50	10/01/19 09:06	10/01/19 18:25/LIT	EPA 6010D	D
7440-36-0	Antimony	ND	0.256	2.10	mg/kg dry	1	10/01/19 09:06	10/01/19 18:19/LIT	EPA 6010D	
7440-38-2	Arsenic	6.15	0.138	0.524	mg/kg dry	1	10/01/19 09:06	10/01/19 18:19/LIT	EPA 6010D	
7440-39-3	Barium	93.3	1.68	10.5	mg/kg dry	1	10/01/19 09:06	10/01/19 18:19/LIT	EPA 6010D	
7440-41-7	Beryllium	0.325	0.0231	0.262	mg/kg dry	1	10/01/19 09:06	10/01/19 18:19/LIT	EPA 6010D	
7440-43-9	Cadmium	1.39	0.0252	0.262	mg/kg dry	1	10/01/19 09:06	10/01/19 18:19/LIT	EPA 6010D	
7440-70-2	Calcium	5180	115	655	mg/kg dry	50	10/01/19 09:06	10/01/19 18:25/LIT	EPA 6010D	D
7440-47-3	Chromium	30.7	0.148	1.05	mg/kg dry	1	10/01/19 09:06	10/01/19 18:19/LIT	EPA 6010D	
7440-48-4	Cobalt	6.18	0.282	2.62	mg/kg dry	1	10/01/19 09:06	10/01/19 18:19/LIT	EPA 6010D	
7440-50-8	Copper	71.8	0.169	1.57	mg/kg dry	1	10/01/19 09:06	10/01/19 18:19/LIT	EPA 6010D	
7439-89-6	Iron	27600	73.9	655	mg/kg dry	50	10/01/19 09:06	10/01/19 18:25/LIT	EPA 6010D	D
7439-92-1	Lead	82.7	0.0529	0.524	mg/kg dry	1	10/01/19 09:06	10/01/19 18:19/LIT	EPA 6010D	
7439-95-4	Magnesium	3580	188	1310	mg/kg dry	50	10/01/19 09:06	10/01/19 18:25/LIT	EPA 6010D	D
7439-96-5	Manganese	197	0.175	1.05	mg/kg dry	1	10/01/19 09:06	10/01/19 18:19/LIT	EPA 6010D	
7440-02-0	Nickel	18.7	0.257	2.10	mg/kg dry	1	10/01/19 09:06	10/01/19 18:19/LIT	EPA 6010D	
7440-09-7	Potassium	590	3.14	26.2	mg/kg dry	1	10/01/19 09:06	10/01/19 18:19/LIT	EPA 6010D	
7782-49-2	Selenium	ND	0.223	2.10	mg/kg dry	1	10/01/19 09:06	10/01/19 18:19/LIT	EPA 6010D	
7440-22-4	Silver	0.270	0.0487	0.262	mg/kg dry	1	10/01/19 09:06	10/01/19 18:19/LIT	EPA 6010D	
7440-23-5	Sodium	299	2.36	26.2	mg/kg dry	1	10/01/19 09:06	10/01/19 18:19/LIT	EPA 6010D	
7440-28-0	Thallium	ND	0.154	1.57	mg/kg dry	1	10/01/19 09:06	10/02/19 13:44/LIT	EPA 6010D	
7440-62-2	Vanadium	38.3	0.980	2.62	mg/kg dry	1	10/01/19 09:06	10/01/19 18:19/LIT	EPA 6010D	

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ENVIRONMENTAL & GEOTECHNICAL
301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear
Project Manager: James Kelly

Reported:
10/10/2019 16:00

Client ID: NE
Lab ID: 1901597-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Total Metals by EPA Method SW846 6010D

7440-66-6	Zinc	201	0.325	3.14	mg/kg dry	1	10/01/19 09:06	10/01/19 18:19/LIT	EPA 6010D	
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SPLP Metals by SW846 6010D

Sample Prepared by Method:EPA 3010A

7440-43-9	SPLP Cadmium	ND	0.951	4.00	ug/L	1	10/07/19 09:35	10/07/19 17:33/LIT	1312/6010D	
7439-92-1	SPLP Lead	27.1	1.59	5.00	ug/L	1	10/07/19 09:35	10/09/19 11:54/LIT	1312/6010D	

Total Mercury by SW846 7471B

Sample Prepared by Method:EPA 7471B

7439-97-6	Mercury	0.709	0.0728	0.0728	mg/kg dry	1	10/03/19 08:30	10/03/19 13:46/BFG	EPA 7471B	
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SPLP Mercury by SW846 7470A

Sample Prepared by Method:EPA 7470A

7439-97-6	SPLP Mercury	ND	0.0200	0.500	ug/L	1	10/09/19 08:21	10/09/19 15:30/BFG	1312/7470A	
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Wet Chemistry

Sample Prepared by Method:EPA 9010C

NA	Cyanide (total)	ND	0.0524	1.05	mg/kg dry	1	10/03/19 12:09	10/04/19 14:13/NNM	EPA 9014	
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Sample Prepared by Method:Percent Solids

NA	Percent Solids	95.4	0.100	0.100	%	1	09/30/19 14:03	10/01/19 08:40/NIN	SM 2540 G	
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Extractable Petroleum Hydrocarbons by NJ EPH

Sample Prepared by Method:EPA 3546

NA	Extractable Petroleum Hydrocarbons (I	148	16.8	16.8	mg/kg dry	1	10/02/19 08:12	10/02/19 20:25/MS	NJDEP EPH	
<i>Surrogate: o-Terphenyl</i>				64.6 %	40-140		10/02/19 08:12	10/02/19 20:25/MS	NJDEP EPH	
<i>Surrogate: 1-Chlorooctadecane</i>				92.8 %	40-140		10/02/19 08:12	10/02/19 20:25/MS	NJDEP EPH	

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ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 16:00

Client ID: NE

Lab ID: 1901597-01RE1 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Semivolatile Organic Compounds EPA Method SW846 8270D

Sample Prepared by Method:EPA 3546 GCMS

62-75-9	N-Nitrosodimethylamine	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
100-52-7	Benzaldehyde	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
108-95-2	Phenol	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
111-44-4	bis(2-chloroethyl)ether	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
95-57-8	2-Chlorophenol	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
95-48-7	2-Methylphenol	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
39638-32-9	bis(2-chloroisopropyl)ether	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
98-86-2	Acetophenone	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
106-44-5	3 & 4-Methylphenol	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
621-64-7	N-Nitroso-di-n-propylamine	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
67-72-1	Hexachloroethane	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
98-95-3	Nitrobenzene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
78-59-1	Isophorone	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
88-75-5	2-Nitrophenol	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
105-67-9	2,4-Dimethylphenol	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
111-91-1	bis(2-chloroethoxy)methane	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
120-83-2	2,4-Dichlorophenol	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
91-20-3	Naphthalene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
106-47-8	4-Chloroaniline	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
87-68-3	Hexachlorobutadiene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
105-60-2	Caprolactam	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
59-50-7	4-Chloro-3-methylphenol	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
91-57-6	2-Methylnaphthylene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
77-47-4	Hexachlorocyclopentadiene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
88-06-2	2,4,6-Trichlorophenol	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
95-95-4	2,4,5-Trichlorophenol	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 16:00

Client ID: NE

Lab ID: 1901597-01RE1 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Semivolatile Organic Compounds EPA Method SW846 8270D

91-58-7	2-Chloronaphthalene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
92-52-4	1,1-Biphenyl	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
88-74-4	2-Nitroaniline	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
131-11-3	Dimethylphthalate	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
208-96-8	Acenaphthylene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
99-09-2	3-Nitroaniline	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
83-32-9	Acenaphthene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
51-28-5	2,4-Dinitrophenol	ND	262	1310	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
100-02-7	4-Nitrophenol	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
132-64-9	Dibenzofuran	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
606-20-2	2,6-Dinitrotoluene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
121-14-2	2,4-Dinitrotoluene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
84-66-2	Diethyl phthalate	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
7005-72-3	4-Chlorophenyl-phenylether	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
86-73-7	Fluorene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
100-01-6	4-Nitroaniline	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
534-52-1	4,6-Dinitro-2-methylphenol	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
86-74-8	Carbazole	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
86-30-6	N-Nitrosodiphenylamine	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
122-66-7	1,2-Diphenylhydrazine	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
103-33-3	Azobenzene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
101-55-3	4-Bromophenyl-phenylether	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
1912-24-9	Atrazine	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
118-74-1	Hexachlorobenzene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
87-86-5	Pentachlorophenol	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
85-01-8	Phenanthrene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
120-12-7	Anthracene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 16:00

Client ID: NE

Lab ID: 1901597-01RE1 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Semivolatile Organic Compounds EPA Method SW846 8270D

84-74-2	Di-n-butyl phthalate	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
206-44-0	Fluoranthene	419	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	JD
92-87-5	Benzidine	ND	653	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
129-00-0	Pyrene	461	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	JD
85-68-7	Butylbenzylphthalate	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
91-94-1	3,3'-Dichlorobenzidine	ND	653	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
56-55-3	Benzo[a]anthracene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
117-81-7	bis(2-ethylhexyl)phthalate	542	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	JD
218-01-9	Chrysene	296	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	JD
117-84-0	Di-n-octyl phthalate	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
205-99-2	Benzo[b]fluoranthene	587	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	JD
207-08-9	Benzo[k]fluoranthene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
50-32-8	Benzo[a]pyrene	283	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	JD
193-39-5	Indeno(1,2,3-cd)pyrene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
53-70-3	Dibenzo(a,h)anthracene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	
191-24-2	Benzo[ghi]perylene	ND	262	655	ug/kg dry	5	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D	

Surrogate: 2-Fluorophenol	35 %	41-102	*	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D
Surrogate: Phenol-d5	40 %	47-113	*	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D
Surrogate: Nitrobenzene-d5	36 %	38-100	*	10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D
Surrogate: 2-Fluorobiphenyl	39 %	38-88		10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D
Surrogate: 2,4,6-Tribromophenol	46 %	40-129		10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D
Surrogate: Terphenyl-d14	63 %	31-145		10/02/19 05:34	10/03/19 17:10/DSM	EPA 8270D

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director

SPLP PREPARATION BENCH SHEET

B9J0601

Accredited Analytical Resources LLC

Printed: 10/10/2019 3:38:46PM

Matrix: Solid

Prepared using: EPA 1312

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	% Moisture	Extraction Comments
1901591-02	SPLP Extraction	10/06/2019 12:51	100	2000	19.80	pH on: 4.83 / pH off: 9.96
1901594-01	SPLP Extraction	10/06/2019 12:51	100	2000	8.80	pH on: 5.86 / pH off: 9.99
1901595-01	SPLP Extraction	10/06/2019 12:51	100	2000	6.30	pH on: 5.38 / pH off: 9.94
1901596-01	SPLP Extraction	10/06/2019 12:51	100	2000	8.40	pH on: 4.98 / pH off: 9.92
1901597-01	SPLP Extraction	10/06/2019 12:51	100	2000	4.60	pH on: 5.46 / pH off: 10.05
B9J0601-BLK1	QC	10/06/2019 12:51	100	2000		

Environmental & Geotechnical Services, LLC

301 Fairfield Rd
Fairfield, NJ 07004

Tel. 973-808-6600 Fax 888-707-7819

SITE NAME: 366-394 Wilson Ave Rear

ADDRESS: 366-394 Wilson Avenue Rear 07105

Page 1 of 1

100

[illegible]



Customer Change Order

Initiator:	<u>Bernie</u>	Date:	<u>10-7-19</u>
Client:	<u>EGS</u>	Phone No.:	<u></u>
Contact:	<u>Jim K.</u>	Fax No.:	<u></u>
Work Order No.:	<u>1901597</u>	E-Mail Address:	<u></u>
Date Sampled:	<u>9-26-19</u>	Demand Date:	<u>10-10-19</u>
		Holding Time Up on:	<u>10-10-19</u>

Change Order Request:

Analyze sample 01 for SPLP benzo(a)pyrene/Hg/Cd/Pb

Remarks:

Rose, Neceta, Atoy, Betty

Kathy, Nydia

Bernie O'Gara

From: Jim Kelly [jkelly@eandgservices.com]
Sent: Friday, October 04, 2019 7:03 PM
To: Bernie O'Gara
Cc: (kberkowska@eandgservices.com); ccrum@eandgservices.com; malcala@eandgservices.com; Daniel Miguel
Subject: Re: AAR Case 1901597, EGS, 366-394 Wilson Ave Rear Project Results and Spreadsheet
Attachments: 1901597 RFC 100419.pdf

Hi Bernie,

Please find attached a request for change for this work order.

Specifically, as indicated on the attached, please perform SPLP analysis on the following for this sample: **benzo(a)pyrene, mercury, cadmium and lead.**

Please perform the SPLP analysis on a rush turnaround time. Please complete the SPLP analysis ASAP. Per a discussion with Danny earlier today, it was indicated that the SPLP results can be completed and sent to us by next Thursday 10/10/19.

