

# Site Investigation Report

**Former Pyrolac Corporation Facility  
55 Schoon Avenue (Block 17, Lot 11)  
Hawthorne, Passaic County, New Jersey**

**September 2010**



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## **EXECUTIVE SUMMARY**

On behalf of the Passaic County Department of Economic Development (PCDED), Dewberry-Goodkind, Inc. (Dewberry) performed Site Investigation (SI) activities at the property formerly known as the Pyrolac Corporation facility, located at 55 Schoon Avenue in Hawthorne, Passaic County, New Jersey. The site has been vacant since the owner (Pyrolac) abandoned the property in April 1995. The performance of this SI has been funded through a United States Environmental Protection Agency (USEPA) Brownfields Grant issued to the PCDED to inventory and investigate sites in Passaic County that have been contaminated by hazardous substances, pollutants, or contaminants. The site was selected for assessment by the PCDED due to known soil and groundwater contamination identified during past investigation activities performed by the New Jersey Department of Environmental Protection (NJDEP) and the USEPA.

The scope of work (SOW) for SI was developed to identify and/or confirm the presence of historically identified site contaminants. Both historical soil and groundwater contaminants were identified through document review as part of the Preliminary Assessment (PA) completed in November 2009.

The following areas of environmental concern (AOCs) were identified during the PA requiring further investigation:

- AOC-1 - Former Drum Storage Areas
- AOC-2 - Former Disposal Trench
- AOC-3 - Eleven Bulk Chemical Underground Storage Tanks
- AOC-4 - One Heating Oil Underground Storage Tank
- AOC-5 - Documented Soil Contamination
- AOC-6 - Documented Groundwater Contamination
- AOC-7 - Floor Drains and Unknown Integrity of Flooring

A total of 22 soil borings were advanced to investigate the six soil AOCs at the site. Prior to performing the borings, a geophysical survey was conducted in AOC-3 and AOC-4 to confirm the locations of underground storage tanks (USTs) and identify underground utilities in these areas. A total of 36 soil samples were collected from the 22 borings and 30 of these samples were analyzed for Target Compound List (TCL) volatile organic compounds plus 10 additional, non-targeted peaks, TCL base neutral and acid extractable organic compounds plus 20 additional, non-targeted peaks, TCL pesticides and polychlorinated biphenyls (PCB), and Target Analyte List (TAL) metals. The remaining six soil samples, collected from borings advanced in AOC-4, were analyzed for total petroleum hydrocarbons/diesel-range organics (TPH/DRO) with contingent 2-methylnaphthalene and naphthalene analyses.

Of the six AOCs investigated for soil, only three contaminant concentrations were identified in excess of NJDEP Soil Remediation Standards (SRS) as follows:

- AOC-1 - PCBs were detected in the surface soil sample collected from boring GP-5 at a concentration of 2.1 milligrams per kilogram (mg/kg), which is above both the NJDEP Residential Direct Contact SRS of 0.2 mg/kg and NJDEP Non-Residential Direct Contact SRS of 1.0 mg/kg.
- AOC-3 - PCBs were detected in the surface soil sample collected from boring GP-9 at a concentration of 0.23 mg/kg, which exceeds the NJDEP Residential Direct Contact SRS of 0.2 mg/kg.
- AOC-5 - Lead was detected in the surface soil sample collected from boring GP-18 at a concentration of 524 mg/kg, which is above the NJDEP Residential Direct Contact SRS of 400 mg/kg.

Based on the above results, Dewberry recommends that a remedial investigation be performed to delineate the horizontal and vertical extent of the soil contamination at sample locations GP-5 (AOC-1), GP-9 (AOC-3), and GP-18 (AOC-5). Upon delineation, the impacted soils can be removed as “hot spots” or remain in place through the utilization of engineering controls, such as capping, and institutional controls, specifically, a Deed Notice.

The soil samples collected from borings advanced in AOC-2, AOC-4, and AOC-7 did not contain concentrations above NJDEP standards. Therefore, Dewberry recommends no further investigation in these areas.

In addition, Dewberry recommends closure (removal) of the 11 bulk chemical USTs in AOC-3 and heating oil UST in AOC-4 per the requirements of NJAC 7:14B and NJAC 7:26E.

The eight groundwater monitoring wells at the site were sampled between April 29 and 30, 2010. The groundwater samples were analyzed for TCL VO+10, TCL BNA+20, TCL pesticides and PCBs, and TAL metals. No VOs, BNAs, pesticides, or PCBs were detected in the groundwater samples at levels above the NJDEP Class II-A Ground Water Quality Standards (GWQS). Four metals (arsenic, iron, manganese, and sodium) were detected at concentrations above the NJDEP GWQS in the groundwater samples collected from various site monitoring wells.

The elevated concentrations of metals detected in the groundwater samples are likely associated with metals adsorbed onto suspended soil particles within the samples and, therefore, not due to the quality of the groundwater itself. Although the wells were rehabilitated through the use of surge-block and development techniques (as well as sampled via the low-flow purging and sampling methodology), the age and condition of the wells, last sampled in December 1997, appears to have contributed to slightly turbid samples. Therefore, Dewberry recommends that a confirmation round of groundwater well sampling be conducted at the site.

## **1.0 INTRODUCTION**

On behalf of the Passaic County Department of Economic Development (PCDED), Dewberry-Goodkind, Inc. (Dewberry) performed Site Investigation (SI) activities at the property formerly known as the Pyrolac Corporation facility, located at 55 Schoon Avenue in Hawthorne, Passaic County, New Jersey. The site consists of one tax lot (Block 17, Lot 11) measuring 2.45 acres in size. The site has been vacant since the owner (Pyrolac) abandoned the property in April 1995. The performance of this SI has been funded through a United States Environmental Protection Agency (USEPA) Brownfields Grant issued to the PCDED to inventory and investigate sites in Passaic County that have been contaminated by hazardous substances, pollutants, or contaminants. The site was selected for assessment by the PCDED due to known soil and groundwater contamination identified during past investigation activities performed by the New Jersey Department of Environmental Protection (NJDEP) and the USEPA.

The scope of work (SOW) for SI was developed to identify and/or confirm the presence of historically identified site contaminants. Both historical soil and groundwater contaminants were identified through document review performed as part of the Preliminary Assessment (PA) completed in November 2009. The SOW was submitted to the PCDED in April 2010 as part of a Sampling and Analysis Plan (SAP). The work was performed under a Quality Assurance Project Plan (QAPP) and Health and Safety Plan (HASP) dated April 2010. This SI report was prepared in conformance with the NJDEP Technical Requirements for Site Remediation, NJAC 7:26E, Subchapter 3 – Preliminary Assessment and Site Investigation.

## **2.0 PHYSICAL SETTING**

### **2.1 Regional Geology**

The site is located in the Triassic Lowlands of the Piedmont Physiographic Province of New Jersey. The subsurface aquifer of concern is the Passaic Formation, formerly known as the Brunswick Formation of the Newark Supergroup. Groundwater movement and storage within this aquifer is primarily due to extensive fracturing of its component rocks. The Passaic Formation is mainly composed of red siltstone, shale, sandstone, and conglomerate. Within the area of the site, the primary water-bearing zone ranges from less than 200 to 600 feet in depth.

Site soils consist of glacial deposits from the Wisconsin Glacial Period. These deposits overlay the Brunswick Shale Formation. As confirmed during previous environmental investigation activities, overburden soils at the site consists measure in thickness from 25 feet to greater than 35 feet. A layer of fill material overlies these soils at grade, measuring in thickness from one to seven feet across the site.

### **2.2 Hydrogeology**

Shallow groundwater exists at the site in limited quantities in localized, perched water-bearing zones. The perched zones are the result of low permeability lenses where the subsurface glacial deposits have very high silt and clay content. To date, eight groundwater monitoring wells (identified as MW-1 through MW-8) have been installed on site. Wells MW-1, MW-2, and MW-3 were installed to depths of 15, 15, and 19 feet, respectively, in the perched water-bearing zones. Depth to groundwater in these localized, perched zones has varied historically based on storm water accumulation.

Wells MW-4 through MW-8 were installed to depths of 19 to 30 feet below grade in the deeper unconsolidated water-bearing zone. Depth to groundwater across the site in this deeper water zone has ranged from approximately 8 to 12 feet below grade. The groundwater flow direction of the lower water zone is to the south-southeast across the site, towards the Passaic River (located one-quarter mile south of the site).

### **2.3 Topography and Drainage**

Dewberry reviewed the United States Geological Survey (USGS) map of the area surrounding the site. The Paterson, NJ USGS 7.5 Minute Topographic Quadrangle (Photo revised 1981) indicates that the area generally slopes slightly to the south towards the Passaic River, located approximately one quarter mile south of the site. Elevation at the site is approximately 50 feet above mean sea level (msl). Figure 1 presents a USGS map showing the topography of the site and surrounding area.



## 2.4 Land Use

The site is located in a mixed industrial and residential area of the Borough of Hawthorne in Passaic County. The site measures approximately 2.45 acres in size and consists of Block 17, Lot 11 on the tax maps of the Borough of Hawthorne. The site is bordered to the north by Nexus Plastics Corporation (a plastics manufacturer), to the east by residential properties, to the south by mixed residential/commercial development and Schoon Avenue, and to the west by the Erie-Lackawanna Railroad, and Passaic Avenue.

The manufacturing building measures approximately 20,000 square feet in area. The site has been vacant since Pyrolac abandoned the site in April 1995. A facility fire was reported at the site on June 11, 1997 involving a section of the building which appeared to be a quality assurance/quality control (QA/QC) laboratory. Based upon a review of historical documents and site inspection, structures remaining on site include a former manufacturing facility, former drum storage building, former solvent storage canopy, former office area, and former concrete block storage shed.

The site is surrounded by a chain-link fence with a locked entrance gate on Schoon Avenue. Since its abandonment, according to the Borough of Hawthorne Fire Department, the site has been vandalized on four separate occasions. Currently, the perimeter of the site is overgrown by trees, shrubs, vines, and other foliage to the point that the interior of the site is not visible from the fence line.

The site has been vacant since it was abandoned in April 1995. During its operations, manufacturing activities conducted at the site included the production of primers, lacquers, bake enamels, water reduction products, high-solids coatings, and solvent reducers and cleaners. A majority of the products manufactured at the facility were custom-blended paints for industrial use clients.

Also, still present on site are 11 underground storage tanks (USTs) previously used to store bulk liquids used in the production processes performed at the site. The USTs are reportedly empty due to the USEPA removal action in 1998. The status of the USTs is discussed in Section 4.2.3.

Bulk raw materials used in the production processes were stored in the USTs located in the northern corner of the site. Additional raw materials were also delivered to the facility in 55-gallon drums and smaller containers and stored in various warehouse facilities at the site. Eleven USTs were used to store bulk raw materials as follows:

- One 3,800-gallon Lacquer Thinner UST
- One 4,000-gallon Toluene UST
- One 3,800-gallon Methyl Isobutyl Ketone (MIBK) UST
- One 6,000-gallon VMP Naptha UST
- One 6,000-gallon Xylenes UST

- One 6,000-gallon Recovered Solvent UST
- One 2,000-gallon Isopropyl Alcohol UST
- Two 2,000-gallon Mineral Spirits USTs
- One 2,000-gallon Butyl Alcohol UST
- One 2,000-gallon Butyl Acetate UST

Historical documents indicate that the tanks are at least 30 years old. Although the above listed USTs (totaling 39,600 gallons in combined capacity) are still present at the site, the residual contents within these USTs were removed and disposed off site during the USEPA Removal Action performed in February 1998. Additional raw materials including resins, pigments, and various additives, as well as finished products were stored in both interior and exterior warehousing facilities at the site.

In addition to the above USTs, the facility formerly utilized a heating oil UST, situated south of the manufacturing building. The fill port and vent pipe were located during the August 11, 2009 site inspection. The capacity of the UST is 2,000 gallons; there is approximately 9 inches of an oil/water mixture at the bottom of the tank.

### **3.0 SITE ASSESSMENT AND INVESTIGATION HISTORY**

#### **3.1 Previous Site Assessment and Investigation Activities**

The Hawthorne Fire Department issued a Notice of Violation (NOV) to Pyrolac on September 1, 1970. The NOV indicated that Pyrolac should “machine a ditch around the outside of the above ground storage area” for spill containment purposes. In response, Pyrolac reportedly used a backhoe to excavate a 3-foot by 3-foot trench located at the eastern side of the property, away from any above ground storage locations. The trench reportedly measured 25 feet in length. A former Pyrolac employee reported that waste material, consisting mainly of “isopropyl alcohol with some plastic and resin”, was disposed in the trench. Pyrolac personnel and Borough of Hawthorne representatives have disagreed over the details regarding the directions given for the construction of the trench. The Hawthorne Fire Chief ordered the cessation of receiving, storing, and dumping of waste materials in the trench. The subject trench was subsequently backfilled. This trench was investigated as part of this SI, as detailed in Section 5.2 of this report.

Pyrolac was cited on numerous occasions by local officials for poor housekeeping issues, both interior and exterior, including the presence of numerous “leaking” drums. Following facility inspections conducted in March 1977 and 1979, the Hawthorne Bureau of Fire Prevention issued violations to Pyrolac citing poor material handling and storage practices in indoor and outdoor work areas and long-term storage of an accumulation of returned materials.

The NJDEP performed a Resource Conservation and Recovery Act (RCRA) inspection of the site on May 6, 1985. Reported findings of this inspection included the presence of both indoor and outdoor spills, 11 USTs, indoor floor drains, storage of waste materials for longer than the RCRA-mandated 90 days, and incorrect manifesting of hazardous wastes. Materials stored in the USTs included xylenes, methyl isobutyl ketone, toluene, lacquer thinner, butyl acetate, mineral spirits, and isopropyl alcohol. The NJDEP collected two samples during the inspection, one from the solvent distribution room floor drain and one from a stained soil area at the rear of the property. Analytical results of these samples indicated the presence of toluene, ethylbenzene, bis(2-ethylhexyl)phthalate, chloroform, methylene chloride, naphthalene, 1,1-dichloroethene, dibutylphthalate, and isophorone.

The NJDEP issued an Administrative Consent Order (ACO) to Pyrolac in July 1985 for operating as an unpermitted generator of hazardous waste and an unpermitted transport, storage, and disposal facility (TSDF). Pyrolac reportedly agreed to clean up the areas found to be contaminated per the May 1985 analytical data. On August 1, 1985, Pyrolac contracted with S&W Waste to remove the top four inches of soil from the northwestern drum storage area. In August 1987, the NJDEP determined that Pyrolac had violated the State’s Water Pollution Control Act and directed Pyrolac to conduct a Remedial Investigation (RI). On January 1, 1990, the NJDEP issued Pyrolac a New Jersey Pollutant Discharge Elimination System (NJPDDES) Permit (No. NJ0073563).

### **3.2 Remedial Investigation Activities**

Pyrolac conducted a RI at the site in 1988. The areas of environmental concern (AOCs) investigated included the USTs, backfilled trench area, outdoor drum storage/spill areas, and indoor floor drains. At the time of the RI activities, the floor drains had reportedly already been filled with concrete. In June 1988, five groundwater monitoring wells were installed at the site. Groundwater analytical data collected in July 1988 indicated the presence of elevated volatile organic compounds (VOC) and semi-volatile organic compounds (SVOC). In August 1988, eight soil borings were advanced and sampled for VOCs and total petroleum hydrocarbons. Only one soil sample, collected from boring B-5 installed at the formal disposal trench, indicated elevated concentrations of VOCs. Three additional monitoring wells were installed in May 1990. Groundwater analytical data collected in July 1990 also indicated the presence of elevated VOCs and SVOCs in the on-site wells.

In November 1990, the NJDEP conducted a NJPDES Compliance Evaluation Inspection at the site. The Discharge Surveillance Report stated that recent analytical data from the monitoring wells indicated the presence of elevated VOC and SVOC concentrations. Two possible contaminant sources were identified: the northern UST field and the backfilled disposal trench. The highest groundwater contaminant concentrations were reported in wells MW-6 and MW-8, located directly downgradient of these two areas. The NJDEP proceeded to direct Pyrolac to implement a Ground Water Quality Assessment program.

On January 3, 1992, Pyrolac, collected groundwater samples from each of the eight groundwater monitoring wells. Analytical results indicated the presence of elevated concentrations of VOCs and SVOCs including benzene, toluene, ethylbenzene, and xylenes (BTEX), tetrachloroethene (TCE), 1,1,1-trichloroethane, 1,1-dichloroethene, 1,1-dichloroethane, acetone, and methylene chloride.

On November 19, 1992, the NJDEP performed another site compliance inspection and observed a solvent odor throughout the facility, three sealed floor drains, poor interior/exterior material storage and handling practices, and an outdoor drum storage area with three leaking drums. In July 1993, the NJDEP issued a directive to Pyrolac and Ply-Gem Corporation (Ply-Gem) (reported owner of materials disposed in the disposal trench) identifying them as responsible parties of the on-site contamination. Pyrolac was directed by the NJDEP to conduct a RI to determine the nature and extent of both soil and groundwater contamination, as well as perform site cleanup activities. Ply-Gem subsequently disputed its liability for the waste materials discharged into the disposal trench.

On November 24, 1993, Pyrolac executed an Administrative Consent Order (ACO) with the NJDEP for the cleanup of the site, with the stipulation that the ACO would not become effective unless Pyrolac could obtain financial assistance from the NJDEP Hazardous Discharge Site Remediation Fund. Efforts by Pyrolac to obtain funding failed and the case was listed by the NJDEP as awaiting publically funded cleanup.

### 3.3 USEPA Removal Action

Pyrolac abandoned the property in April 1995. On November 26, 1996, the USEPA Response and Prevention Branch conducted a Removal Assessment at the facility. The site was visually inspected from the perimeter of the property. The facility was observed to have been vandalized. Approximately 100 drums, 200 5 to 30-gallon containers, and 400 smaller containers were observed on site. Hazardous materials noted to be present included butyl alcohol, xylenes, isopropyl alcohol, toluene, acetone, and alkyl resin solution.

Based on the results of the November 1996 USEPA Removal Assessment, the NJDEP submitted the site to the USEPA for Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) removal action consideration in January 1997. The CERCLA System ID No. assigned to the site is NJD001271931. In June 1997, a building fire occurred at the abandoned facility. During firefighting activities, firefighters reported the presence of a “substantial amount” of chemicals in various containers within the building. Following the fire, the USEPA initiated a Removal Action at the Pyrolac facility. Wastes that were collected and disposed off site included paint-related materials, oxidizing liquids and solids, caustic alkali liquids, hydrogen peroxide, nitrocellulose liquid, aluminum powder, and one propane gas cylinder. The Removal Action was completed in February 1998. These activities were conducted in conjunction with additional RI activities.

In December 1997, a USEPA Region II Superfund Technical Assessment and Response Team (START) conducted additional sampling at the facility. The START Team collected soil and groundwater samples to assist in developing a Hazard Ranking System (HRS) score for the facility. Groundwater samples were collected from monitoring wells MW-4, MW-5, MW-7, and MW-8. The remaining wells could not be located or sufficient sample volume could not be obtained. The groundwater samples were analyzed for VOCs and SVOCs. The START Team identified MW-4 as a background well. Numerous contaminants in MW-5, MW-7, and MW-8 were detected at concentrations at least three times those detected in the background well (MW-4) indicating that an impact to groundwater had occurred.