Thanks,

Jim

James Kelly

Project Manager

Environmental and Geotechnical Services, LLC



Direct: 973-417-8599

Office: 973-808-6600

Fax: 888-707-7819

301 Fairfield Rd, Fairfield, NJ 07004

Email: jkelly@eandgservices.com

On Fri, Oct 4, 2019 at 3:32 PM Bernie O'Gara <Bernie@accreditedanalytical.com> wrote:

Bernie O'Gara

Accredited Analytical Resources, LLC
20 Pershing Ave. Carteret, NJ 07008
Ph. 732.969.6112 | Fx. 732.541.1383

www.accreditedanalytical.com

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301 Fairfield Rd
Fairfield, NJ 07004
Tel. 973-808-6600

SITE NAME: 366-394 Wilson Ave Rear
ADDRESS: 366-394 Wilson Avenue Rear 07105

1000
1000
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[illegible]

Samples received in good condition? 7 Yes

 7 Yes No

Turnaround Time: **5 DAY TAT**

Analytical Data Deliverables (encircle):	Reduced Deliverables
Full Deliverables (NMAC 7.26E-2.1)	Reduced Deliverables (NMAC 7.26E-2.1)

RUSH (days or hours):	5 day TAT	60
CLP-I or CLP-II	Other (specified below)	
(USEPA)		

Date/Time: 9/27/2019

Request for change(s):

Date/Time: 8/27/2018 11:36

Date/Time: 9/27/2018

Date/Time: 9-27-19 - 13:55

mercury, cadmium, and lead analysis on this sample

Date/Time:

Job No:



Accredited Analytical Resources, LLC.

10 October 2019

AAR Work Order: 1901595

James Kelly
ENVIRONMENTAL & GEOTECHNICAL
301 Fairfield Road
Fairfield, NJ 07004
Project: 366-394 Wilson Ave Rear

Enclosed are the results of analyses for samples received by the laboratory on 09/27/2019 13:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Daniel Miguel
Technical Director



New Jersey Certification Number: 12007
New York Certification Number: 11109

Pennsylvania Certification Number: 68-02799
CT Certification Number: PH-0219

This report shall not be reproduced, except in its entirety, without the written consent of Accredited Analytical Resources, LLC.
The test results included in this report relate only to the samples analyzed.

**ENVIRONMENTAL & GEOTECHNICAL**301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:52

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
E	1901595-01	Soil	09/26/2019 10:55	09/27/2019 13:55

Notes and Definitions

* Values outside of QC limits

ND - Indicates compound analyzed for but not detected at or above the MDL

J - Indicates estimated value for TICs and all results when detected below the RL

B - Indicates compound found in associated blank

E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution

P - Greater than 25% diff. between 2 GC columns.

MDL - Minimum detection limit

RL - Reporting limit

VC - The container(s) provided by the client for soil volatiles do not meet the requirements of EPA SW846-5035A. Results reported below 200 ug/kg may be biased low due to samples not being collected according to EPA SW846 5035A requirements.

Conformance / Non-Conformance Summary**AAR Work Order:1901595**

Accredited Analytical Resources, LLC received 1 sample(s) from ENVIRONMENTAL & GEOTECHNICAL (Project: 366-394 Wilson Ave Rear) on 09/27/2019 13:55.

On 10/7/19, the client requested SPLP Benzo(a)pyrene, SPLP Cadmium, SPLP Lead and SPLP Mercury. The results are included in this data package.

All analyses were performed within the required holding time.

Except for the parameters tested AAR makes no representation as to the fitness or quality of the sample (s) taken.

"The laboratory has reviewed the quality assurance and quality control measurements for the sample analyses."

Daniel Miguel
Technical Director

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:52

Methodology Summary

EPA Method SW846 8081B/8082A:

NY 8081B/8082A

Extractable Petroleum Hydrocarbons by NJ EPH:

NJDEP EPH

Semivolatile Organic Compounds EPA Method SW846 8270:

8270D

Semivolatile Organic Compounds in SPLP Extracts by GC/MS:

1312/8270D

SPLP Mercury by SW846 7470:

1312/7470

SPLP Metals by SW846 6010:

1312/6010D

Total Mercury by SW846 7471:

EPA 7471B

Total Metals by EPA Method SW846 6010:

6010D

Volatile Organic Compounds EPA Method SW846 8260:

8260C

Wet Chemistry:

Total Cyanide by EPA 9010C & EPA 9014

Percent Solids by SM 2540 G

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director

ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

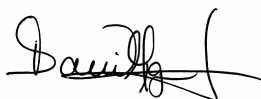
Reported:

10/10/2019 15:52

Condition of Samples on Receipt

Temperature °C	6.00
Chain of Custody Filled Out Properly	Yes
Received with Proper Containers	Yes
Received with Proper Volumes	Yes
Received Within Holding Time	Yes
Samples Received with Correct Preservation	Yes
Samples Received On Ice	Yes
Sample Received Via Field Services	Yes
Samples Hand Delivered	No

Accredited Analytical Resources LLC



Daniel Miguel, Technical Director

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ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:52

Client ID: E

Lab ID: 1901595-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Volatile Organic Compounds EPA Method SW846 8260C

Sample Prepared by Method:EPA 5035A

107-02-8	Acrolein	ND	6.40	10.7	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
107-13-1	Acrylonitrile	ND	2.13	10.7	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
67-64-1	Acetone	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
75-71-8	Dichlorodifluoromethane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
74-87-3	Chloromethane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
75-01-4	Vinyl chloride	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
74-83-9	Bromomethane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
75-00-3	Chloroethane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
75-69-4	Trichlorofluoromethane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
76-13-1	Freon 113	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
75-35-4	1,1-Dichloroethene	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
75-15-0	Carbon disulfide	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
79-20-9	Methyl Acetate	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
75-09-2	Methylene Chloride	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
156-60-5	trans-1,2-Dichloroethene	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
75-34-3	1,1-Dichloroethane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
78-93-3	2-Butanone	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
156-59-4	cis-1,2-Dichloroethene	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
67-66-3	Chloroform	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
74-97-5	Bromochloromethane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
110-82-7	Cyclohexane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
71-55-6	1,1,1-Trichloroethane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
75-65-0	t-Butyl alcohol	ND	5.34	21.3	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
56-23-5	Carbon Tetrachloride	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
107-06-2	1,2-Dichloroethane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
71-43-2	Benzene	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
79-01-6	Trichloroethene	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:52

Client ID: E

Lab ID: 1901595-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Volatile Organic Compounds EPA Method SW846 8260C

108-87-2	Methylcyclohexane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
78-87-5	1,2-Dichloropropane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
75-27-4	Bromodichloromethane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
10061-01-5	cis-1,3-Dichloropropene	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
108-88-3	Toluene	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
10061-02-6	trans-1,3-Dichloropropene	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
79-00-5	1,1,2-Trichloroethane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
108-10-1	4-Methyl-2-pentanone	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
106-93-4	1,2-Dibromoethane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
591-78-6	2-Hexanone	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
127-18-4	Tetrachloroethene	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
124-48-1	Dibromochloromethane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
100-41-4	Ethylbenzene	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
108-90-7	Chlorobenzene	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
108-38-3/106-4m,p-Xylenes		ND	2.13	4.27	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
95-47-6	o-Xylene	ND	2.13	4.27	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
100-42-5	Styrene	ND	1.07	4.27	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
75-25-2	Bromoform	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
98-82-8	Isopropylbenzene	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
541-73-1	1,3-Dichlorobenzene	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
106-46-7	1,4-Dichlorobenzene	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
95-50-1	1,2-Dichlorobenzene	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
120-82-1	1,2,4-Trichlorobenzene	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
87-61-6	1,2,3-Trichlorobenzene	ND	1.07	2.13	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
1634-04-4	Methyl tert-Butyl Ether	ND	2.13	4.27	ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	
NA	TIC: unknown hydrocarbon	12.5			ug/kg dry	1	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C	J

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:52

Client ID: E

Lab ID: 1901595-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Volatile Organic Compounds EPA Method SW846 8260C

Surrogate: 1,2-Dichloroethane-d4	115 %	74-146	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C
Surrogate: Toluene-d8	94 %	70-121	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C
Surrogate: Bromofluorobenzene	76 %	28-133	09/30/19 20:05	09/30/19 20:05/DSM	EPA 8260C

Sum of Tentatively Identified Compounds	12.53
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Semivolatile Organic Compounds EPA Method SW846 8270D

Sample Prepared by Method:EPA 3546 GCMS

62-75-9	N-Nitrosodimethylamine	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
100-52-7	Benzaldehyde	91.2	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
108-95-2	Phenol	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
111-44-4	bis(2-chloroethyl)ether	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
95-57-8	2-Chlorophenol	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
95-48-7	2-Methylphenol	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
39638-32-9	bis(2-chloroisopropyl)ether	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
98-86-2	Acetophenone	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
106-44-5	3 & 4-Methylphenol	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
621-64-7	N-Nitroso-di-n-propylamine	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
67-72-1	Hexachloroethane	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
98-95-3	Nitrobenzene	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
78-59-1	Isophorone	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
88-75-5	2-Nitrophenol	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
105-67-9	2,4-Dimethylphenol	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
111-91-1	bis(2-chloroethoxy)methane	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
120-83-2	2,4-Dichlorophenol	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
91-20-3	Naphthalene	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
106-47-8	4-Chloroaniline	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
87-68-3	Hexachlorobutadiene	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
105-60-2	Caprolactam	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:52

Client ID: E

Lab ID: 1901595-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Semivolatile Organic Compounds EPA Method SW846 8270D

59-50-7	4-Chloro-3-methylphenol	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
91-57-6	2-Methylnaphthylene	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
77-47-4	Hexachlorocyclopentadiene	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
88-06-2	2,4,6-Trichlorophenol	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
95-95-4	2,4,5-Trichlorophenol	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
91-58-7	2-Chloronaphthalene	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
92-52-4	1,1-Biphenyl	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
88-74-4	2-Nitroaniline	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
131-11-3	Dimethylphthalate	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
208-96-8	Acenaphthylene	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
99-09-2	3-Nitroaniline	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
83-32-9	Acenaphthene	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
51-28-5	2,4-Dinitrophenol	ND	53.3	267	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
100-02-7	4-Nitrophenol	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
132-64-9	Dibenzofuran	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
606-20-2	2,6-Dinitrotoluene	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
121-14-2	2,4-Dinitrotoluene	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
84-66-2	Diethyl phthalate	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
7005-72-3	4-Chlorophenyl-phenylether	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
86-73-7	Fluorene	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
100-01-6	4-Nitroaniline	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
534-52-1	4,6-Dinitro-2-methylphenol	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
86-74-8	Carbazole	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
86-30-6	N-Nitrosodiphenylamine	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
122-66-7	1,2-Diphenylhydrazine	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
103-33-3	Azobenzene	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:52

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CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Semivolatile Organic Compounds EPA Method SW846 8270D

101-55-3	4-Bromophenyl-phenylether	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
1912-24-9	Atrazine	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
118-74-1	Hexachlorobenzene	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
87-86-5	Pentachlorophenol	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
85-01-8	Phenanthrene	183	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
120-12-7	Anthracene	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
84-74-2	Di-n-butyl phthalate	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
206-44-0	Fluoranthene	432	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
92-87-5	Benzidine	ND	133	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
129-00-0	Pyrene	859	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
85-68-7	Butylbenzylphthalate	55.5	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
91-94-1	3,3'-Dichlorobenzidine	ND	133	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
56-55-3	Benzo[a]anthracene	274	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
117-81-7	bis(2-ethylhexyl)phthalate	507	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
218-01-9	Chrysene	326	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
117-84-0	Di-n-octyl phthalate	87.5	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
205-99-2	Benzo[b]fluoranthene	629	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
207-08-9	Benzo[k]fluoranthene	250	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
50-32-8	Benzo[a]pyrene	311	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
193-39-5	Indeno(1,2,3-cd)pyrene	160	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
53-70-3	Dibenzo(a,h)anthracene	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
191-24-2	Benzo[ghi]perylene	ND	53.3	133	ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
040710-42-7	TIC: 1-Hentetracontanol (CAS) \$\$ N-H	589			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
001454-84-8	TIC: 1-Nonadecanol \$\$ Nonadecyl alcol	371			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
018435-45-5	TIC: 1-Nonadecene (CAS)	970			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
000112-80-1	TIC: 9-Octadecenoic acid (Z)- (CAS) \$\$	515			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
000297-03-0	TIC: Cyclotetracosane (CAS)	677			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear
Project Manager: James Kelly

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Accredited Analytical Resources LLC