Twenty surface soil samples and four subsurface soil samples were also collected. Eight of these samples were collected from off-site neighboring properties. As with the groundwater samples, two background soil samples were collected in order to apply the USEPA Region II three-times background rule to determine if a release to soils occurred at the site. Elevated levels of VOCs, SVOCs, and pesticides were detected in each of the intended background samples as well as in each of the on-site soil samples, preventing a background comparison and determination of whether a discharge to site soils had occurred. Numerous VOC and SVOC compounds were detected in excess of former NJDEP SCC.

Dewberry completed a Preliminary Assessment (PA) of the site in November 2009 including the performance of a site visit and appropriate inquiry of Federal, state, local, and certain proprietary records.

According to the results of the PA, the following AOCs were identified at the site:

- AOC-1 - Former Drum Storage Areas
- AOC-2 - Former Disposal Trench
- AOC-3 - Eleven Bulk Chemical Underground Storage Tanks
- AOC-4 - One Heating Oil Underground Storage Tank
- AOC-5 - Documented Soil Contamination
- AOC-6 - Documented Groundwater Contamination
- AOC-7 - Floor Drains and Unknown Integrity of Flooring

Based on the PA results, Dewberry recommended that a Site Investigation (SI) be conducted on the property per the requirements of NJAC 7:26E. The SI activities performed at the site are discussed in this SI Report.

## 4.0 TECHNICAL APPROACH

### 4.1 Reliability of Laboratory Analytical Data

Samples collected during the SI were analyzed via USEPA Contract Laboratory Program (CLP) protocols. Samples were submitted to TestAmerica Laboratories, Inc. (TestAmerica) (NJDEP Laboratory ID: 12028) in Edison, New Jersey. Details of Dewberry's sampling and Quality Assurance/Quality Control (QA/QC) procedures were presented in the Quality Assurance Project Plan (QAPP) dated April 2010. TestAmerica's QA/QC procedures are detailed in TestAmerica's Quality Assurance Manual (QAM), included in Appendix A of the QAPP.

As proposed in the April 2010 QAPP, a total of three trip blanks, two field blanks, and two duplicates were collected during the soil sampling activities and two trip blanks, one field blank, and one duplicate were collected during the groundwater sampling event. The QA/QC samples were collected per the NJDEP Field Sampling Procedures Manual (August 2005). With the exception of the field blanks for soil and trip blanks for both soil and groundwater, the QA/QC samples were analyzed for the same parameters as the environmental samples collected during the sampling program, including VOs for soil and VOs, BNAs, pesticides, PCBs, and metals for soil and groundwater. The field blanks for soil were collected and submitted to TestAmerica for VO analysis only. Trip blanks were submitted along with each sample shipment to TestAmerica for VO analysis only. The QA/QC samples are listed in Table 1, Sampling and Analysis Program Summary.

Five sample shipments were submitted to TestAmerica for analysis, each resulting in a separate data package. Each data package was reviewed for completeness, which included a review of preservation and regulatory holding times, instrument performance checks, calibration data, blank result data, surrogate and internal standard result data, matrix, spike/matrix spike duplicate recovery data, target compound identification, reporting and method detection limits, tentatively identified compound identification, and overall evaluation of data. Following a review, the five analytical data packages were determined by TestAmerica to be administratively complete and met the data quality objectives (DQOs) of the project.

Dewberry conducted a third-party data validation of the soil and groundwater analytical results, which confirmed the laboratory's findings. The data validation was performed by Mid-Atlantic Environmental Laboratories, Inc. (Mid-Atlantic) of New Castle, Delaware, under subcontract to Dewberry. The results of the validation indicated that all samples were prepped and analyzed within the required holding times. No issues were identified that would require the data to be rejected. As a result, the data is usable and satisfies the project's DQOs.

An electronic copy of the analytical data reports for each of the five data packages is presented in Appendix A. The third-party data validation reports are provided in Appendix B.

## 4.2 Area of Concern Summary

The following is a discussion of the potential impacts at each identified AOC.

### 4.2.1 AOC-1 (Former Drum Storage Areas)

In addition to the bulk storage USTs in AOC-3, raw materials used in the production processes were also delivered to the facility in 55-gallon drums and smaller containers and stored in various warehouse facilities at the site. Waste chemicals and materials were also stored in steel drums and other waste containers and stored in various warehouse facilities at the site. Seven exterior drum storage areas have previously been identified at the site in addition to a solvent storage canopy, drum storage building, and nitrocellulose storage building.

### 4.2.2 AOC-2 (Former Disposal Trench)

As discussed in further detail in the following section, a disposal trench measuring 3 feet wide, 3 feet deep, and 25 feet long was installed in 1970. Pyrolac disposed of the contents of three 55-gallon drums of cellulose acetate from an off-site source (identified as Ply-Gem Corporation of Queens, New York) in this trench. Upon discovery of these operations, the Hawthorne Fire Chief ordered the cessation of receiving, storing, and dumping of waste materials in the trench. The subject trench was subsequently backfilled.

### 4.2.3 AOC-3 (Eleven Bulk Chemical USTs)

Bulk raw materials used in the production processes were stored in the USTs located in the northern corner of the site. Additional raw materials were also delivered to the facility in 55-gallon drums and smaller containers and stored in various warehouse facilities at the site. Eleven USTs were used to store bulk raw materials as follows:

- One 3,800-gallon Lacquer Thinner UST
- One 4,000-gallon Toluene UST
- One 3,800-gallon Methyl Isobutyl Ketone (MIBK) UST
- One 6,000-gallon VMP Naptha UST
- One 6,000-gallon Xylenes UST
- One 6,000-gallon Recovered Solvent UST
- One 2,000-gallon Isopropyl Alcohol UST
- Two 2,000-gallon Mineral Spirits USTs
- One 2,000-gallon Butyl Alcohol UST
- One 2,000-gallon Butyl Acetate UST

Historical documents indicate that the tanks are at least 30 years old. Although the above listed USTs (totaling 39,600 gallons in combined capacity) are still present at the site, the residual contents within these USTs were removed and disposed off site during the USEPA Removal Action performed in February 1998. Additional raw materials including resins, pigments, and



various additives, as well as finished products were stored in both interior and exterior warehousing facilities at the site.

#### 4.2.4 AOC-4 (One Heating Oil UST)

In addition to the above USTs, the facility formerly utilized a heating oil UST, situated south of the manufacturing building, shown on Figure 1. The fill port and vent pipe were located during the August 11, 2009, site inspection. The length and width of the UST were later determined during a geophysical survey on April 12, 2010 to measure approximately 18 feet by 5 feet respectively, giving the UST an approximate volume of 3,000 gallons. Approximately nine inches of residual water and heating oil were observed in the tank measuring approximately 250 gallons.

#### 4.2.5 AOC-5 (Documented Soil Contamination)

Soil sampling activities have been performed at the site on a few occasions since May 1985. Historical soil sample results were presented in Table 1 of the Preliminary Assessment (PA) Report, dated November 2009. Surface soil contaminant concentrations (0.0 to 0.5 feet below grade) in excess of the NJDEP Soil Remediation Standards (SRS) were previously identified at seven sample locations as shown in Figure 2. The following table summarizes the historical soil sample contaminants and concentrations.

Sample ID	Contaminant	Concentration (mg/kg)	NJDEP SRS (mg/kg)
S01	Benzo(a)pyrene	0.28	0.2
S02	Benzo(a)pyrene	0.24	0.2
S09	Aroclor-1254	0.23	0.2
S11	Aroclor-1254	0.55	0.2
S14	Benzo(a)pyrene	0.54	0.2
	Aroclor-1254	0.84	0.2
S16	Aroclor-1254	0.43	0.2
S19	Benzo(b)fluoranthene	0.61	0.6
	Benzo(a)pyrene	0.6	0.2

#### 4.2.6 AOC-6 (Documented Groundwater Contamination)

Groundwater sampling activities have been performed at the site since May 1995. Eight groundwater monitoring wells have been installed to date, identified as MW-1 through MW-8. Three of the wells (MW-1 through MW-3) have been installed in shallow, perched water bearing zones. The remaining five monitoring wells (MW-4 through MW-8) have been installed in the deeper water-bearing aquifer. The wells have been sampled on five occasions: once in 1988, twice in 1990, and once in 1992 and 1997. The following table summarizes the groundwater sample contaminants and concentrations from the December 1, 1997 well sampling event.

Sample ID	Contaminant	Concentration (ug/l)	NJDEP GWQS (ug/l)
MW-5	Benzene	97	1
MW-6	Toluene	24,281	1,000
	Ethylbenzene	2,109	700
	Xylenes	11,251	1,000
	1,1,1-Trichloroethane	499	30
MW-7	Ethylbenzene	920	700
	Xylenes	3,100	1,000

#### 4.2.7 AOC-7 (Floor Drains and Unknown Integrity of Flooring)

The building interior was identified as a new AOC during the site reconnaissance. The concrete flooring in the building could not be assessed for structural integrity or evidence of contamination due to debris piles and pooled water throughout the building. Historical reports identified numerous sealed floor drains within the facility, but did not identify any SI activities associated with the floor drains. Three sealed floor drains were identified within the northern portion of the building, one in the solvent room and two in the production room. No information was available during the PA activities performed regarding where the floor drains discharge or when or why the drains were sealed.

## **5.0 SITE INVESTIGATION ACTIVITIES**

From April 12 through 15, 2010, field investigation activities were conducted by Dewberry and Enviroprobe Service, Inc. (Enviroprobe) of Moorestown, New Jersey. Enviroprobe is a New Jersey-licensed driller. Prior to performing intrusive, subsurface investigation activities, Enviroprobe performed a geophysical survey in AOC-3 and AOC-4 to identify the locations of the previously reported USTs in these areas and potential underground utilities at the boring locations.

The geophysical survey was conducted using a cart-mounted ground penetrating radar (GPR) unit, a Fisher TW-6 metallic locator, and a Radio Detection (RD) unit. The RD unit was used to trace common utilities from sources in and around the survey area. When possible, the locations of utilities were confirmed with the GPR. A GPR survey was also performed in a grid pattern in at least two orthogonal directions to search for underground utilities. Designated utilities were marked with spray paint using the following colors; red - electric, green - storm drain, blue - water, and pink - vent lines. The GPR and TW-6 were used in a grid pattern in AOC-3 and AOC-4. Based on the results of the GPR and TW-6 surveys, several anomalies consistent with USTs were identified. The locations of these anomalies were shown on the utility print and their boundaries were marked with pink and orange paint. An area of approximately 15 feet by 15 feet surrounding each proposed boring locations was also investigated with the GPR. The corners of the investigated areas were marked with white paint. A copy of the Geophysical Survey Report prepared by Enviroprobe is included in Appendix C.

Following completion of the geophysical activities, Enviroprobe utilized a truck-mounted direct-push (Geoprobe) unit to advance 22 soil borings across the site (identified as GP-1 through GP-22). The boring locations are shown on Figure 4. With the exception of two borings along the piping of the heating oil UST (GP-14 and GP-15) advanced to a depth of 4 feet below grade, the borings were installed to depths of 8 to 12 feet below grade.

A Dewberry representative provided field oversight, soil screening, and sampling services. Soil samples were obtained from each boring by Enviroprobe and soil was logged by Dewberry. Soil samples were collected in 2-inch diameter by 48-inch long dedicated acetate liners. Soil was described using the Burmister Soil Classification System. Soil boring logs are presented in Appendix D.

Where applicable, soil sample collection for laboratory analysis was biased toward physical evidence of contamination (e.g., odors, staining, etc.). Once the samples were extracted from the borings, Dewberry visually screened the soil and scanned it with a photoionization detector (PID) to assess the potential presence of total volatile organics. The field observations and PID readings were recorded in a project-dedicated field book. Soil samples labeled as “A” were collected from the 0 to 0.5-foot depth interval. Soil samples labeled as “B” were collected from either the 0.5-foot interval exhibiting the most evidence of contamination based on field observations or PID readings or the 0.5-foot interval immediately above the groundwater table. In total, 36 soil samples were collected from 22 borings, including two duplicate soil samples.

In addition, groundwater samples were collected from the eight existing monitoring wells MW-1 through MW-8 to assess groundwater quality at the site. The soil and groundwater sampling activities, and necessary sampling equipment decontamination, was conducted in accordance with the NJDEP Field Sampling Procedures Manual (August 2005).

The soil and groundwater samples were collected in the appropriate laboratory-supplied containers and shipped in a cooler maintained at four degrees Celsius. The samples were transported, via courier, to TestAmerica under chain-of-custody protocol. The soil samples, collected in AOC-1 through AOC-5 and AOC-7, and the groundwater samples, collected in AOC-6, were analyzed for Target Compound List/Target Analyte List compounds plus 30 additional, non-targeted peaks (TCL/TAL+30). TCL/TAL+30 includes TCL volatile organic compounds plus 10 additional, non-targeted peaks (VO+10), TCL base neutral and acid extractable organic compounds plus 20 additional, non-targeted peaks (BNA+20), TCL pesticides and polychlorinated biphenyls (PCBs), and Target Analyte List (TAL) metals. The soil samples, collected in AOC-4, were analyzed for total petroleum hydrocarbons/diesel-range organics (TPH/DRO) with contingent analyses for 2-methylnaphthalene and naphthalene in accordance with the analytical requirements of NJAC 7:26E-2.1(d)3.

Soil analytical results were compared with the NJDEP Soil Remediation Standards (SRS), specifically, the NJDEP Residential Direct Contact SRS and Non-Residential Direct SRS. The groundwater analytical results were compared with the NJDEP Ground Water Quality Standards (GWQS) for Class II-A groundwater.

The Sampling and Analysis Program Summary is presented as Table 1.

## 5.1 AOC-1 (Former Drum Storage Areas)

Five locations where former drum storage areas existed at the site were investigated on April 13 and 14, 2010. Borings GP-1 and GP-2 were located adjacent to the fence on the northern side of the property. Boring GP-3 was located to the east of the solvent storage canopy. Boring GP-4 was located at former drum storage area located south of the solvent storage canopy, and boring GP-5 was located at the former drum storage area east of the fire room in the manufacturing building. The borings were advanced to depths of 8 to 12 feet below grade. Figure 4 shows the locations of these borings.

### 5.1.1 Sampling Activities

At boring locations GP-1 and GP-2, soil samples for laboratory analysis were collected from 0.0 to 0.5 feet below grade and 4.0 to 4.5 feet below grade, the 0.5-foot depth interval directly above the groundwater table. At boring location GP-3, soil samples were collected from 0.0 to 0.5 feet below grade and 10.5 to 11.0 feet below grade, the 0.5-foot interval above the groundwater table. At boring location GP-4, soil samples were collected from 0.0 to 0.5 feet below grade and 5.5 to 6.0 feet below grade, directly over a silt layer. At boring GP-5, soil samples were collected from 0.0 to 0.5 feet below grade and 5.0 to 5.5 feet below grade, directly over a silt layer.

Full TCL/TAL+30 analyses were performed on the soil samples collected in AOC-1.

### 5.1.2 Field Observations

Soils at boring locations GP-1 and GP-2 consisted of light brown fine sand with some silt to approximately nine to eleven feet below grade, and brown silt to a depth of 12 feet below grade. At these two boring locations, the groundwater table was encountered at 4.5 feet below grade. Soils at boring GP-3 consisted of brown fine sand with some to little silt to 11 feet below grade, followed by gray clayey silt to 12 feet below grade. Soils at boring locations GP-4 and GP-5 consisted of brown fine sand with little silt to 5.5 feet below grade, followed by brown to dark gray silt with increasing clay to 12 feet below grade. Depth to groundwater at these borings was approximately 6 feet below grade. The soil samples were visually screened and scanned with the PID. Results of the screening indicated no visual evidence of contamination, and PID readings were 0 parts per million (ppm).

### 5.1.3 Analytical Results

PCBs were detected at a concentration of 2.1 mg/kg in sample GP-5A (collected from 0.0 to 0.5 feet below), in excess of the NJDEP Residential Direct Contact SRS of 0.2 mg/kg and NJDEP Non-Residential Direct Contact SRS of 1.0 mg/kg (Figure 4).

No other targeted compounds were detected in excess of NJDEP SRS at this location.

## 5.2 AOC-2 (Former Disposal Trench)

A soil investigation was performed at the former disposal trench location at the site on April 14, 2010. The area of the former disposal trench is situated approximately 25 feet north of the concrete storage shed (Figure 4). One boring, GP-6, was advanced to 12 feet below grade.

### 5.2.1 Sampling Activities

At boring location GP-6, soil samples were collected from 0.0 to 0.5 feet below grade and 5.5 to 6.0 feet below grade, the 0.5-foot depth interval directly above the groundwater table.

Full TCL/TAL+30 analyses were performed on the soil samples collected in AOC-2.

### 5.2.2 Field Observations

Soils at boring GP-6 consisted of black medium to fine sand from the surface to half a foot below grade, and brown fine sand with little silt to 5.5 feet below grade, followed by brown to dark gray silt with some to little fine sand and clay to 12 feet below grade. Soils encountered below 6 feet were saturated. The soil samples were visually screened and scanned with the PID. Results of the screening indicated no visual evidence of contamination, and PID readings were 0 ppm.

### 5.2.3 Analytical Results

No targeted compounds were detected in excess of NJDEP SRS at this location.

## 5.3 AOC-3 (Eleven Bulk Chemical USTs)

A soil investigation was performed at the location of the 11 bulk chemical USTs on April 13 and 14, 2010. The geophysical survey performed in this area identified one contiguous subsurface anomaly in the northwestern portion of the site. As the USTs situated in this area were installed closely parallel to one another, the locations of these USTs were consistent with the location of the subsurface anomaly. A total of three borings, GP-7, GP-8, and GP-9, were installed directly south of the USTs (Figure 4). The borings were located based on the results of the geophysical survey performed in this area. The UST locations were marked with spray paint. The boring locations were screened for the presence of subsurface utilities. Aside from the UST system piping, no other lines were identified. The borings were advanced to depths of 12 feet below grade.

### 5.3.1 Sampling Activities

Soil samples were collected from 0.0 to 0.5 feet below grade and 11.5 to 12 feet below grade in borings GP-8 and GP-9, where the physical evidence of contamination was observed. At boring location GP-7, soil samples were collected from 0.0 to 0.5 feet below grade and 10.5 to 11 feet below grade above a silty clay layer.

Full TCL/TAL+30 analyses were performed on the soil samples collected in AOC-3.

### 5.3.2 Field Observations

Soils at boring locations GP-7, GP-8, and GP-9 consisted of brown fine sand with some silt to approximately 10.5 feet below grade, and brown to gray silt to 11 feet below grade. Gray silt with some clay exists from 11 to 12 feet below grade. Depth to groundwater at these borings ranged from 7 feet below grade (GP-7) to 8 feet below grade (GP-8 and GP-9). The soil samples were visually screened and scanned with the PID. Visual and olfactory evidence of contamination was detected at 11 to 12 feet below grade in borings GP-8 and GP-9 (i.e., soil staining and solvent-like odor). A PID reading of 1,476 ppm was recorded at the 11 to 12-foot depth interval in boring GP-8. Although visual and olfactory evidence of contamination (staining and odors) was similarly documented at the 11 to 12-foot interval in boring GP-9, the PID reading was 0 ppm.