Semivolatile Organic Compounds EPA Method SW846 8270D

000593-49-7	TIC: Heptacosane (CAS) \$\$ n-Heptacos	1570			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
000629-78-7	TIC: Heptadecane (CAS) \$\$ n-Heptade	4260			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
000630-01-3	TIC: Hexacosane (CAS) \$\$ n-Hexacosan	731			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
000057-10-3	TIC: Hexadecanoic acid (CAS) \$\$ Palm	846			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
000630-02-4	TIC: Octacosane (CAS) \$\$ n-Octacosan	503			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
000057-11-4	TIC: Octadecanoic acid (CAS) \$\$ Stear	1860			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
074685-36-2	TIC: Oxacyclotetradecane-2,11-dione, 1	529			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
000646-31-1	TIC: Tetracosane (CAS) \$\$ n-Tetracosa	2860			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
000124-25-4	TIC: Tetradecanal (CAS) \$\$ Myristalde	1660			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
NA	TIC: unknown	541			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
NA	TIC: unknown hydrocarbon (01)	510			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
NA	TIC: unknown hydrocarbon (02)	1180			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
NA	TIC: unknown hydrocarbon (03)	298			ug/kg dry	1	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	J
Surrogate: 2-Fluorophenol		41 %	41-102				10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
Surrogate: Phenol-d5		45 %	47-113			*	10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
Surrogate: Nitrobenzene-d5		45 %	38-100				10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
Surrogate: 2-Fluorobiphenyl		44 %	38-88				10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
Surrogate: 2,4,6-Tribromophenol		51 %	40-129				10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	
Surrogate: Terphenyl-d14		110 %	31-145				10/02/19 05:34	10/02/19 20:28/DSM	EPA 8270D	

Sum of Tentatively Identified Compounds 20,463.09

Semivolatile Organic Compounds in SPLP Extracts by GC/MS

Sample Prepared by Method:EPA 3510C GCMS

50-32-8	Benzo[a]pyrene	ND	0.0500	0.0500	ug/L	1	10/07/19 11:51	10/07/19 22:03/DSM	EPA 8270D SIM
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EPA Method SW846 8081B/8082A

Sample Prepared by Method:EPA 3546

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:52

Client ID: E

Lab ID: 1901595-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

EPA Method SW846 8081B/8082A

319-84-6	alpha-BHC	ND	0.528	0.528	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
319-85-7	beta-BHC	ND	0.528	0.528	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
319-86-8	delta-BHC	ND	0.528	0.528	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
58-89-9	gamma-BHC [Lindane]	ND	0.528	0.528	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
76-44-8	Heptachlor	ND	0.528	0.528	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
309-00-2	Aldrin	ND	0.528	0.528	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
1024-57-3	Heptachlor Epoxide	ND	0.528	0.528	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
959-98-8	Endosulfan I	ND	0.528	0.528	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
60-57-1	Dieldrin	ND	1.06	1.06	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
72-55-9	4,4'-DDE	4.96	1.06	1.06	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	P
72-20-8	Endrin	ND	1.06	1.06	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
33213-65-9	Endosulfan II	ND	1.06	1.06	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
72-54-8	4,4'-DDD	4.00	1.06	1.06	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
1031-07-8	Endosulfan sulfate	ND	1.06	1.06	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
50-29-3	4,4'-DDT	17.1	1.06	1.06	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	P
72-43-5	Methoxychlor	ND	1.60	5.33	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
53494-70-5	Endrin ketone	ND	1.06	1.06	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
7421-93-4	Endrin aldehyde	ND	1.06	1.06	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
5103-71-9	alpha-Chlordane	2.35	0.528	0.528	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	P
5566-34-7	gamma-Chlordane	2.16	0.528	0.528	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
8001-35-2	Toxaphene	ND	26.7	26.7	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
12674-11-2	Aroclor-1016	ND	13.3	26.7	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear
Project Manager: James Kelly

Reported:
10/10/2019 15:52

Client ID: E

Lab ID: 1901595-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

EPA Method SW846 8081B/8082A

11104-28-2	Aroclor-1221	ND	13.3	26.7	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
11141-16-5	Aroclor-1232	ND	13.3	26.7	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
53469-21-9	Aroclor-1242	ND	13.3	26.7	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
12672-29-6	Aroclor-1248	ND	13.3	26.7	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
11097-69-1	Aroclor-1254	ND	13.3	26.7	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
11096-82-5	Aroclor-1260	ND	13.3	26.7	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
37324-23-5	Aroclor-1262	ND	13.3	26.7	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
11100-14-4	Aroclor-1268	ND	13.3	26.7	ug/kg dry	1	10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
<i>Surrogate: Tetrachloro-m-xylene</i>				42.2 %	27-137		10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
<i>Surrogate: Tetrachloro-m-xylene</i>				48.5 %	39-138		10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
<i>Surrogate: Decachlorobiphenyl</i>				39.8 %	21-150		10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	
<i>Surrogate: Decachlorobiphenyl</i>				59.7 %	24-171		10/01/19 05:55	10/01/19 14:57/JAM	EPA 8081B/8082A	

Total Metals by EPA Method SW846 6010D

Sample Prepared by Method:EPA 3050B

7429-90-5	Aluminum	7010	55.0	558	mg/kg dry	50	10/01/19 09:06	10/02/19 11:20/LIT	EPA 6010D	D
7440-36-0	Antimony	ND	0.273	2.23	mg/kg dry	1	10/01/19 09:06	10/01/19 17:47/LIT	EPA 6010D	
7440-38-2	Arsenic	5.17	0.147	0.558	mg/kg dry	1	10/01/19 09:06	10/01/19 17:47/LIT	EPA 6010D	
7440-39-3	Barium	102	1.79	11.2	mg/kg dry	1	10/01/19 09:06	10/01/19 17:47/LIT	EPA 6010D	
7440-41-7	Beryllium	ND	0.0246	0.279	mg/kg dry	1	10/01/19 09:06	10/01/19 17:47/LIT	EPA 6010D	
7440-43-9	Cadmium	1.33	0.0268	0.279	mg/kg dry	1	10/01/19 09:06	10/01/19 17:47/LIT	EPA 6010D	
7440-70-2	Calcium	6290	122	698	mg/kg dry	50	10/01/19 09:06	10/02/19 11:20/LIT	EPA 6010D	D
7440-47-3	Chromium	26.8	0.157	1.12	mg/kg dry	1	10/01/19 09:06	10/01/19 17:47/LIT	EPA 6010D	
7440-48-4	Cobalt	7.10	0.301	2.79	mg/kg dry	1	10/01/19 09:06	10/01/19 17:47/LIT	EPA 6010D	

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear
Project Manager: James Kelly

Reported:
10/10/2019 15:52

Client ID: E

Lab ID: 1901595-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Total Metals by EPA Method SW846 6010D

7440-50-8	Copper	77.3	0.180	1.68	mg/kg dry	1	10/01/19 09:06	10/01/19 17:47/LIT	EPA 6010D	
7439-89-6	Iron	20300	78.7	698	mg/kg dry	50	10/01/19 09:06	10/02/19 11:20/LIT	EPA 6010D	D
7439-92-1	Lead	78.0	0.0564	0.558	mg/kg dry	1	10/01/19 09:06	10/01/19 17:47/LIT	EPA 6010D	
7439-95-4	Magnesium	4040	200	1400	mg/kg dry	50	10/01/19 09:06	10/02/19 11:20/LIT	EPA 6010D	D
7439-96-5	Manganese	206	0.187	1.12	mg/kg dry	1	10/01/19 09:06	10/01/19 17:47/LIT	EPA 6010D	
7440-02-0	Nickel	27.6	0.274	2.23	mg/kg dry	1	10/01/19 09:06	10/01/19 17:47/LIT	EPA 6010D	
7440-09-7	Potassium	603	3.35	27.9	mg/kg dry	1	10/01/19 09:06	10/01/19 17:47/LIT	EPA 6010D	
7782-49-2	Selenium	ND	0.238	2.23	mg/kg dry	1	10/01/19 09:06	10/01/19 17:47/LIT	EPA 6010D	
7440-22-4	Silver	0.299	0.0519	0.279	mg/kg dry	1	10/01/19 09:06	10/01/19 17:47/LIT	EPA 6010D	
7440-23-5	Sodium	294	2.51	27.9	mg/kg dry	1	10/01/19 09:06	10/01/19 17:47/LIT	EPA 6010D	
7440-28-0	Thallium	ND	0.164	1.68	mg/kg dry	1	10/01/19 09:06	10/02/19 13:25/LIT	EPA 6010D	
7440-62-2	Vanadium	37.5	1.04	2.79	mg/kg dry	1	10/01/19 09:06	10/01/19 17:47/LIT	EPA 6010D	
7440-66-6	Zinc	168	0.347	3.35	mg/kg dry	1	10/01/19 09:06	10/01/19 17:47/LIT	EPA 6010D	

SPLP Metals by SW846 6010D

Sample Prepared by Method:EPA 3010A

7440-43-9	SPLP Cadmium	ND	0.951	4.00	ug/L	1	10/07/19 09:35	10/07/19 17:22/LIT	1312/6010D	
7439-92-1	SPLP Lead	36.4	1.59	5.00	ug/L	1	10/07/19 09:35	10/09/19 11:44/LIT	1312/6010D	

Total Mercury by SW846 7471B

Sample Prepared by Method:EPA 7471B

7439-97-6	Mercury	0.924	0.0770	0.0770	mg/kg dry	1	10/03/19 08:30	10/03/19 13:39/BFG	EPA 7471B	
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SPLP Mercury by SW846 7470A

Sample Prepared by Method:EPA 7470A

7439-97-6	SPLP Mercury	ND	0.0200	0.500	ug/L	1	10/09/19 08:21	10/09/19 15:12/BFG	1312/7470A	
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Wet Chemistry

Sample Prepared by Method:EPA 9010C

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:52

Client ID: E**Lab ID: 1901595-01 (Soil)**

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC**Wet Chemistry**

NA	Cyanide (total)	ND	0.0534	1.07	mg/kg dry	1	09/30/19 09:00	09/30/19 15:43/NNM	EPA 9014	
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Sample Prepared by Method:Percent Solids

NA	Percent Solids	93.7	0.100	0.100	%	1	09/30/19 14:03	10/01/19 08:40/NIN	SM 2540 G	
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Extractable Petroleum Hydrocarbons by NJ EPH

Sample Prepared by Method:EPA 3546

NA	Extractable Petroleum Hydrocarbons (I	225	17.1	17.1	mg/kg dry	1	09/30/19 13:35	10/02/19 03:10/MS	NJDEP EPH	
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Surrogate: o-Terphenyl

92.0 % 40-140

09/30/19 13:35

10/02/19 03:10/MS

NJDEP EPH

Surrogate: 1-Chlorooctadecane

126 % 40-140

09/30/19 13:35

10/02/19 03:10/MS

NJDEP EPH

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director

SPLP PREPARATION BENCH SHEET

B9J0601

Accredited Analytical Resources LLC

Printed: 10/10/2019 3:38:46PM

Prepared using: EPA 1312

Matrix: Solid

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	% Moisture	Extraction Comments
1901591-02	SPLP Extraction	10/06/2019 12:51	100	2000	19.80	pH on: 4.83 / pH off: 9.96
1901594-01	SPLP Extraction	10/06/2019 12:51	100	2000	8.80	pH on: 5.86 / pH off: 9.99
1901595-01	SPLP Extraction	10/06/2019 12:51	100	2000	6.30	pH on: 5.38 / pH off: 9.94
1901596-01	SPLP Extraction	10/06/2019 12:51	100	2000	8.40	pH on: 4.98 / pH off: 9.92
1901597-01	SPLP Extraction	10/06/2019 12:51	100	2000	4.60	pH on: 5.46 / pH off: 10.05
B9J0601-BLK1	QC	10/06/2019 12:51	100	2000		

Environmental & Geotechnical Services, LLC

Fairfield, NJ 07004

ADDRESS:

ADDRESS: 366-394 Wilson Avenue Rear 07105

SITE NAME: 366-394 Wilson Ave Rear

Page 10

[illegible]



Customer Change Order

Initiator:	<u>Bernie</u>	Date:	<u>10-7-19</u>
Client:	<u>EGS</u>	Phone No.:	<u></u>
Contact:	<u>Jim K.</u>	Fax No.:	<u></u>
Work Order No.:	<u>1901595</u>	E-Mail Address:	<u></u>
Date Sampled:	<u>9-26-19</u>	Demand Date:	<u>10-10-19</u>
		Holding Time Up on:	<u>10-10-19</u>

Change Order Request:

Analyze sample 01 for SPLP benzo(a)pyrene/Hg/Cd/Pb

Remarks:

Rose, Neceta, Atoy, Betty

Kathy, Nydia

Bernie O'Gara

From: Jim Kelly [jkelly@eandgservices.com]
Sent: Friday, October 04, 2019 7:00 PM
To: Bernie O'Gara
Cc: (kberkowska@eandgservices.com); ccrum@eandgservices.com; malcala@eandgservices.com; Daniel Miguel
Subject: Re: AAR Case 1901595, EGS, 366-394 Wilson Ave Rear Project Results and Spreadsheet
Attachments: 1901595 RFC 100419.pdf

Hi Bernie,

Please find attached a request for change for this work order.

Specifically, as indicated on the attached, please perform SPLP analysis on the following for this sample: **benzo(a)pyrene, mercury, cadmium and lead.**

Please perform the SPLP analysis on a rush turnaround time. Please complete the SPLP analysis ASAP. Per a discussion with Danny earlier today, it was indicated that the SPLP results can be completed and sent to us by next Thursday 10/10/19.