### 5.3.3 Analytical Results

PCBs were detected at a concentration of 0.23 mg/kg in sample GP-9A (collected from 0.0 to 0.5 feet below grade), which was above the NJDEP Residential Direct Contact SRS of 0.2 mg/kg (Figure 4).

No other targeted compounds were detected in excess of NJDEP SRS at this location.

#### **5.4 AOC-4 (One Heating Oil UST)**

A soil investigation was performed at the heating oil UST located south of the manufacturing building at the site on April 13, 2010. The location of this UST was confirmed during the geophysical survey. One boring was installed on each side of the UST (GP-10 to GP-13) and two borings were installed along the remote fill piping (GP-14 and GP-15) (Figure 4). The locations of the UST and associated piping were marked with spray paint. The boring locations were further screened for any additional subsurface utilities that may exist at these locations. No utilities were identified. The UST borings were advanced to depths of 8 to 12 feet below grade, while the UST piping borings were advanced to depths of 4 feet below grade.

##### **5.4.1 Sampling Activities**

At the UST piping boring locations, GP-14 and GP-15, one soil sample was collected from each boring at 3.0 to 3.5 feet below grade, 0.5 feet below the expected bottom of piping trench. In the boring locations around the UST, GP-10 to GP-13, one soil sample was collected from each boring at 7.5 to 8.0 feet below grade, 0.5 feet above the groundwater table and an underlying silt layer.

##### **5.4.2 Field Observations**

Soils from the boring locations at the UST consisted of brown fine sand with some silt and traces of clay and subangular to subrounded gravel to approximately 8 feet below grade, followed by brown silt to 12 feet below grade. Depth to groundwater was 8 feet below grade in borings GP-10, GP-11, GP-12, and GP-13. No groundwater was encountered in borings GP-14 and GP-15. The soil samples were visually screened and scanned with the PID. Results of the screening indicated no visual or olfactory evidence of contamination, and PID readings were 0 ppm.

##### **5.4.3 Analytical Results**

TPH/DRO was not detected in any of the soil samples in excess of the Total Organic Compound (TOC) Standard of 5,100 mg/kg. In addition, TPH/DRO was not detected above the 1,000 mg/kg action level, triggering additional contingent analyses for 2-methylnaphthalene and naphthalene (per NJAC 7:26E, Subchapter 2). As such, no contingent analyses were performed on the samples.

#### **5.5 AOC-5 (Documented Soil Contamination)**

A soil investigation was performed in areas of documented soil contamination at the site on April 15, 2010. Four soil borings, designated as GP-16, GP-17, GP-18, and GP-19, were located across the site (Figure 4). Boring GP-16 was situated adjacent to the southwest corner of the stock production room, which is part of the manufacturing building at the site. Boring GP-17 was located just east of the Schoon Avenue entrance to the site. Boring GP-18 was located north of the southern property corner and adjacent to the site boundary, and boring GP-19 was located

to the east of the concrete storage shed and adjacent to the eastern boundary of the site. The borings were advanced to depths of 12 feet below grade.

#### 5.5.1 Sampling Activities

One soil sample was collected from 0.0 to 0.5 feet below grade from each boring, upon visually screening and scanning the potential fill material with the PID.

Full TCL/TAL+30 analyses were performed on the soil samples collected in AOC-5.

#### 5.5.2 Field Observations

Soils at borings locations GP-16, GP-17, GP-18, and GP-19 consisted of brown fine sand with some silt and traces of clay and subangular to subrounded gravel to approximately 8 to 11 feet below grade, followed by brown to dark gray silt and some to little clay to 12 feet below grade. Depth to groundwater at these borings ranged from 5 feet below grade (GP-19) to 10 feet below grade (GP-17). The soil samples were visually screened and scanned with the PID. Results of the screening indicated no visual or olfactory evidence of contamination, and PID readings were 0 ppm.

#### 5.5.3 Analytical Results

Lead was detected at a concentration of 524 mg/kg in sample GP-9A (collected from 0.0 to 0.5 feet below grade), above the NJDEP Residential Direct Contact SRS of 400 mg/kg (Figure 4).

No other targeted compounds were detected in excess of NJDEP SRS in this area.

### 5.6 AOC-6 (Documented Groundwater Contamination)

Between April 29 and 30, 2010, eight existing groundwater monitoring wells were sampled at the site. The last time the wells were sampled was in December 1997. Two weeks prior to groundwater sampling (i.e., April 15 and 16, 2010), the monitoring wells were rehabilitated via surge block and development. The purpose of the rehabilitation was to remove sediment from inside the well and within the sand pack surrounding the screen casing, as well as determine the condition and yield of the wells. Two weeks following the rehabilitation activities, the monitoring wells were sampled by Dewberry.

On April 29, 2010, prior to sampling the wells, Dewberry collected static groundwater elevation measurements. Groundwater elevations were contoured, showing a south-southeasterly flow direction across the site, towards the Passaic River. The groundwater flow direction is consistent with that historically reported at the site. The Groundwater Elevation Contour Map, prepared from the April 29, 2010 hydraulic gauging data, is presented in Figure 3. The NJDEP Groundwater Elevation Contour Map Reporting Form is included as Appendix E.



### 5.6.1 Sampling Activities

The groundwater sampling activities, and necessary sampling equipment decontamination, was conducted in accordance with the NJDEP Field Sampling Procedures Manual (August 2005). Prior to the purging and sampling of groundwater, a headspace reading was taken upon opening up the well heads using a PID. A water level measurement was also taken from each well using an interface probe. Groundwater samples were collected via the low-flow method using a bladder pump equipped with Teflon™ bladders and Teflon™ tubing. Groundwater Sampling Data Sheets are present in Appendix F.

Full TCL/TAL+30 analyses were performed on the groundwater samples collected in AOC-6.

### 5.6.2 Field Observations

During the well rehabilitation activities, seven of the eight monitoring wells were found to contain a 3-inch diameter by 36-inch long bailer at the bottom of the wells. Well MW-5 was the only well that did not contain a bailer. The purge water from the majority of the wells contained sediment and cleared up after 30 to 60 minutes of development. Discharge water from most of the wells (MW-1, MW-2, MW-3, MW-6, MW-7, and MW-8) cleared up during the development activities. Monitoring wells MW-4 and MW-8 purged slightly turbid to turbid water before these wells were completely evacuated. Wells MW-4 and MW-8 were allowed to recharge and were evacuated again. The purged water from wells MW-4 and MW-8 remained slightly turbid and did not totally clear up. Dewberry was unable to remove the bailer located in monitoring well MW-1. However, well MW-1 was purged to the level of the top of the bailer and low-flow groundwater sampling activities were performed at this location.

During groundwater sampling activities, the headspace of each monitoring well was scanned with a PID. The PID readings from most of the wells were 0 ppm, with the exception of well MW-6 which had a reading of 1.7 ppm. The wells were purged and sampled using a positive-displacement bladder pump and low-flow techniques, per Section 6.9.2.2 of the NJDEP Field Sampling Procedures Manual (August 2005).

### 5.6.3 Analytical Results

Arsenic was detected in groundwater sample MW-5 (5.0 ug/l) and in sample MW-8 (3.6 ug/l) in excess of the NJDEP Class II-A GWQS of 3 ug/l. Iron was detected in sample MW-2 (1,470 ug/l), sample MW-3 (466 ug/l), sample MW-4 (771 ug/l), sample MW-5 (8,690 ug/l), and sample MW-8 (18,100 ug/l) above the NJDEP GWQS of 300 ug/l. Manganese was detected in sample MW-3 (395 ug/l), sample MW-5 (2,550 ug/l), and sample MW-8 (2,470 ug/l) above the NJDEP GWQS of 50 ug/l. Sodium was detected in sample MW-5 (70,300 ug/l) and sample MW-7 (64,500 ug/l) above the NJDEP GWQS of 50,000 ug/l. Figure 5 shows the groundwater sample analytical results that exceeded the NJDEP Class II-A GWQS.

No other targeted compounds were detected in the groundwater samples exceeding the NJDEP Class II-A GWQS.

## 5.7 AOC-7 (Floor Drains and Unknown Integrity of Flooring)

A soil investigation was performed at floor drain locations inside the production and solvent rooms in the manufacturing building at the site on April 14, 2010. Three soil borings, GP-20, GP-21, and GP-22, were located adjacent to previously sealed floor drains. Borings GP-20 and GP-21 were located in the production room, and boring GP-22 was located in the solvent room. Both rooms are situated in the northern portion of the manufacturing building. The borings were advanced to depths of 12 feet below grade.

### 5.7.1 Sampling Activities

Prior to installing the borings, cores were drilled through the concrete building slab at the three boring locations using a concrete coring machine. The soil borings were then advanced through the core holes. Soil samples were collected from 0.0 to 0.5 feet below grade in all three soil borings. Soil samples were collected from the 11.5 to 12-foot depth interval at borings GP-21 and GP-22. At boring GP-20, a soil sample was collected from the 10 to 10.5-foot interval due to the presence of black colored (possibly stained) soil observed at the 10 to 10.2-foot interval.

Full TCL/TAL+30 analyses were performed on the soil samples collected in AOC-7.

### 5.7.2 Field Observations

Soils from the interior borings below the concrete surface consisted of tan to brown fine sand with little silt and traces of subangular to subrounded gravel to approximately 10 to 11 feet below grade, followed by brown to dark gray silt and some to little fine sand and clay to 12 feet below grade. Depth to groundwater at these borings ranged from 6.5 feet below grade (GP-20) to 7 feet below grade (GP-21 and GP-22). The soil samples were visually screened and scanned with the PID. No visual and olfactory evidence of contamination were detected in soils from borings GP-21 and GP-22. A black colored (possibly stained) lens of soil at the 10 to 10.2-foot interval was observed in boring GP-20, but no odor was noted and the PID reading was 0 ppm.

### 5.7.3 Analytical Results

No targeted compounds were detected in excess of NJDEP SRS at this location.

## 6.0 BASELINE ECOLOGICAL EVALUATION

A baseline ecological evaluation (BEE) was performed to assess the seven AOCs identified at the site with potential to impact sensitive receptors. The BEE was prepared in accordance with NJAC 7:26E-3.11, as a qualitative screening tool to determine the need for additional ecological investigation. The locations of the AOCs are shown on Figure 4.

### 6.1 Objective

The objective of this BEE is to evaluate whether or not constituents detected at the site have the potential to adversely impact environmentally sensitive natural resources present in the area of the identified AOCs. The evaluation consists of a review of the following:

1. Determine whether Contaminants of Potential Ecological Concern (COPECs) are present on site. COPECs are defined by the NJDEP as being compounds which biomagnify, bioaccumulate, or exceed available ecologically based criteria or guidelines referenced by the NJDEP, specifically NJAC 7:26E-3.11(a)1;
2. Determine whether potential ecological receptors (sensitive areas or resources) are present on site or on adjacent properties; and
3. Determine whether any completed exposure pathways are present between the existing on-site contamination and any identified sensitive areas/resources on site or on adjacent properties.

### 6.2 Contaminants of Potential Ecological Concern

The COPECs at the site consist of lead and polychlorinated biphenyls (PCBs) in the surface soil. Both lead and PCBs bioaccumulate in the environment and do not biodegrade naturally in the environment. These COPECs are located in discrete areas of the site as shown on Figure 4. The site has been vacant since April 1995.

### 6.3 Environmentally Sensitive Natural Resources

The site and adjacent properties were examined to determine the presence of environmentally sensitive natural resources. As defined in NJAC 7:26E-3.11(a) and in NJAC 7:26E-1.8, environmentally sensitive natural resources include groundwater, areas that are protected or managed pursuant to the Pinelands Protection Act N.J.S.A. 13:18A-1 et seq. and the Pinelands Comprehensive Management Plan, and environmentally sensitive areas identified in NJAC 7:1E-1.8(a). The environmentally sensitive areas identified in NJAC 7:1E-1.8(a) specifically include:

- Surface waters;
- Sources of water supply;
- Bay islands and barrier island corridors;
- Beaches;
- Dunes;

- Wetlands and wetlands transition areas;
- Breeding areas;
- Wintering areas;
- Prime fishing areas;
- Finfish migratory pathways;
- Water areas supporting submerged vegetation;
- Shellfish harvesting waters;
- Forested areas;
- Habitat for Federal and State endangered or threatened plant and animal species;
- Federal and State wilderness areas; and
- Areas designated as wild, scenic, recreational, or developed recreational rivers.

As indicated on Figures 1 and 2, land use in the vicinity of the site is primarily industrial and residential. The site consists of a former industrial manufacturing facility, asphalt-paved driveway, and densely wooded areas. Environmentally sensitive areas were not observed at the site with the exception of the groundwater-bearing unit beneath the site. The only other sensitive natural resource encountered was the Passaic River, located approximately one-quarter mile south-southeast (downgradient) of the site.

#### **6.4 Contaminant Migration Pathways**

The shallow groundwater aquifer unit beneath the site is not used for potable purposes nor hydraulically connected to other aquifer systems. Current groundwater impacts have not been identified at the site. As groundwater beneath the site has not been affected, impact to additional environmentally sensitive natural resources/receptors from on-site contaminants, such as the Passaic River, is not possible. No contaminant migration pathways from the site to sensitive natural resources have been identified.

#### **6.5 Conclusions and Recommendations**

Environmentally sensitive natural resources exist both on and near the site in the form of groundwater and the Passaic River, located approximately one-quarter mile from the site. Because groundwater contamination beneath the site does not exist, there is no transport mechanism for the soil impacts to reach the Passaic River.

In compliance with NJAC 7:26E-3.11(a)4, an ecological evaluation will be conducted if the co-occurrence of contaminants of concern, environmentally sensitive natural resources, and potential contaminant migration pathways to environmentally sensitive natural resources exist. At this time, however, these conditions are not believed to exist and no further ecological evaluation is proposed.

## 7.0 FINDINGS AND RECOMMENDATIONS

### 7.1 Soil

Of the six AOCs investigated for soil, only three contaminant concentrations were identified in excess of NJDEP SRS as follows:

- AOC-1 - PCBs were detected in the surface soil sample collected from boring GP-5 at a concentration of 2.1 mg/kg, which is above both the NJDEP Residential Direct Contact SRS of 0.2 mg/kg and NJDEP Non-Residential Direct Contact SRS of 1.0 mg/kg.
- AOC-3 - PCBs were detected in the surface soil sample collected from boring GP-9 at a concentration of 0.23 mg/kg, which exceeds the NJDEP Residential Direct Contact SRS of 0.2 mg/kg.
- AOC-5 - Lead was detected in the surface soil sample collected from boring GP-18 at a concentration of 524 mg/kg, which is above the NJDEP Residential Direct Contact SRS of 400 mg/kg.

Based on the above results, Dewberry recommends that a remedial investigation be performed to delineate the horizontal and vertical extent of the soil contamination at sample locations GP-5 (AOC-1), GP-9 (AOC-3), and GP-18 (AOC-5). Upon delineation, the impacted soils can be removed as “hot spots” or remain in place through the utilization of engineering controls, such as capping, and institutional controls, specifically, a Deed Notice.

The soil samples collected from borings advanced in AOC-2, AOC-4, and AOC-7 did not contain concentrations above NJDEP standards. Therefore, Dewberry recommends no further investigation in these areas.

In addition, Dewberry recommends closure (removal) of the 11 bulk chemical USTs in AOC-3 and heating oil UST in AOC-4 per the requirements of NJAC 7:14B and NJAC 7:26E.

### 7.2 Groundwater

In AOC-6, no VOs, BNAs, pesticides, or PCBs were detected in the groundwater samples at levels above the NJDEP Class II-A GWQS. Four metals (arsenic, iron, manganese, and sodium) were detected at concentrations above the NJDEP GWQS in the groundwater samples collected from various site monitoring wells.

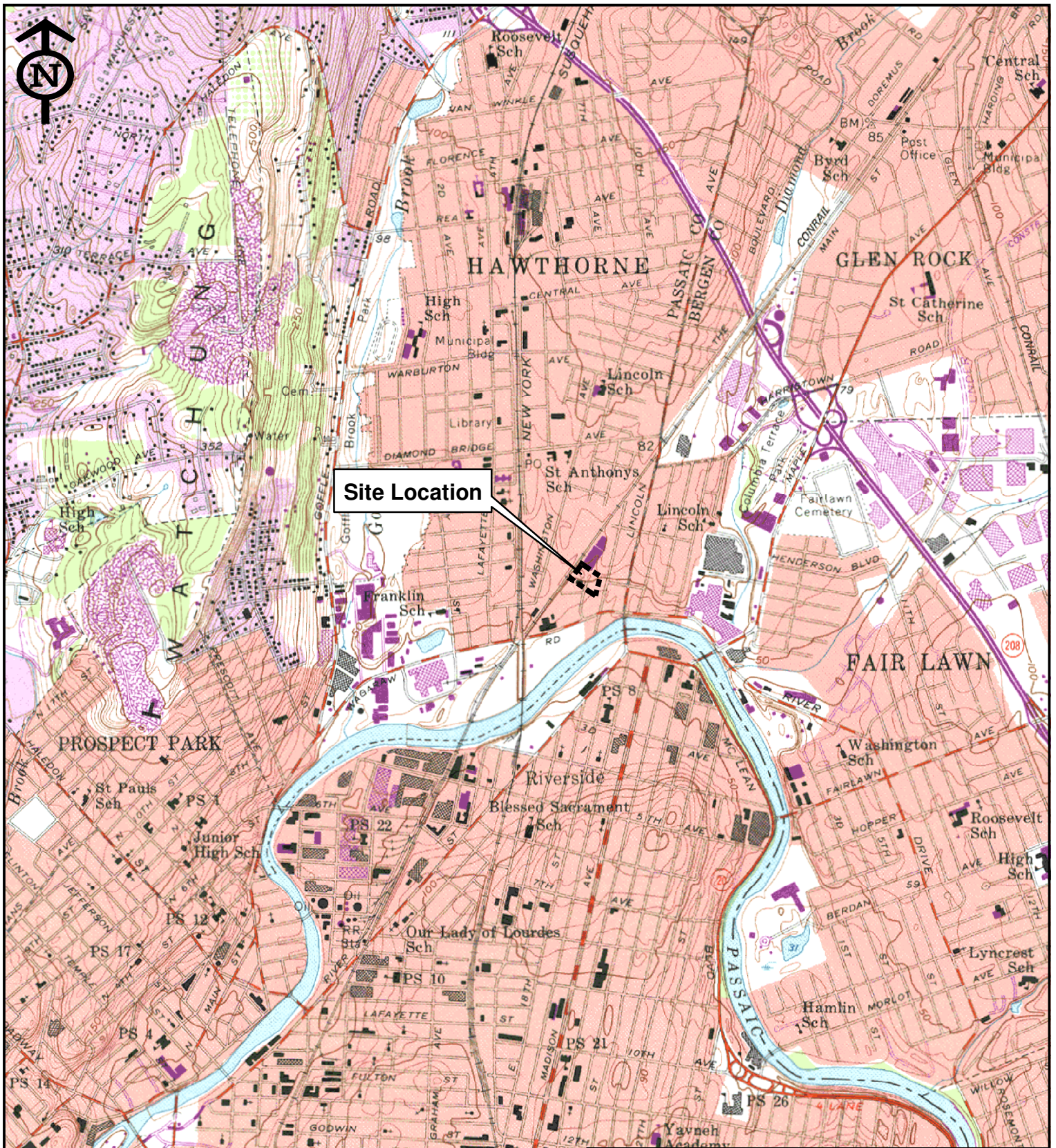
The elevated concentrations of metals detected in the groundwater samples are likely associated with metals adsorbed onto suspended soil particles within the samples and, therefore, not due to the quality of the groundwater itself. Although the wells were rehabilitated through the use of surge-block and development techniques (as well as sampled via the low-flow purging and sampling methodology), the age and condition of the wells, last sampled in December 1997, appears to have contributed to slightly turbid samples. Therefore, Dewberry recommends that a confirmation round of groundwater well sampling be conducted at the site.