Thanks,

Jim

James Kelly

Project Manager

Environmental and Geotechnical Services, LLC



Direct: 973-417-8599

Office: 973-808-6600

Fax: 888-707-7819

301 Fairfield Rd, Fairfield, NJ 07004

Email: jkelly@eandgservices.com

On Fri, Oct 4, 2019 at 3:23 PM Bernie O'Gara <Bernie@accreditedanalytical.com> wrote:

Bernie O'Gara

Accredited Analytical Resources, LLC
20 Pershing Ave. Carteret, NJ 07008
Ph. 732.969.6112 | Fx. 732.541.1383

www.accreditedanalytical.com

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Tel. 973-808-6600 Fax 888-707-7819

CHAIN OF CUSTODY RECORD

SITE NAME: 366-394 Wilson Ave Rear
ADDRESS: 366-394 Wilson Avenue Rear 07105

Page 1 of 1

20 of 20

[illegible]



Accredited Analytical Resources, LLC.

10 October 2019

AAR Work Order: 1901596

James Kelly
ENVIRONMENTAL & GEOTECHNICAL
301 Fairfield Road
Fairfield, NJ 07004
Project: 366-394 Wilson Ave Rear

Enclosed are the results of analyses for samples received by the laboratory on 09/27/2019 13:55. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Daniel Miguel
Technical Director



New Jersey Certification Number: 12007
New York Certification Number: 11109

Pennsylvania Certification Number: 68-02799
CT Certification Number: PH-0219

This report shall not be reproduced, except in its entirety, without the written consent of Accredited Analytical Resources, LLC.
The test results included in this report relate only to the samples analyzed.

**ENVIRONMENTAL & GEOTECHNICAL**301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:56

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SW	1901596-01	Soil	09/27/2019 11:47	09/27/2019 13:55

Notes and Definitions

* Values outside of QC limits

ND - Indicates compound analyzed for but not detected at or above the MDL

J - Indicates estimated value for TICs and all results when detected below the RL

B - Indicates compound found in associated blank

E - Concentration exceeds highest calibration standard

D - Indicates result is based on a dilution

P - Greater than 25% diff. between 2 GC columns.

MDL - Minimum detection limit

RL - Reporting limit

VC - The container(s) provided by the client for soil volatiles do not meet the requirements of EPA SW846-5035A. Results reported below 200 ug/kg may be biased low due to samples not being collected according to EPA SW846 5035A requirements.

Conformance / Non-Conformance Summary**AAR Work Order:1901596**

Accredited Analytical Resources, LLC received 1 sample(s) from ENVIRONMENTAL & GEOTECHNICAL (Project: 366-394 Wilson Ave Rear) on 09/27/2019 13:55.

On 10/7/19, the client requested SPLP Benzo(a)pyrene, SPLP Cadmium, SPLP Lead and SPLP Mercury. The results are included in this data package.

All analyses were performed within the required holding time.

Except for the parameters tested AAR makes no representation as to the fitness or quality of the sample (s) taken.

"The laboratory has reviewed the quality assurance and quality control measurements for the sample analyses."

Daniel Miguel
Technical Director

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:56

Methodology Summary

EPA Method SW846 8081B/8082A:

NY 8081B/8082A

Extractable Petroleum Hydrocarbons by NJ EPH:

NJDEP EPH

Semivolatile Organic Compounds EPA Method SW846 8270:

8270D

Semivolatile Organic Compounds in SPLP Extracts by GC/MS:

1312/8270D

SPLP Mercury by SW846 7470:

1312/7470

SPLP Metals by SW846 6010:

1312/6010D

Total Mercury by SW846 7471:

EPA 7471B

Total Metals by EPA Method SW846 6010:

6010D

Volatile Organic Compounds EPA Method SW846 8260:

8260C

Wet Chemistry:

Total Cyanide by EPA 9010C & EPA 9014

Percent Solids by SM 2540 G

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Daniel Miguel, Technical Director

ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

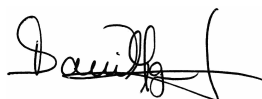
Reported:

10/10/2019 15:56

Condition of Samples on Receipt

Temperature °C	6.00
Chain of Custody Filled Out Properly	Yes
Received with Proper Containers	Yes
Received with Proper Volumes	Yes
Received Within Holding Time	Yes
Samples Received with Correct Preservation	Yes
Samples Received On Ice	Yes
Sample Received Via Field Services	Yes
Samples Hand Delivered	No

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Daniel Miguel, Technical Director

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ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:56

Client ID: SW

Lab ID: 1901596-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Volatile Organic Compounds EPA Method SW846 8260C

Sample Prepared by Method:EPA 5035A

107-02-8	Acrolein	ND	8.83	14.7	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
107-13-1	Acrylonitrile	ND	2.94	14.7	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
67-64-1	Acetone	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
75-71-8	Dichlorodifluoromethane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
74-87-3	Chloromethane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
75-01-4	Vinyl chloride	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
74-83-9	Bromomethane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
75-00-3	Chloroethane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
75-69-4	Trichlorofluoromethane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
76-13-1	Freon 113	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
75-35-4	1,1-Dichloroethene	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
75-15-0	Carbon disulfide	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
79-20-9	Methyl Acetate	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
75-09-2	Methylene Chloride	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
156-60-5	trans-1,2-Dichloroethene	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
75-34-3	1,1-Dichloroethane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
78-93-3	2-Butanone	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
156-59-4	cis-1,2-Dichloroethene	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
67-66-3	Chloroform	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
74-97-5	Bromochloromethane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
110-82-7	Cyclohexane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
71-55-6	1,1,1-Trichloroethane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
75-65-0	t-Butyl alcohol	ND	7.36	29.4	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
56-23-5	Carbon Tetrachloride	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
107-06-2	1,2-Dichloroethane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
71-43-2	Benzene	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
79-01-6	Trichloroethene	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	

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ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:56

Client ID: SW

Lab ID: 1901596-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Volatile Organic Compounds EPA Method SW846 8260C

108-87-2	Methylcyclohexane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
78-87-5	1,2-Dichloropropane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
75-27-4	Bromodichloromethane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
10061-01-5	cis-1,3-Dichloropropene	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
108-88-3	Toluene	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
10061-02-6	trans-1,3-Dichloropropene	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
79-00-5	1,1,2-Trichloroethane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
108-10-1	4-Methyl-2-pentanone	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
106-93-4	1,2-Dibromoethane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
591-78-6	2-Hexanone	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
127-18-4	Tetrachloroethene	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
124-48-1	Dibromochloromethane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
100-41-4	Ethylbenzene	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
108-90-7	Chlorobenzene	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
108-38-3/106-4m,p-Xylenes		ND	2.94	5.89	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
95-47-6	o-Xylene	ND	2.94	5.89	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
100-42-5	Styrene	ND	1.47	5.89	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
75-25-2	Bromoform	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
98-82-8	Isopropylbenzene	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
541-73-1	1,3-Dichlorobenzene	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
106-46-7	1,4-Dichlorobenzene	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
95-50-1	1,2-Dichlorobenzene	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
120-82-1	1,2,4-Trichlorobenzene	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
87-61-6	1,2,3-Trichlorobenzene	ND	1.47	2.94	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
1634-04-4	Methyl tert-Butyl Ether	ND	2.94	5.89	ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	
NA	TIC: unknown hydrocarbon	8.29			ug/kg dry	1	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C	J

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:56

Client ID: SW

Lab ID: 1901596-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Volatile Organic Compounds EPA Method SW846 8260C

Surrogate: 1,2-Dichloroethane-d4	99 %	74-146	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C
Surrogate: Toluene-d8	97 %	70-121	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C
Surrogate: Bromofluorobenzene	63 %	28-133	09/30/19 20:34	09/30/19 20:34/DSM	EPA 8260C

Sum of Tentatively Identified Compounds	8.29
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Semivolatile Organic Compounds EPA Method SW846 8270D

Sample Prepared by Method:EPA 3546 GCMS

62-75-9	N-Nitrosodimethylamine	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
100-52-7	Benzaldehyde	118	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	J
108-95-2	Phenol	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
111-44-4	bis(2-chloroethyl)ether	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
95-57-8	2-Chlorophenol	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
95-48-7	2-Methylphenol	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
39638-32-9	bis(2-chloroisopropyl)ether	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
98-86-2	Acetophenone	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
106-44-5	3 & 4-Methylphenol	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
621-64-7	N-Nitroso-di-n-propylamine	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
67-72-1	Hexachloroethane	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
98-95-3	Nitrobenzene	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
78-59-1	Isophorone	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
88-75-5	2-Nitrophenol	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
105-67-9	2,4-Dimethylphenol	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
111-91-1	bis(2-chloroethoxy)methane	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
120-83-2	2,4-Dichlorophenol	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
91-20-3	Naphthalene	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
106-47-8	4-Chloroaniline	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
87-68-3	Hexachlorobutadiene	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
105-60-2	Caprolactam	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	

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ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

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Project Manager: James Kelly

Reported:

10/10/2019 15:56

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Accredited Analytical Resources LLC

Semivolatile Organic Compounds EPA Method SW846 8270D

59-50-7	4-Chloro-3-methylphenol	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
91-57-6	2-Methylnaphthylene	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
77-47-4	Hexachlorocyclopentadiene	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
88-06-2	2,4,6-Trichlorophenol	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
95-95-4	2,4,5-Trichlorophenol	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
91-58-7	2-Chloronaphthalene	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
92-52-4	1,1-Biphenyl	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
88-74-4	2-Nitroaniline	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
131-11-3	Dimethylphthalate	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
208-96-8	Acenaphthylene	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
99-09-2	3-Nitroaniline	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
83-32-9	Acenaphthene	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
51-28-5	2,4-Dinitrophenol	ND	54.5	273	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
100-02-7	4-Nitrophenol	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
132-64-9	Dibenzofuran	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
606-20-2	2,6-Dinitrotoluene	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
121-14-2	2,4-Dinitrotoluene	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
84-66-2	Diethyl phthalate	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
7005-72-3	4-Chlorophenyl-phenylether	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
86-73-7	Fluorene	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
100-01-6	4-Nitroaniline	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
534-52-1	4,6-Dinitro-2-methylphenol	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
86-74-8	Carbazole	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
86-30-6	N-Nitrosodiphenylamine	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
122-66-7	1,2-Diphenylhydrazine	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
103-33-3	Azobenzene	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	

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Accredited Analytical Resources LLC

Semivolatile Organic Compounds EPA Method SW846 8270D

101-55-3	4-Bromophenyl-phenylether	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
1912-24-9	Atrazine	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
118-74-1	Hexachlorobenzene	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
87-86-5	Pentachlorophenol	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
85-01-8	Phenanthrene	322	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
120-12-7	Anthracene	68.8	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	J
84-74-2	Di-n-butyl phthalate	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
206-44-0	Fluoranthene	510	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
92-87-5	Benzidine	ND	136	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
129-00-0	Pyrene	1220	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
85-68-7	Butylbenzylphthalate	78.1	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	J
91-94-1	3,3'-Dichlorobenzidine	ND	136	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
56-55-3	Benzo[a]anthracene	374	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
117-81-7	bis(2-ethylhexyl)phthalate	328	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
218-01-9	Chrysene	444	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
117-84-0	Di-n-octyl phthalate	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
205-99-2	Benzo[b]fluoranthene	761	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
207-08-9	Benzo[k]fluoranthene	225	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
50-32-8	Benzo[a]pyrene	414	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
193-39-5	Indeno(1,2,3-cd)pyrene	209	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
53-70-3	Dibenzo(a,h)anthracene	ND	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
191-24-2	Benzo[ghi]perylene	252	54.5	136	ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	
000112-92-5	TIC: 1-Octadecanol (CAS) \$\$ Stenol \$\$	604			ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	J
067602-74-8	TIC: 9-CHLORO-1-AZAPHENOXAN	298			ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	J
000629-97-0	TIC: Docosane (CAS) \$\$ n-Docosane \$\$	3740			ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	J
000629-78-7	TIC: Heptadecane (CAS) \$\$ n-Heptade	2380			ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	J
000057-10-3	TIC: Hexadecanoic acid (CAS) \$\$ Palm	521			ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	J

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear
Project Manager: James Kelly

Reported:
10/10/2019 15:56

Client ID: SW

Lab ID: 1901596-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Semivolatile Organic Compounds EPA Method SW846 8270D

000593-45-3	TIC: Octadecane (CAS) \$ n-Octadecar	717			ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	J
000057-11-4	TIC: Octadecanoic acid (CAS) \$ Stear	277			ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	J
000124-25-4	TIC: Tetradecanal (CAS) \$ Myristalde	784			ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	J
NA	TIC: unknown (01)	252			ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	J
NA	TIC: unknown (02)	272			ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	J
NA	TIC: unknown (03)	414			ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	J
NA	TIC: unknown hydrocarbon	477			ug/kg dry	1	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D	J