### **7.3 Redevelopment Potential**

The information presented in the SI Report can be utilized for decision-making purposes by prospective developers who may be interested in purchasing and redeveloping the site. In doing so, interested parties should be aware of the following:

The surface soil contamination identified in AOC-1, AOC-3, and AOC-5 is likely localized around the boring locations and can be readily removed as soil “hot spots” or remain in place through the use of engineering and/or institutional controls. The existing USTs in AOC-3 and AOC-4, although mostly empty and initially assessed, are required to be closed in accordance with NJAC 7:14B and NJAC 7:26E. As part of these UST closure activities, a tank-specific site assessment (including post-excavation soil sampling) must be performed in each area to further evaluate soil and groundwater at these locations. Finally, the existing groundwater monitoring wells at the site should be sampled to confirm the groundwater analytical results provided in this report. If groundwater conditions are confirmed, these wells can likely be sealed and abandoned and the groundwater issues are over.

## **FIGURES**



**PASSAIC COUNTY DEPARTMENT OF  
ECONOMIC DEVELOPMENT**

**SITE LOCATION MAP**

**Former Pyrolac Corporation Facility  
55 Schoon Avenue (Block 17, Lot 11)  
Hawthorne, Passaic County, New Jersey**

**SCALE: As Indicated**

**DATE: September 2010**



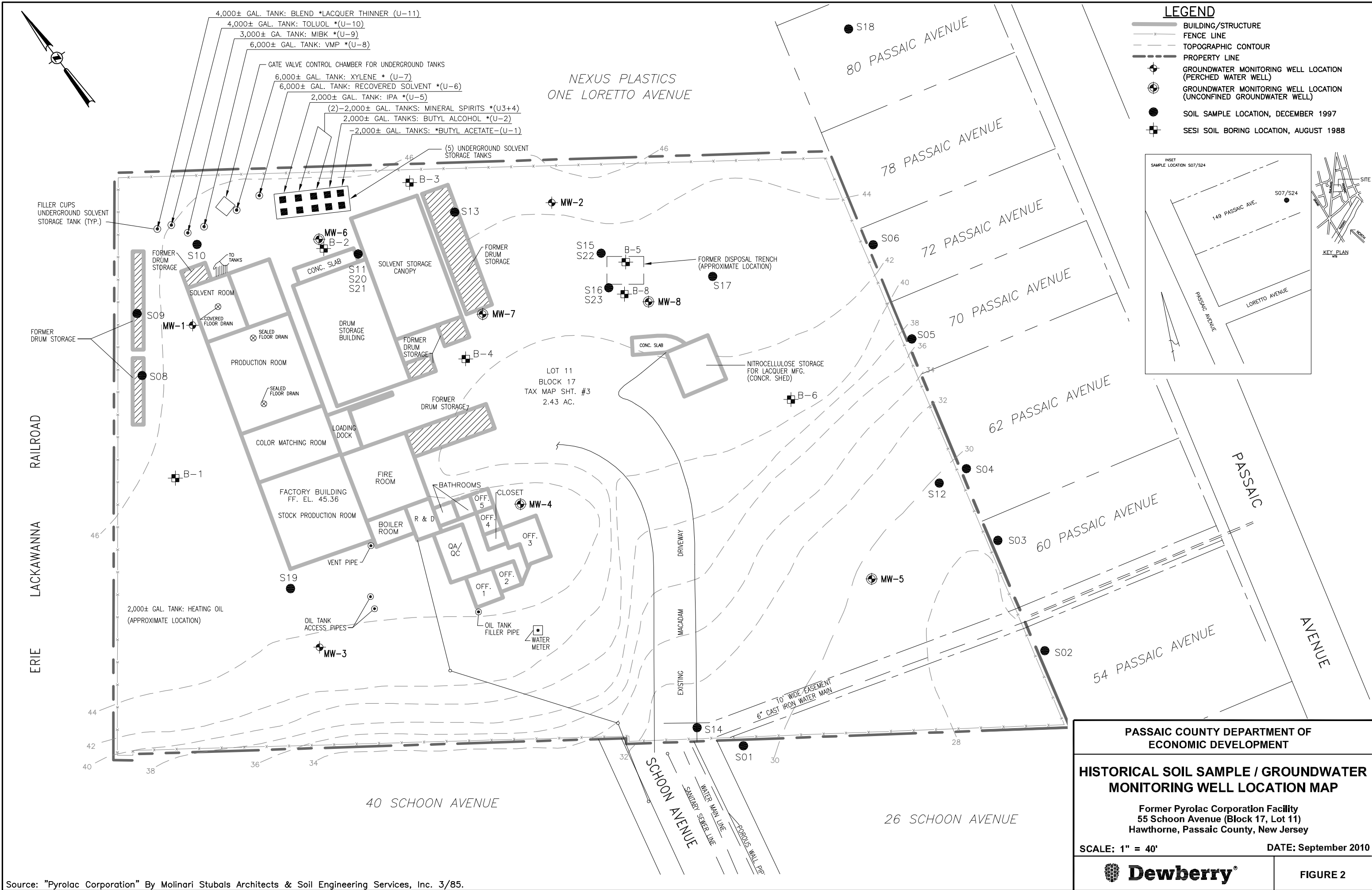
**FIGURE 1**

Source: U.S.G.S. 7.5 Minute Topographic Quadrangle  
Paterson, N.J. Dated 1955, Photorevised 1981

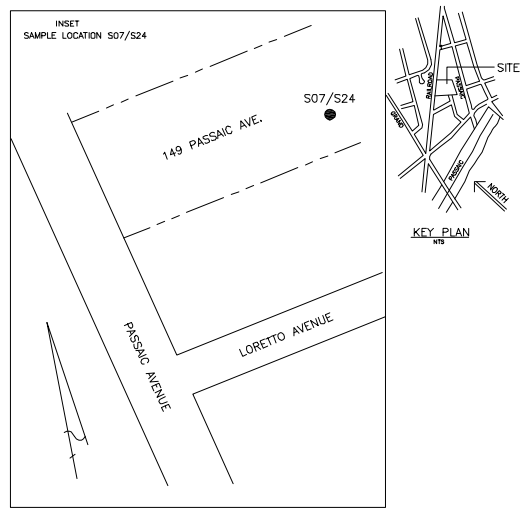
Q:\50015464\50015465 - Schoon Ave SHGIS\mxd\Site Location Map.mxd



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- LEGEND**
- BUILDING/STRUCTURE
  - - - FENCE LINE
  - - - TOPOGRAPHIC CONTOUR
  - - - PROPERTY LINE
  - ⊕ GROUNDWATER MONITORING WELL LOCATION (PERCHED WATER WELL)
  - ⊙ GROUNDWATER MONITORING WELL LOCATION (UNCONFINED GROUNDWATER WELL)
  - SOIL SAMPLE LOCATION, DECEMBER 1997
  - ⊕ SESI SOIL BORING LOCATION, AUGUST 1988



**PASSAIC COUNTY DEPARTMENT OF ECONOMIC DEVELOPMENT**

**HISTORICAL SOIL SAMPLE / GROUNDWATER MONITORING WELL LOCATION MAP**

Former Pyrolac Corporation Facility  
55 Schoon Avenue (Block 17, Lot 11)  
Hawthorne, Passaic County, New Jersey