Surrogate: 2-Fluorophenol		31 %	41-102	*	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D
Surrogate: Phenol-d5		35 %	47-113	*	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D
Surrogate: Nitrobenzene-d5		35 %	38-100	*	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D
Surrogate: 2-Fluorobiphenyl		33 %	38-88	*	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D
Surrogate: 2,4,6-Tribromophenol		34 %	40-129	*	10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D
Surrogate: Terphenyl-d14		84 %	31-145		10/02/19 05:34	10/02/19 21:12/DSM	EPA 8270D

Sum of Tentatively Identified Compounds 10,734.62

Semivolatile Organic Compounds in SPLP Extracts by GC/MS

Sample Prepared by Method:EPA 3510C GCMS

50-32-8	Benzo[a]pyrene	ND	0.0500	0.0500	ug/L	1	10/07/19 11:51	10/07/19 22:48/DSM	EPA 8270D SIM
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EPA Method SW846 8081B/8082A

Sample Prepared by Method:EPA 3546

319-84-6	alpha-BHC	ND	0.540	0.540	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A
319-85-7	beta-BHC	ND	0.540	0.540	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A
319-86-8	delta-BHC	ND	0.540	0.540	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A
58-89-9	gamma-BHC [Lindane]	ND	0.540	0.540	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A
76-44-8	Heptachlor	ND	0.540	0.540	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:56

Client ID: SW

Lab ID: 1901596-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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EPA Method SW846 8081B/8082A

309-00-2	Aldrin	ND	0.540	0.540	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
1024-57-3	Heptachlor Epoxide	ND	0.540	0.540	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
959-98-8	Endosulfan I	ND	0.540	0.540	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
60-57-1	Dieldrin	ND	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
72-55-9	4,4'-DDE	46.3	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	PE
72-20-8	Endrin	ND	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
33213-65-9	Endosulfan II	ND	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
72-54-8	4,4'-DDD	40.6	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
1031-07-8	Endosulfan sulfate	ND	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
50-29-3	4,4'-DDT	149	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	PE
72-43-5	Methoxychlor	ND	1.64	5.45	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
53494-70-5	Endrin ketone	ND	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
7421-93-4	Endrin aldehyde	ND	1.09	1.09	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
5103-71-9	alpha-Chlordane	4.01	0.540	0.540	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	P
5566-34-7	gamma-Chlordane	9.58	0.540	0.540	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
8001-35-2	Toxaphene	ND	27.3	27.3	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
12674-11-2	Aroclor-1016	ND	13.6	27.3	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
11104-28-2	Aroclor-1221	ND	13.6	27.3	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
11141-16-5	Aroclor-1232	ND	13.6	27.3	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
53469-21-9	Aroclor-1242	ND	13.6	27.3	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
12672-29-6	Aroclor-1248	ND	13.6	27.3	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
11097-69-1	Aroclor-1254	ND	13.6	27.3	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear
Project Manager: James Kelly

Reported:
10/10/2019 15:56

Client ID: SW

Lab ID: 1901596-01 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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EPA Method SW846 8081B/8082A

11096-82-5	Aroclor-1260	ND	13.6	27.3	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
37324-23-5	Aroclor-1262	ND	13.6	27.3	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
11100-14-4	Aroclor-1268	ND	13.6	27.3	ug/kg dry	1	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
<i>Surrogate: Tetrachloro-m-xylene</i>				30.9 %	27-137		10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
<i>Surrogate: Tetrachloro-m-xylene</i>				36.0 %	39-138	*	10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
<i>Surrogate: Decachlorobiphenyl</i>				35.3 %	21-150		10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	
<i>Surrogate: Decachlorobiphenyl</i>				39.4 %	24-171		10/01/19 05:55	10/01/19 15:18/JAM	EPA 8081B/8082A	

Total Metals by EPA Method SW846 6010D

Sample Prepared by Method:EPA 3050B

7429-90-5	Aluminum	6200	53.8	546	mg/kg dry	50	10/01/19 09:06	10/01/19 18:03/LIT	EPA 6010D	D
7440-36-0	Antimony	ND	0.266	2.18	mg/kg dry	1	10/01/19 09:06	10/01/19 17:58/LIT	EPA 6010D	
7440-38-2	Arsenic	12.4	0.144	0.546	mg/kg dry	1	10/01/19 09:06	10/01/19 17:58/LIT	EPA 6010D	
7440-39-3	Barium	83.8	1.75	10.9	mg/kg dry	1	10/01/19 09:06	10/01/19 17:58/LIT	EPA 6010D	
7440-41-7	Beryllium	0.294	0.0240	0.273	mg/kg dry	1	10/01/19 09:06	10/01/19 17:58/LIT	EPA 6010D	
7440-43-9	Cadmium	5.23	0.0262	0.273	mg/kg dry	1	10/01/19 09:06	10/01/19 17:58/LIT	EPA 6010D	
7440-70-2	Calcium	6590	119	682	mg/kg dry	50	10/01/19 09:06	10/01/19 18:03/LIT	EPA 6010D	D
7440-47-3	Chromium	23.9	0.154	1.09	mg/kg dry	1	10/01/19 09:06	10/01/19 17:58/LIT	EPA 6010D	
7440-48-4	Cobalt	7.61	0.294	2.73	mg/kg dry	1	10/01/19 09:06	10/01/19 17:58/LIT	EPA 6010D	
7440-50-8	Copper	136	0.176	1.64	mg/kg dry	1	10/01/19 09:06	10/01/19 17:58/LIT	EPA 6010D	
7439-89-6	Iron	16600	77.0	682	mg/kg dry	50	10/01/19 09:06	10/01/19 18:03/LIT	EPA 6010D	D
7439-92-1	Lead	134	0.0551	0.546	mg/kg dry	1	10/01/19 09:06	10/01/19 17:58/LIT	EPA 6010D	
7439-95-4	Magnesium	3080	195	1360	mg/kg dry	50	10/01/19 09:06	10/01/19 18:03/LIT	EPA 6010D	D
7439-96-5	Manganese	215	0.182	1.09	mg/kg dry	1	10/01/19 09:06	10/01/19 17:58/LIT	EPA 6010D	
7440-02-0	Nickel	31.9	0.268	2.18	mg/kg dry	1	10/01/19 09:06	10/01/19 17:58/LIT	EPA 6010D	

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Total Metals by EPA Method SW846 6010D

7440-09-7	Potassium	640	3.28	27.3	mg/kg dry	1	10/01/19 09:06	10/01/19 17:58/LIT	EPA 6010D	
7782-49-2	Selenium	ND	0.233	2.18	mg/kg dry	1	10/01/19 09:06	10/01/19 17:58/LIT	EPA 6010D	
7440-22-4	Silver	2.23	0.0508	0.273	mg/kg dry	1	10/01/19 09:06	10/01/19 17:58/LIT	EPA 6010D	
7440-23-5	Sodium	195	2.46	27.3	mg/kg dry	1	10/01/19 09:06	10/01/19 17:58/LIT	EPA 6010D	
7440-28-0	Thallium	ND	0.160	1.64	mg/kg dry	1	10/01/19 09:06	10/02/19 13:40/LIT	EPA 6010D	
7440-62-2	Vanadium	29.3	1.02	2.73	mg/kg dry	1	10/01/19 09:06	10/01/19 17:58/LIT	EPA 6010D	
7440-66-6	Zinc	408	16.9	164	mg/kg dry	50	10/01/19 09:06	10/01/19 18:03/LIT	EPA 6010D	D

SPLP Metals by SW846 6010D

Sample Prepared by Method:EPA 3010A

7440-43-9	SPLP Cadmium	1.09	0.951	4.00	ug/L	1	10/07/19 09:35	10/07/19 17:28/LIT	1312/6010D	J
7439-92-1	SPLP Lead	36.4	1.59	5.00	ug/L	1	10/07/19 09:35	10/09/19 11:49/LIT	1312/6010D	

Total Mercury by SW846 7471B

Sample Prepared by Method:EPA 7471B

7439-97-6	Mercury	3.78	0.390	0.390	mg/kg dry	5	10/03/19 08:30	10/03/19 14:59/BFG	EPA 7471B	D
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SPLP Mercury by SW846 7470A

Sample Prepared by Method:EPA 7470A

7439-97-6	SPLP Mercury	ND	0.0200	0.500	ug/L	1	10/09/19 08:21	10/09/19 15:26/BFG	1312/7470A	
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Wet Chemistry

Sample Prepared by Method:EPA 9010C

NA	Cyanide (total)	ND	0.0546	1.09	mg/kg dry	1	10/03/19 12:09	10/04/19 14:13/NNM	EPA 9014	
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Sample Prepared by Method:Percent Solids

NA	Percent Solids	91.6	0.100	0.100	%	1	09/30/19 14:03	10/01/19 08:40/NIN	SM 2540 G	
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Extractable Petroleum Hydrocarbons by NJ EPH

Sample Prepared by Method:EPA 3546

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ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:56

Client ID: SW**Lab ID: 1901596-01 (Soil)**

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC**Extractable Petroleum Hydrocarbons by NJ EPH**

NA	Extractable Petroleum Hydrocarbons (I	354	17.5	17.5	mg/kg dry	1	09/30/19 13:35	10/02/19 03:45/MS	NJDEP EPH	
Surrogate: o-Terphenyl			83.8 %	40-140			09/30/19 13:35	10/02/19 03:45/MS	NJDEP EPH	
Surrogate: 1-Chlorooctadecane			135 %	40-140			09/30/19 13:35	10/02/19 03:45/MS	NJDEP EPH	

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ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:56

Client ID: SW

Lab ID: 1901596-01RE1 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Semivolatile Organic Compounds EPA Method SW846 8270D

Sample Prepared by Method:EPA 3546 GCMS

62-75-9	N-Nitrosodimethylamine	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
100-52-7	Benzaldehyde	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
108-95-2	Phenol	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
111-44-4	bis(2-chloroethyl)ether	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
95-57-8	2-Chlorophenol	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
95-48-7	2-Methylphenol	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
39638-32-9	bis(2-chloroisopropyl)ether	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
98-86-2	Acetophenone	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
106-44-5	3 & 4-Methylphenol	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
621-64-7	N-Nitroso-di-n-propylamine	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
67-72-1	Hexachloroethane	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
98-95-3	Nitrobenzene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
78-59-1	Isophorone	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
88-75-5	2-Nitrophenol	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
105-67-9	2,4-Dimethylphenol	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
111-91-1	bis(2-chloroethoxy)methane	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
120-83-2	2,4-Dichlorophenol	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
91-20-3	Naphthalene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
106-47-8	4-Chloroaniline	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
87-68-3	Hexachlorobutadiene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
105-60-2	Caprolactam	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
59-50-7	4-Chloro-3-methylphenol	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
91-57-6	2-Methylnaphthylene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
77-47-4	Hexachlorocyclopentadiene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
88-06-2	2,4,6-Trichlorophenol	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
95-95-4	2,4,5-Trichlorophenol	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:56

Client ID: SW

Lab ID: 1901596-01RE1 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Semivolatile Organic Compounds EPA Method SW846 8270D

91-58-7	2-Chloronaphthalene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
92-52-4	1,1-Biphenyl	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
88-74-4	2-Nitroaniline	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
131-11-3	Dimethylphthalate	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
208-96-8	Acenaphthylene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
99-09-2	3-Nitroaniline	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
83-32-9	Acenaphthene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
51-28-5	2,4-Dinitrophenol	ND	273	1370	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
100-02-7	4-Nitrophenol	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
132-64-9	Dibenzofuran	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
606-20-2	2,6-Dinitrotoluene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
121-14-2	2,4-Dinitrotoluene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
58-90-2	2,3,4,6-Tetrachlorophenol	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
84-66-2	Diethyl phthalate	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
7005-72-3	4-Chlorophenyl-phenylether	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
86-73-7	Fluorene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
100-01-6	4-Nitroaniline	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
534-52-1	4,6-Dinitro-2-methylphenol	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
86-74-8	Carbazole	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
86-30-6	N-Nitrosodiphenylamine	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
122-66-7	1,2-Diphenylhydrazine	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
103-33-3	Azobenzene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
101-55-3	4-Bromophenyl-phenylether	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
1912-24-9	Atrazine	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
118-74-1	Hexachlorobenzene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
87-86-5	Pentachlorophenol	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
85-01-8	Phenanthrene	341	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	JD
120-12-7	Anthracene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear
Project Manager: James Kelly

Reported:
10/10/2019 15:56

Client ID: SW

Lab ID: 1901596-01RE1 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

Semivolatile Organic Compounds EPA Method SW846 8270D

84-74-2	Di-n-butyl phthalate	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
206-44-0	Fluoranthene	680	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	JD
92-87-5	Benzidine	ND	680	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
129-00-0	Pyrene	745	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	D
85-68-7	Butylbenzylphthalate	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
91-94-1	3,3'-Dichlorobenzidine	ND	680	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
56-55-3	Benzo[a]anthracene	379	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	JD
117-81-7	bis(2-ethylhexyl)phthalate	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
218-01-9	Chrysene	453	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	JD
117-84-0	Di-n-octyl phthalate	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
205-99-2	Benzo[b]fluoranthene	841	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	D
207-08-9	Benzo[k]fluoranthene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
50-32-8	Benzo[a]pyrene	407	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	JD
193-39-5	Indeno(1,2,3-cd)pyrene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
53-70-3	Dibenzo(a,h)anthracene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	
191-24-2	Benzo[ghi]perylene	ND	273	682	ug/kg dry	5	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D	

Surrogate: 2-Fluorophenol	30 %	41-102	*	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D
Surrogate: Phenol-d5	34 %	47-113	*	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D
Surrogate: Nitrobenzene-d5	33 %	38-100	*	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D
Surrogate: 2-Fluorobiphenyl	34 %	38-88	*	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D
Surrogate: 2,4,6-Tribromophenol	34 %	40-129	*	10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D
Surrogate: Terphenyl-d14	45 %	31-145		10/02/19 05:34	10/03/19 16:26/DSM	EPA 8270D

EPA Method SW846 8081B/8082A

Sample Prepared by Method:EPA 3546

319-84-6	alpha-BHC	ND	5.40	5.40	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A
319-85-7	beta-BHC	ND	5.40	5.40	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:56

Client ID: SW

Lab ID: 1901596-01RE1 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

EPA Method SW846 8081B/8082A

319-86-8	delta-BHC	ND	5.40	5.40	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
58-89-9	gamma-BHC [Lindane]	ND	5.40	5.40	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
76-44-8	Heptachlor	ND	5.40	5.40	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
309-00-2	Aldrin	ND	5.40	5.40	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
1024-57-3	Heptachlor Epoxide	ND	5.40	5.40	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
959-98-8	Endosulfan I	ND	5.40	5.40	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
60-57-1	Dieldrin	ND	10.9	10.9	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
72-55-9	4,4'-DDE	75.9	10.9	10.9	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	D
72-20-8	Endrin	ND	10.9	10.9	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
33213-65-9	Endosulfan II	ND	10.9	10.9	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
72-54-8	4,4'-DDD	61.7	10.9	10.9	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	D
1031-07-8	Endosulfan sulfate	ND	10.9	10.9	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
50-29-3	4,4'-DDT	247	10.9	10.9	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	D
72-43-5	Methoxychlor	ND	16.4	54.5	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
53494-70-5	Endrin ketone	ND	10.9	10.9	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
7421-93-4	Endrin aldehyde	ND	10.9	10.9	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
5103-71-9	alpha-Chlordane	ND	5.40	5.40	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
5566-34-7	gamma-Chlordane	ND	5.40	5.40	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
8001-35-2	Toxaphene	ND	273	273	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
12674-11-2	Aroclor-1016	ND	136	273	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
11104-28-2	Aroclor-1221	ND	136	273	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
11141-16-5	Aroclor-1232	ND	136	273	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	

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Daniel Miguel, Technical Director



ENVIRONMENTAL & GEOTECHNICAL

301 Fairfield Road
Fairfield NJ, 07004

Project: 366-394 Wilson Ave Rear

Project Manager: James Kelly

Reported:

10/10/2019 15:56

Client ID: SW

Lab ID: 1901596-01RE1 (Soil)

CAS #	Analyte	Result	MDL	RL	Units	Dilution	Prepared Date	Analyzed Date/By	Method	Notes
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Accredited Analytical Resources LLC

EPA Method SW846 8081B/8082A

53469-21-9	Aroclor-1242	ND	136	273	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
12672-29-6	Aroclor-1248	ND	136	273	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
11097-69-1	Aroclor-1254	ND	136	273	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
11096-82-5	Aroclor-1260	ND	136	273	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
37324-23-5	Aroclor-1262	ND	136	273	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
11100-14-4	Aroclor-1268	ND	136	273	ug/kg dry	10	10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
<i>Surrogate: Tetrachloro-m-xylene</i>				39.0 %	27-137		10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
<i>Surrogate: Tetrachloro-m-xylene</i>				40.0 %	39-138		10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
<i>Surrogate: Decachlorobiphenyl</i>				39.0 %	21-150		10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	
<i>Surrogate: Decachlorobiphenyl</i>				41.0 %	24-171		10/01/19 05:55	10/02/19 16:52/JAM	EPA 8081B/8082A	

Accredited Analytical Resources LLC

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Daniel Miguel, Technical Director

SPLP PREPARATION BENCH SHEET

B9J0601

Accredited Analytical Resources LLC

Printed: 10/10/2019 3:38:46PM

Prepared using: EPA 1312

Matrix: Solid

Lab Number	Analysis	Prepared	Initial (g)	Final (mL)	% Moisture	Extraction Comments
1901591-02	SPLP Extraction	10/06/2019 12:51	100	2000	19.80	pH on: 4.83 / pH off: 9.96
1901594-01	SPLP Extraction	10/06/2019 12:51	100	2000	8.80	pH on: 5.86 / pH off: 9.99
1901595-01	SPLP Extraction	10/06/2019 12:51	100	2000	6.30	pH on: 5.38 / pH off: 9.94
1901596-01	SPLP Extraction	10/06/2019 12:51	100	2000	8.40	pH on: 4.98 / pH off: 9.92
1901597-01	SPLP Extraction	10/06/2019 12:51	100	2000	4.60	pH on: 5.46 / pH off: 10.05
B9J0601-BLK1	QC	10/06/2019 12:51	100	2000		

Environmental & Geotechnical Services, LLC

Fairfield, NJ 07004

Tel. 973-808-6600 Fax 888-707-7819

ADDRESS:

366-394 Wilson Avenue Rear 07105

6954

CHAIN OF CUSTODY RECORD

ADDRESS:

366-394 Wilson Avenue Rear 07105

6954

[illegible]



Customer Change Order

Initiator:	<u>Bernie</u>	Date:	<u>10-7-19</u>
Client:	<u>EGS</u>	Phone No.:	<u></u>
Contact:	<u>Jim K.</u>	Fax No.:	<u></u>
Work Order No.:	<u>1901596</u>	E-Mail Address:	<u></u>
Date Sampled:	<u>9-26-19</u>	Demand Date:	<u>10-10-19</u>
		Holding Time Up on:	<u>10-10-19</u>

Change Order Request:

Analyze sample 01 for SPLP benzo(a)pyrene/Hg/Cd/Pb

Remarks:

Rose, Neceta, Atoy, Betty

Kathy, Nydia

Bernie O'Gara

From: Jim Kelly [jkelly@eandgservices.com]
Sent: Friday, October 04, 2019 7:02 PM
To: Bernie O'Gara
Cc: (kberkowska@eandgservices.com); ccrum@eandgservices.com;
malcala@eandgservices.com; Daniel Miguel
Subject: Re: AAR Case 1901596, EGS, 366-394 Wilson Ave Rear Project Results and Spreadsheet
Attachments: 1901596 RFC 100419.pdf

Hi Bernie,

Please find attached a request for change for this work order.

Specifically, as indicated on the attached, please perform SPLP analysis on the following for this sample: **benzo(a)pyrene, mercury, cadmium and lead.**

Please perform the SPLP analysis on a rush turnaround time. Please complete the SPLP analysis ASAP. Per a discussion with Danny earlier today, it was indicated that the SPLP results can be completed and sent to us by next Thursday 10/10/19.

Thanks,

Jim

James Kelly

Project Manager

Environmental and Geotechnical Services, LLC



Direct: 973-417-8599

Office: 973-808-6600

Fax: 888-707-7819

301 Fairfield Rd, Fairfield, NJ 07004

Email: jkelly@eandgservices.com

On Fri, Oct 4, 2019 at 3:30 PM Bernie O'Gara <Bernie@accreditedanalytical.com> wrote:

Bernie O'Gara

Accredited Analytical Resources, LLC
20 Pershing Ave. Carteret, NJ 07008
Ph. 732.969.6112 | Fx. 732.541.1383

www.accreditedanalytical.com

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301 Fairfield Rd
Fairfield, NJ 07004
Tel. 973-808-6600

Page 1 of 1

SITE NAME: 366-394 Wilson Ave Rear
ADDRESS: 366-394 Wilson Avenue K

[illegible]

Samples received in good condition? ☒ Yes ☐ No

RUSH (days or hours):
5 day TAT @

CLP-I or CLP-II (USEPA)	Other (specified below)

Request for change(s):

10/9/19 KHC - Fucose per team

SPCT benzocarpyrene,

mercury, cadmium, and lead analysis on this sample

Contact Person: James

Job No.:

Attachment 8

- SPLP Spreadsheets

NJDEP SPLP Spreadsheet, V3.1, November 2013

Case name/area of concern: 366-394 Wilson Ave Rear
Case number: N/A
Sampling date: 9/26/2019

CALCULATE
SITE SPECIFIC
IGW STANDARD

Reset
Spreadsheet

Print Results

Instructions

Print to file

Exit

CLICK HERE if chemical is not on drop-down list, or to enter alternate GWQC

Contaminant: Benzo(a)pyrene
CAS No: 50-32-8
Water solubility (mg/L): 1.62E-03
Aqueous reporting limit (µg/L): 1.00E-01
Soil reporting limit (mg/kg): 2.00E-01
Health-based GWQC (µg/L): 5.00E-03
DAF (20, or site-specific if approved): 20
Leachate Criterion (µg/L): 1.00E-01
Henry's law constant (dimensionless): 4.63E-05

NOTE:

USE ONE PAGE PER CONTAMINANT, do not leave empty rows between samples
Do not enter samples with soil concentrations at or below the reporting limit
When leachate concentration is non-detect, enter the aqueous reporting limit
Enter site-specific dilution-attenuation factor (DAF) if desired

Data entry cells (do not skip rows)

Optional data entry

Calculated or locked cells

Indicates that Alternative Remediation Standard needs to be recalculated

Sample ID	Soil sample weight (kg)	Leachate Volume (L)	Total Soil Concentration (mg/kg)	SPLP Leachate Concentration (µg/L)	Final pH of Leachate (except VOCs)	Optional data			Kd (L/kg)	% Contaminant in Leachate	Field leachate concentration (µg/L)	Pass or fail?
						Sampling Depth (ft)	Soil Type	Organic Carbon (mg/kg)				
E	0.1	2	0.311	0.05	9.94				6200.0	0.32	0.05	PASS
N	0.1	2	0.319	0.05	9.99				6360.0	0.31	0.05	PASS
NE	0.1	2	0.322	0.05	10.05				6420.0	0.31	0.05	PASS
SW	0.1	2	0.414	0.05	9.92				8260.0	0.24	0.05	PASS

SPLP RESULTS for

OPTION 1a: All adjusted leachate concentrations are below the leachate criterion

REMEDIATION STANDARD = 0.414 mg/kg

OPTION 1b: Simple inspection of tabulated results to find highest acceptable standard
EVERYTHING PASSED, OPTION 1b NOT VALID

OPTION 2: Remediation standard using site-specific Kd value

Kd ratio = 1.33, AVERAGING Kds OK

Kd USED FOR CALCULATING STANDARD = 6810. L/kg

result before rounding = 0.681 mg/kg

REMEDIATION STANDARD = 0.4 mg/kg (controlled by maximum soil concentration)

OPTION 3: Remediation standard using linear regression

Number of points = 1

(points were eliminated because leachate concentrations were not above the aqueous reporting limit)

Less than three points with leachate concentrations above the aqueous reporting limit

LINEAR REGRESSION CANNOT BE CONDUCTED

Acenaphth 83-32-9

Acetone (2 67-64-1

Acetophen 98-86-2

Acrolein 107-02-8

Acrylonitril 107-13-1

Aldrin 309-00-2

Aluminum 7429-90-5

Anthracen 120-12-7

Antimony (7440-36-0

Arsenic (to 7440-38-2

Atrazine 1912-24-9

Barium (tot 7440-39-3

Benzene 71-43-2

Benzidine 92-87-5

Benzo(a)ar 56-55-3

Benzo(a)py 50-32-8

Benzo(b)flu 205-99-2

Benzo(k)flu 207-08-9

Beryllium 7440-41-7

1,1'-Biphen 92-52-4

Bis(2-chlor 111-44-4

Bis(2-chlor 108-60-1

Bis(2-ethyl 117-81-7

Bromodich 75-27-4

Bromoform 75-25-2

Bromometh 74-83-9

2-Butanone 78-93-3

Butylbenz 85-68-7

Cadmium 7440-43-9

Caprolacta 105-60-2

Carbon dis 75-15-0

Carbon tet 56-23-5

Chlordane 57-74-9

Chloroben 108-90-7

Chloroform 67-66-3

2-Chloroph 95-57-8

Chrysene 128-01-9

Cobalt (tot 7440-48-4

Copper (to 7440-50-8

Cyanide 57-12-5

4,4'-DDD (I 72-54-8

4,4'-DDE (I 72-55-9

4,4'-DDT 50-29-3

Dibenz(a,h 53-70-3

Dibromoch 124-48-1

1,2-Dibrom 96-12-8

1,2-Dibrom 106-93-4

1,2-Dichlor 95-50-1

1,3-Dichlor 541-73-1

1,4-Dichlor 106-46-7

3,3'-Dichlor 91-94-1

Dichlorodif 75-71-8

1,1-Dichlor 75-34-3

1,2-Dichlor 107-06-2

1,1-Dichlor 75-35-4

1,2-Dichlor 156-59-2

1,2-Dichlor 156-60-5

2,4-Dichlor 120-83-2

1,2-Dichlor 78-87-5

1,3-Dichlor 542-75-6

Dieldrin 60-57-1

Diethylphth 84-66-2

2,4-Dimeth 105-67-9

Di-n-butyl 84-74-2

4,6-Dinitro 534-52-1

2,4-Dinitro 51-28-5

2,4-Dinitrot 25321-14-6

Di-n-octyl 117-84-0

1,2-Diphen 122-66-7

Endosulfar 115-29-7

Endosulfar 1031-07-8

Endrin 72-20-8

Ethylbenze 100-41-4

Fluoranth 206-44-0

Fluorene 86-73-7

alpha-HCH 319-84-6

beta-HCH 319-85-7

Heptachlor 76-44-8

Heptachlor 1024-57-3

Hexachlor 118-74-1

Hexachlor 87-68-3

Hexachlor 77-47-4

Hexachlorc 67-72-1
Indeno(1,2 193-39-5
Isophorone 78-59-1
Lead (total 7439-92-1
Lindane (g 58-89-9
Manganese 7439-96-5
Mercury (tc 7439-97-6
Methoxych 72-43-5
Methyl ace 79-20-9
Methylene 75-09-2
2-Methylna 91-57-6
Methyl tert 1634-04-4
Naphthaler 91-20-3
Nickel (tota 7440-02-0
Nitrobenze 98-95-3
N-Nitrosod 62-75-9
N-Nitrosod 621-64-7
N-Nitrosod 86-30-6
Pentachlor 87-86-5
Phenol 108-95-2
Polychlorin 1336-36-3
Pyrene 129-00-0
Selenium (7782-49-2
Silver (tota 7440-22-4
Styrene 100-42-5
Tertiary bu 75-65-0
1,1,2,2-Tet 79-34-5
Tetrachlorc 127-18-4
Thallium (b 7440-28-0
Toluene 108-88-3
Toxaphene 8001-35-2
1,2,4-Trich 120-82-1
1,1,1-Trich 71-55-6
1,1,2-Trich 79-00-5
Trichloroet 79-01-6
Trichloroflu 75-69-4
2,4,5-Trich 95-95-4
2,4,6-Trich 88-06-2
Vinyl chlori 75-01-4
Xylenes (tc 1330-20-7
Zinc (total) 7440-66-6

NJDEP SPLP Spreadsheet, V3.1, November 2013

Case name/area of concern:

366-394 Wilson Ave Rear

Case number:

N/A

Sampling date:

9/26/2019

Contaminant:

Cadmium

CAS No:

7440-43-9

Water solubility (mg/L):

NA

Aqueous reporting limit (µg/L):

5.00E-01

Soil reporting limit (mg/kg):

5.00E-01

Health-based GWQC (µg/L):

4.00E+00

DAF (20, or site-specific if approved):

20

Leachate Criterion (µg/L):

8.00E+01

Henry's law constant (dimensionless):

0.00E+00

CALCULATE
SITE SPECIFIC
IGW STANDARD

Reset
Spreadsheet

Print Results

Instructions

CLICK HERE if chemical is not on drop-down list, or to enter alternate GWQC

Print to file

Exit

NOTE:
USE ONE PAGE PER CONTAMINANT, do not leave empty rows between samples
Do not enter samples with soil concentrations at or below the reporting limit
When leachate concentration is non-detect, enter the aqueous reporting limit
Enter site-specific dilution-attenuation factor (DAF) if desired

	Data entry cells (do not skip rows)
	Optional data entry
	Calculated or locked cells
	Indicates that Alternative Remediation Standard needs to be recalculated

Sample ID	Soil sample weight (kg)	Leachate Volume (L)	Total Soil Concentration (mg/kg)	SPLP Leachate Concentration (µg/L)	Final pH of Leachate (except VOCs)	Optional data				Kd (L/kg)	% Contaminant in Leachate	Field leachate concentration (µg/L)	Pass or fail?
						Sampling Depth (ft)	Soil Type	Organic Carbon (mg/kg)	Organic Carbon (%)				
N	0.1	2	8	1	9.99					7980.0	0.25	1.00	PASS
SW	0.1	2	5.23	1.09	9.92					4778.2	0.42	1.09	PASS
NE	0.1	2	1.39	4	10.05					327.5	5.76	4.24	PASS
E	0.1	2	1.33	4	9.94					312.5	6.02	4.25	PASS

SPLP RESULTS for

OPTION 1a: All adjusted leachate concentrations are below the leachate criterion

REMEDIATION STANDARD = 8 mg/kg

OPTION 1b: Simple inspection of tabulated results to find highest acceptable standard
EVERYTHING PASSED, OPTION 1b NOT VALID

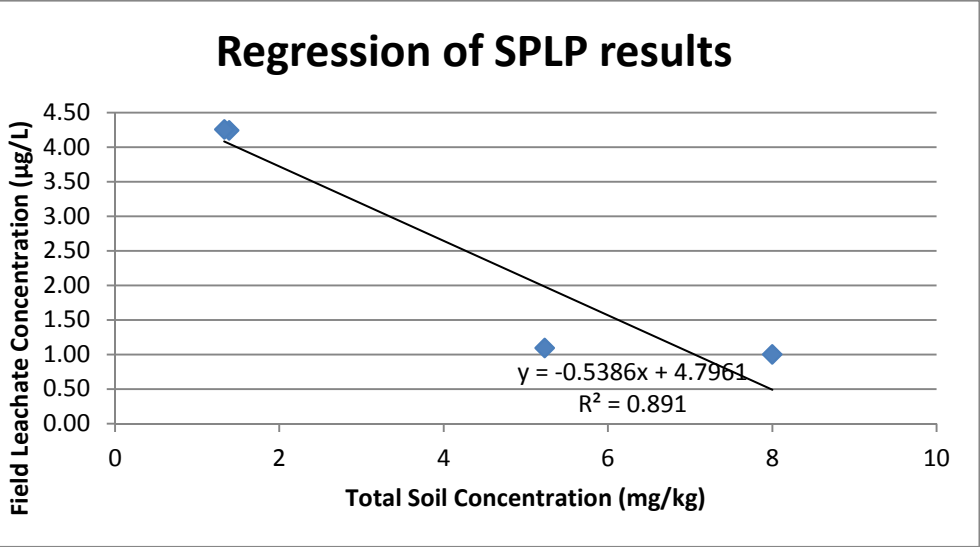
OPTION 2: Remediation standard using site-specific Kd value
Kd ratio = 25.54, USE MINIMUM Kd
Kd USED FOR CALCULATING STANDARD = 312.5 L/kg
result before rounding = 25.0123 mg/kg
REMEDIATION STANDARD = 8 mg/kg (controlled by maximum soil concentration)

OPTION 3: Remediation standard using linear regression
Number of points = 4
Soil concentration midrange = 4.67
Number of points above midrange = 2
Enough points above midrange? YES
R-Square high enough? YES
Leachate criterion within range of leachate concentrations? NO
OPTION 3 NOT VALID

Acenaphth 83-32-9

Acetone (2 67-64-1
Acetophen 98-86-2
Acrolein 107-02-8
Acrylonitrile 107-13-1
Aldrin 309-00-2
Aluminum (7429-90-5
Anthracene 120-12-7
Antimony (7440-36-0
Arsenic (to 7440-38-2
Atrazine 1912-24-9
Barium (tot 7440-39-3
Benzene 71-43-2
Benzidine 92-87-5
Benzo(a)ar 56-55-3
Benzo(a)p 50-32-8

Benzo(b)flu 205-99-2
Benzo(k)flu 207-08-9
Beryllium 7440-41-7
1,1'-Biphenyl 92-52-4
Bis(2-chlorophenyl) 111-44-4
Bis(2-chlorophenyl) ether 108-60-1
Bis(2-ethylphenyl) ether 117-81-7
Bromodichloromethane 75-27-4
Bromoform 75-25-2
Bromomethane 74-83-9
2-Butanone 78-93-3
Butylbenzene 85-68-7
Cadmium 7440-43-9
Caprolactam 105-60-2
Carbon disulfide 75-15-0
Carbon tetrachloride 56-23-5
Chlordane 57-74-9
Chlorobenzene 108-90-7
Chloroform 67-66-3
2-Chlorophenol 95-57-8
Chrysene 218-01-9



1,2-Dichloroethane 107-06-2
1,1-Dichloroethane 75-35-4
1,2-Dichlorobenzene 156-59-2
1,2-Dichlorobenzene 156-60-5
2,4-Dichlorobenzene 120-83-2
1,2-Dichlorobenzene 78-87-5
1,3-Dichlorobenzene 542-75-6
Dieldrin 60-57-1
Diethylphthalate 84-66-2
2,4-Dimethylphenol 105-67-9
Di-n-butylphthalate 84-74-2
4,6-Dinitrophenol 534-52-1
2,4-Dinitrophenol 51-28-5
2,4-Dinitrophenol 25321-14-6
Di-n-octylphthalate 117-84-0
1,2-Diphenyl ether 122-66-7
Endosulfan 115-29-7
Endosulfan 1031-07-8
Endrin 72-20-8
Ethylbenzene 100-41-4
Fluoranthene 206-44-0
Fluorene 86-73-7
alpha-HCH 319-84-6
beta-HCH 319-85-7
Heptachlor 76-44-8
Heptachlor 1024-57-3
Hexachlorocyclopentadiene 118-74-1
Hexachlorocyclopentadiene 87-68-3
Hexachlorocyclopentadiene 77-47-4
Hexachlorocyclopentadiene 67-72-1
Indeno(1,2,3-cd)pyrene 193-39-5
Isophorone 78-59-1
Lead (total) 7439-92-1

Lindane (g) 58-89-9
Manganese 7439-96-5
Mercury (tc) 7439-97-6
Methoxych 72-43-5
Methyl ace 79-20-9
Methylene 75-09-2
2-Methylna 91-57-6
Methyl tert- 1634-04-4
Naphthaler 91-20-3
Nickel (total) 7440-02-0
Nitrobenze 98-95-3
N-Nitrosod 62-75-9
N-Nitrosod 621-64-7
N-Nitrosod 86-30-6
Pentachlor 87-86-5
Phenol 108-95-2
Polychlorin 1336-36-3
Pyrene 129-00-0
Selenium () 7782-49-2
Silver (total) 7440-22-4
Styrene 100-42-5
Tertiary bu 75-65-0
1,1,2,2-Tet 79-34-5
Tetrachlor 127-18-4
Thallium (tc) 7440-28-0
Toluene 108-88-3
Toxaphene 8001-35-2
1,2,4-Trich 120-82-1
1,1,1-Trich 71-55-6
1,1,2-Trich 79-00-5
Trichloroetl 79-01-6
Trichloroflu 75-69-4
2,4,5-Trich 95-95-4
2,4,6-Trich 88-06-2
Vinyl chlori 75-01-4
Xylenes (tc) 1330-20-7
Zinc (total) 7440-66-6

NJDEP SPLP Spreadsheet, V3.1, November 2013

Case name/area of concern:

Case number:

Sampling date:

Contaminant:

CAS No:

Water solubility (mg/L):

Aqueous reporting limit (µg/L):

Soil reporting limit (mg/kg):

Health-based GWQC (µg/L):

DAF (20, or site-specific if approved):

Leachate Criterion (µg/L):

Henry's law constant (dimensionless):

CALCULATE
SITE SPECIFIC
IGW STANDARD

Reset
Spreadsheet

Print Results

Instructions

CLICK HERE if chemical is not on drop-down list, or to enter alternate GWQC

Print to file

Exit

NOTE:

USE ONE PAGE PER CONTAMINANT, do not leave empty rows between samples

Do not enter samples with soil concentrations at or below the reporting limit

When leachate concentration is non-detect, enter the aqueous reporting limit

Enter site-specific dilution-attenuation factor (DAF) if desired

Data entry cells (do not skip rows)

Optional data entry

Calculated or locked cells

Indicates that Alternative Remediation Standard needs to be recalculated

Sample ID	Soil sample weight (kg)	Leachate Volume (L)	Total Soil Concentration (mg/kg)	SPLP Leachate Concentration (µg/L)	Final pH of Leachate (except VOCs)	Optional data				Kd (L/kg)	% Contaminant in Leachate	Field leachate concentration (µg/L)	Pass or fail?
						Sampling Depth (ft)	Soil Type	Organic Carbon (mg/kg)	Organic Carbon (%)				
NE	0.1	2	82.7	27.1	10.05					3031.7	0.66	27.28	PASS
SW	0.1	2	134	36.4	9.92					3661.3	0.54	36.60	PASS
E	0.1	2	78	36.4	9.94					2122.9	0.93	36.74	PASS
N	0.1	2	149	41.4	9.99					3579.0	0.56	41.63	PASS

SPLP RESULTS for

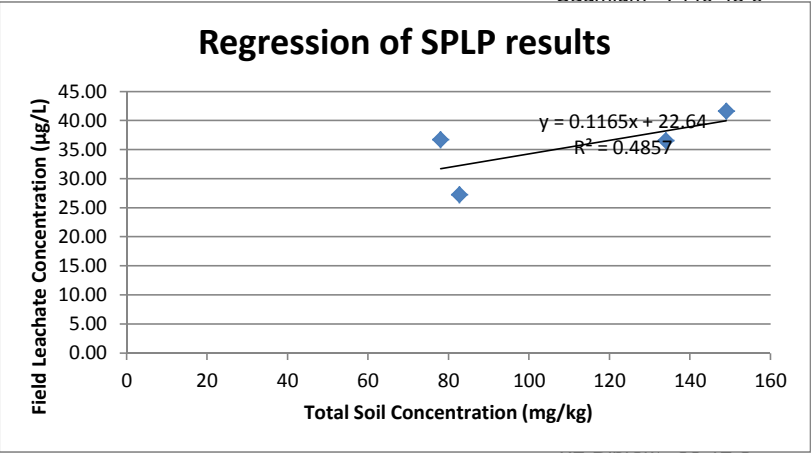
OPTION 1a: All adjusted leachate concentrations are below the leachate criterion

REMEDIATION STANDARD = 149 mg/kg

OPTION 1b: Simple inspection of tabulated results to find highest acceptable standard
EVERYTHING PASSED, OPTION 1b NOT VALID

OPTION 2: Remediation standard using site-specific Kd value
Kd ratio = 1.72, AVERAGING Kds OK
Kd USED FOR CALCULATING STANDARD = 3098.72 L/kg
result before rounding = 309.8871 mg/kg
REMEDIATION STANDARD = 150 mg/kg (controlled by maximum soil concentration)

OPTION 3: Remediation standard using linear regression
Number of points = 4
Soil concentration midrange = 113.5
Number of points above midrange = 2
Enough points above midrange? YES
R-Square high enough? NO
Leachate criterion within range of leachate concentrations? NO
OPTION 3 NOT VALID



- Acenaphth 83-32-9
- Acetone (2 67-64-1
- Acetophen 98-86-2
- Acrolein 107-02-8
- Acrylonitril 107-13-1
- Aldrin 309-00-2
- Aluminum 7429-90-5
- Anthracene 120-12-7
- Antimony (7440-36-0
- Arsenic (to 7440-38-2
- Atrazine 1912-24-9
- Barium (tot 7440-39-3
- Benzene 71-43-2
- Benzidine 92-87-5
- Benzo(a)ar 56-55-3
- Benzo(a)p 50-32-8
- Benzo(b)fl 205-99-2
- Benzo(k)fl 207-08-9
- Beryllium 7440-41-7
- 1,1'-Biphe 92-52-4
- Bis(2-chlor 111-44-4
- Bis(2-chlor 108-60-1
- Bis(2-ethyl 117-81-7
- Bromodich 75-27-4
- Bromoform 75-25-2
- Bromomet 74-83-9
- 2-Butanon 78-93-3
- Butylbenz 85-68-7
- Cadmium 7440-43-9
- 1,2-Dibrom 106-93-4
- 1,2-Dichlor 95-50-1
- 1,3-Dichlor 541-73-1
- 1,4-Dichlor 106-46-7
- 3,3'-Dichlor 91-94-1
- Dichlorodif 75-71-8
- 1,1-Dichlor 75-34-3
- 1,2-Dichlor 107-06-2
- 1,1-Dichlor 75-35-4
- 1,2-Dichlor 156-59-2
- 1,2-Dichlor 156-60-5
- 2,4-Dichlor 120-83-2
- 1,2-Dichlor 78-87-5
- 1,3-Dichlor 542-75-6
- Dieldrin 60-57-1
- Diethylphth 84-66-2
- 2,4-Dimeth 105-67-9
- Di-n-butyl 84-74-2
- 4,6-Dinitro 534-52-1
- 2,4-Dinitro 51-28-5
- 2,4-Dinitro 25321-14-6
- Di-n-octyl 117-84-0
- 1,2-Diphen 122-66-7

Endosulfar 115-29-7
Endosulfar 1031-07-8
Endrin 72-20-8
Ethylbenze 100-41-4
Fluoranthene 206-44-0
Fluorene 86-73-7
alpha-HCH 319-84-6
beta-HCH 319-85-7
Heptachlor 76-44-8
Heptachlor 1024-57-3
Hexachlorocyclopentadiene 118-74-1
Hexachlorocyclopentadiene 87-68-3
Hexachlorocyclopentadiene 77-47-4
Hexachlorocyclopentadiene 67-72-1
Indeno(1,2-b)pyrene 193-39-5
Isophorone 78-59-1
Lead (total) 7439-92-1
Lindane (gamma-hexachlorocyclopentadiene) 58-89-9
Manganese 7439-96-5
Mercury (total) 7439-97-6
Methoxychlor 72-43-5
Methyl acetate 79-20-9
Methylene chloride 75-09-2
2-Methylnaphthalene 91-57-6
Methyl tert-butyl ether 1634-04-4
Naphthalene 91-20-3
Nickel (total) 7440-02-0
Nitrobenzene 98-95-3
N-Nitrosodimethylamine 62-75-9
N-Nitrosodimethylamine 621-64-7
N-Nitrosodimethylamine 86-30-6
Pentachlorocyclopentadiene 87-86-5
Phenol 108-95-2
Polychlorinated biphenyls 1336-36-3
Pyrene 129-00-0
Selenium (total) 7782-49-2
Silver (total) 7440-22-4
Styrene 100-42-5
Tertiary butyl alcohol 75-65-0
1,1,2,2-Tetrachloroethane 79-34-5
Tetrachloroethane 127-18-4
Thallium (total) 7440-28-0
Toluene 108-88-3
Toxaphene 8001-35-2
1,2,4-Trichlorobenzene 120-82-1
1,1,1-Trichloroethane 71-55-6
1,1,2-Trichloroethane 79-00-5
Trichloroethylene 79-01-6
Trichlorofluoromethane 75-69-4
2,4,5-Trichlorobenzoic acid 95-95-4
2,4,6-Trichlorobenzoic acid 88-06-2
Vinyl chloride 75-01-4
Xylenes (total) 1330-20-7
Zinc (total) 7440-66-6

NJDEP SPLP Spreadsheet, V3.1, November 2013

Case name/area of concern: 366-394 Wilson Ave Rear
Case number: N/A
Sampling date: 9/26/2019

**CALCULATE
SITE SPECIFIC
IGW STANDARD**

Reset
Spreadsheet

Print Results

Instructions

Print to file

Exit

CLICK HERE if chemical is not on drop-down list, or to enter alternate GWQC

Contaminant: Mercury (total)
CAS No: 7439-97-6
Water solubility (mg/L): NA
Aqueous reporting limit (µg/L): 5.00E-02
Soil reporting limit (mg/kg): 1.00E-01
Health-based GWQC (µg/L): 2.00E+00
DAF (20, or site-specific if approved): 20
Leachate Criterion (µg/L): 4.00E+01
Henry's law constant (dimensionless): 0.00E+00

NOTE:

USE ONE PAGE PER CONTAMINANT, do not leave empty rows between samples
Do not enter samples with soil concentrations at or below the reporting limit
When leachate concentration is non-detect, enter the aqueous reporting limit
Enter site-specific dilution-attenuation factor (DAF) if desired

Data entry cells (do not skip rows)

Optional data entry

Calculated or locked cells

Indicates that Alternative Remediation Standard needs to be recalculated

Sample ID	Soil sample weight (kg)	Leachate Volume (L)	Total Soil Concentration (mg/kg)	SPLP Leachate Concentration (µg/L)	Final pH of Leachate (except VOCs)	Optional data			Kd (L/kg)	% Contaminant in Leachate	Field leachate concentration (µg/L)	Pass or fail?
						Sampling Depth (ft)	Soil Type	Organic Carbon (mg/kg)				
N	0.1	2	12.4	0.5	9.99				24780.0	0.08	0.50	PASS
SW	0.1	2	3.78	0.5	9.92				7540.0	0.26	0.50	PASS
E	0.1	2	0.924	0.5	9.94				1828.0	1.08	0.51	PASS
NE	0.1	2	0.709	0.5	10.05				1398.0	1.41	0.51	PASS

SPLP RESULTS for

OPTION 1a: All adjusted leachate concentrations are below the leachate criterion

REMEDIATION STANDARD = 12.4 mg/kg

OPTION 1b: Simple inspection of tabulated results to find highest acceptable standard
EVERYTHING PASSED, OPTION 1b NOT VALID

OPTION 2: Remediation standard using site-specific Kd value

Kd ratio = 17.73, USE MINIMUM Kd

Kd USED FOR CALCULATING STANDARD = 1398. L/kg

result before rounding = 55.9261 mg/kg

REMEDIATION STANDARD = 12 mg/kg (controlled by maximum soil concentration)

OPTION 3: Remediation standard using linear regression

Number of points = 4

Soil concentration midrange = 6.55

Number of points above midrange = 1

Enough points above midrange? NO

R-Square high enough? NO

Leachate criterion within range of leachate concentrations? NO

OPTION 3 NOT VALID

Acenaphth 83-32-9

Acetone (2 67-64-1

Acetophen 98-86-2

Acrolein 107-02-8

Acrylonitril 107-13-1

Aldrin 309-00-2

Aluminum 7429-90-5

Anthracene 120-12-7

Antimony (7440-36-0

Arsenic (to 7440-38-2

Atrazine 1912-24-9

Barium (tot 7440-39-3

Benzene 71-43-2

Benzidine 92-87-5

Benzo(a)ar 56-55-3

Benzo(a)py 50-32-8

Benzo(b)flu 205-99-2

Benzo(k)flu 207-08-9

Beryllium 7440-41-7

1,1'-Biphen 92-52-4

Bis(2-chlor 111-44-4

Bis(2-chlor 108-60-1

Bis(2-ethyl 117-81-7

Bromodich 75-27-4

Bromoform 75-25-2

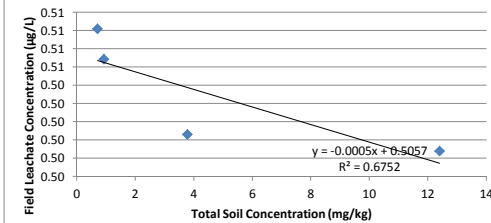
Bromometh 74-83-9

2-Butanone 78-93-3

Butylbenzyl 85-68-7

Cadmium 7440-43-9

Regression of SPLP results



1,2-Dibrom 106-93-4

1,2-Dichlor 95-50-1

1,3-Dichlor 541-73-1

1,4-Dichlor 106-46-7

3,3'-Dichlor 91-94-1

Dichlorodif 75-71-8

1,1-Dichlor 75-34-3

1,2-Dichlor 107-06-2

1,1-Dichlor 75-35-4

1,2-Dichlor 156-59-2

1,2-Dichlor 156-60-5

2,4-Dichlor 120-83-2

1,2-Dichlor 78-87-5

1,3-Dichlor 542-75-6

Dieldrin 60-57-1

Diethylphth 84-66-2

2,4-Dimeth 105-67-9

Di-n-butyl 84-74-2

4,6-Dinitro 534-52-1

2,4-Dinitro 51-28-5

2,4-Dinitrot 25321-14-6

Di-n-octyl 117-84-0

1,2-Diphen 122-66-7

Endosulfar 115-29-7

Endosulfar 1031-07-8

Endrin 72-20-8

Ethylbenze 100-41-4

Fluoranth 206-44-0

Fluorene 86-73-7

alpha-HCH 319-84-6

beta-HCH 319-85-7

Heptachlor 76-44-8

Heptachlor 1024-57-3

Hexachlor 118-74-1

Hexachlor 87-68-3

Hexachlor 77-47-4

Hexachlorc 67-72-1
Indeno(1,2 193-39-5
Isophorone 78-59-1
Lead (total 7439-92-1
Lindane (g 58-89-9
Manganese 7439-96-5
Mercury (tc 7439-97-6
Methoxych 72-43-5
Methyl ace 79-20-9
Methylene 75-09-2
2-Methylna 91-57-6
Methyl tert 1634-04-4
Naphthaler 91-20-3
Nickel (tota 7440-02-0
Nitrobenze 98-95-3
N-Nitrosod 62-75-9
N-Nitrosod 621-64-7
N-Nitrosod 86-30-6
Pentachlor 87-86-5
Phenol 108-95-2
Polychlorin 1336-36-3
Pyrene 129-00-0
Selenium (7782-49-2
Silver (tota 7440-22-4
Styrene 100-42-5
Tertiary bu 75-65-0
1,1,2,2-Tet 79-34-5
Tetrachlorc 127-18-4
Thallium (b 7440-28-0
Toluene 108-88-3
Toxaphene 8001-35-2
1,2,4-Trich 120-82-1
1,1,1-Trich 71-55-6
1,1,2-Trich 79-00-5
Trichloroet 79-01-6
Trichloroflu 75-69-4
2,4,5-Trich 95-95-4
2,4,6-Trich 88-06-2
Vinyl chlori 75-01-4
Xylenes (tc 1330-20-7
Zinc (total) 7440-66-6