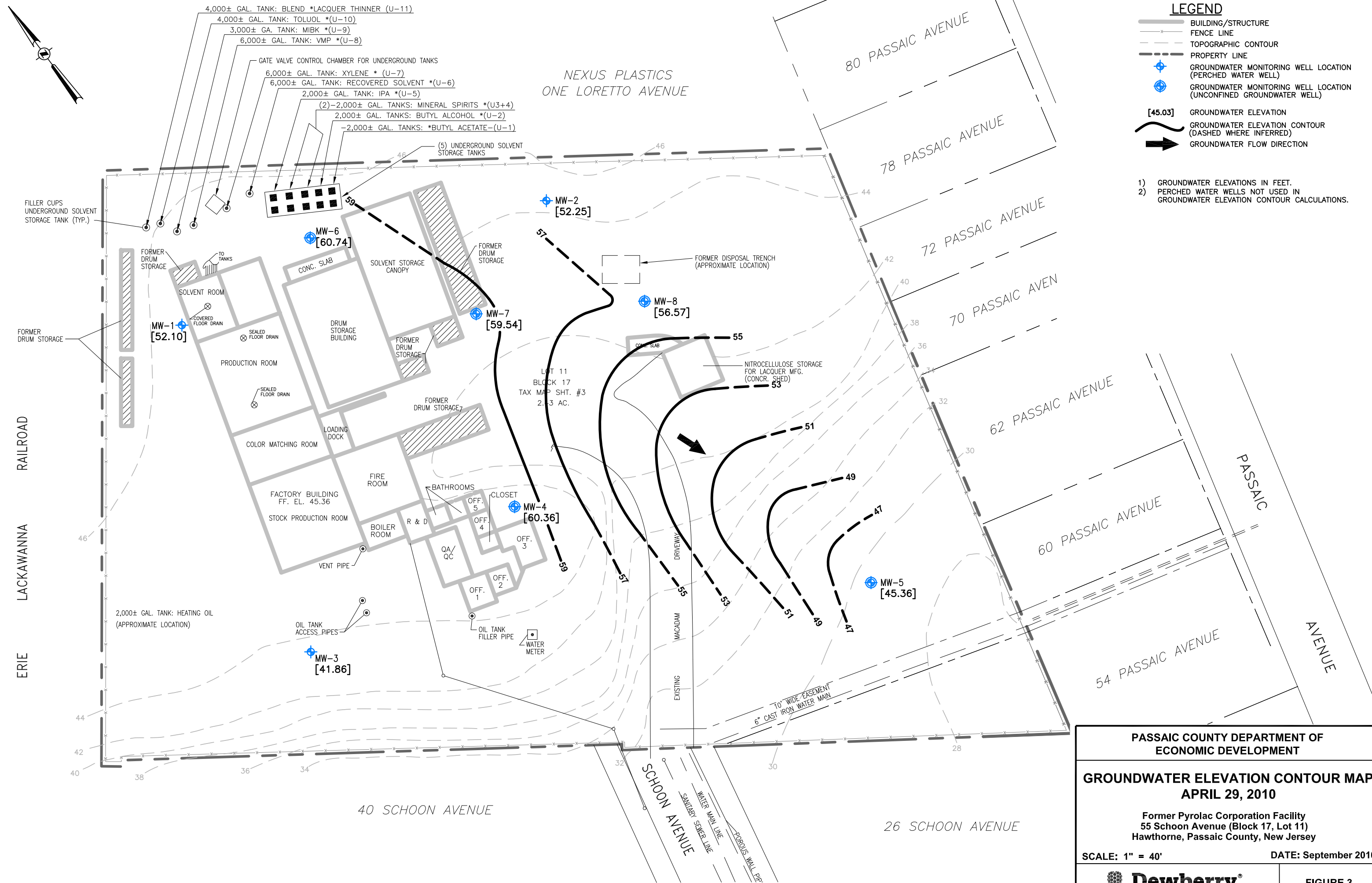
SCALE: 1" = 40'      DATE: September 2010

**Dewberry**

FIGURE 2

Source: "Pyrolac Corporation" By Molinari Stubals Architects & Soil Engineering Services, Inc. 3/85.

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**LEGEND**

- BUILDING/STRUCTURE
- FENCE LINE
- TOPOGRAPHIC CONTOUR
- PROPERTY LINE
- GROUNDWATER MONITORING WELL LOCATION (PERCHED WATER WELL)
- GROUNDWATER MONITORING WELL LOCATION (UNCONFINED GROUNDWATER WELL)
- [45.03] GROUNDWATER ELEVATION
- GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION

- 1) GROUNDWATER ELEVATIONS IN FEET.
- 2) PERCHED WATER WELLS NOT USED IN GROUNDWATER ELEVATION CONTOUR CALCULATIONS.

**PASSAIC COUNTY DEPARTMENT OF ECONOMIC DEVELOPMENT**

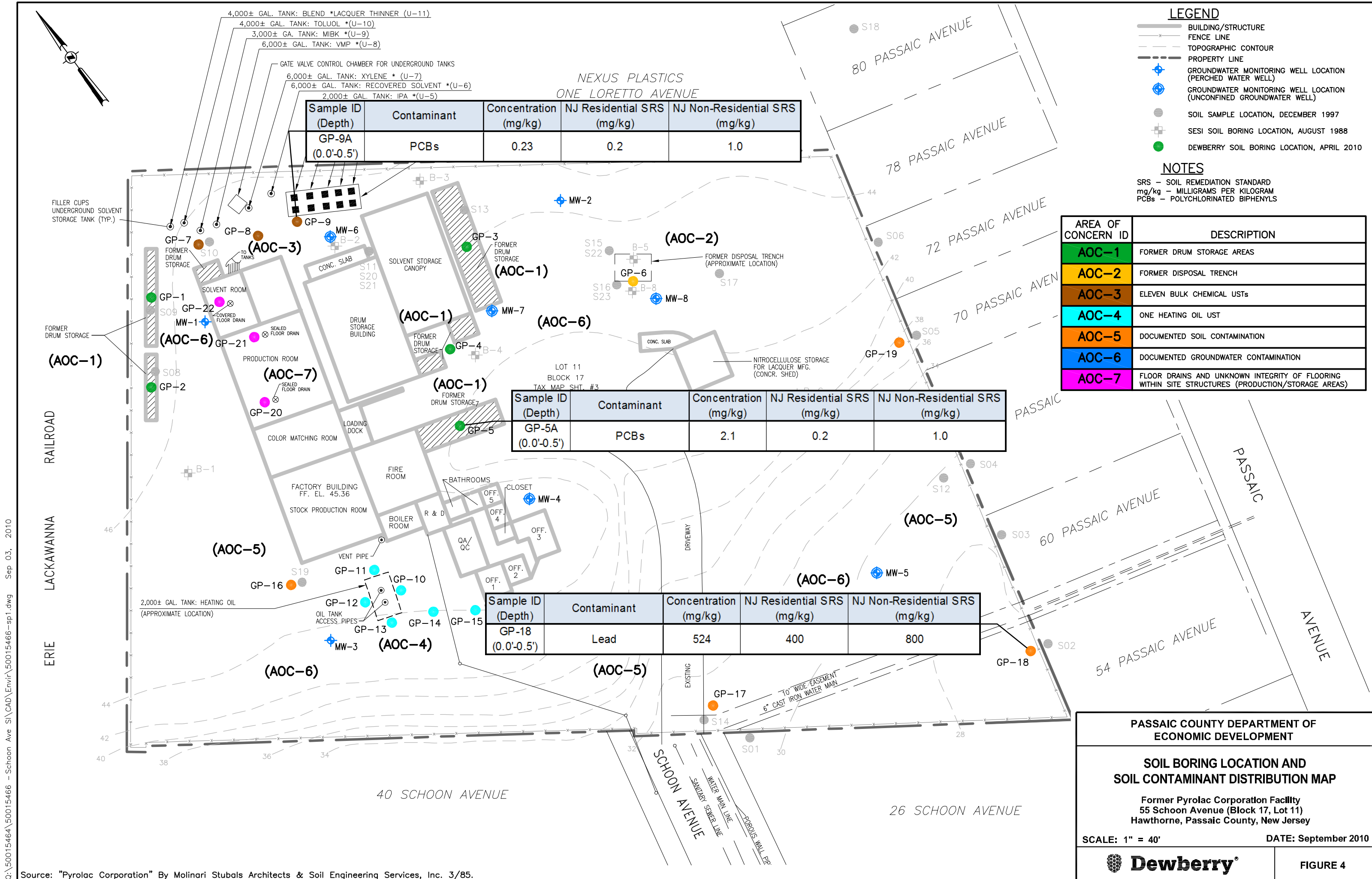
**GROUNDWATER ELEVATION CONTOUR MAP**  
**APRIL 29, 2010**

Former Pyrolac Corporation Facility  
 55 Schoon Avenue (Block 17, Lot 11)  
 Hawthorne, Passaic County, New Jersey

SCALE: 1" = 40' DATE: September 2010

**Dewberry**

FIGURE 3



**LEGEND**

- BUILDING/STRUCTURE
- FENCE LINE
- TOPOGRAPHIC CONTOUR
- PROPERTY LINE
- GROUNDWATER MONITORING WELL LOCATION (PERCHED WATER WELL)
- GROUNDWATER MONITORING WELL LOCATION (UNCONFINED GROUNDWATER WELL)
- SOIL SAMPLE LOCATION, DECEMBER 1997
- SESI SOIL BORING LOCATION, AUGUST 1988
- DEWBERRY SOIL BORING LOCATION, APRIL 2010

**NOTES**

SRS - SOIL REMEDIATION STANDARD  
 mg/kg - MILLIGRAMS PER KILOGRAM  
 PCBs - POLYCHLORINATED BIPHENYLS

AREA OF CONCERN ID	DESCRIPTION
AOC-1	FORMER DRUM STORAGE AREAS
AOC-2	FORMER DISPOSAL TRENCH
AOC-3	ELEVEN BULK CHEMICAL USTs
AOC-4	ONE HEATING OIL UST
AOC-5	DOCUMENTED SOIL CONTAMINATION
AOC-6	DOCUMENTED GROUNDWATER CONTAMINATION
AOC-7	FLOOR DRAINS AND UNKNOWN INTEGRITY OF FLOORING WITHIN SITE STRUCTURES (PRODUCTION/STORAGE AREAS)

Sample ID (Depth)	Contaminant	Concentration (mg/kg)	NJ Residential SRS (mg/kg)	NJ Non-Residential SRS (mg/kg)
GP-9A (0.0'-0.5')	PCBs	0.23	0.2	1.0

Sample ID (Depth)	Contaminant	Concentration (mg/kg)	NJ Residential SRS (mg/kg)	NJ Non-Residential SRS (mg/kg)
GP-5A (0.0'-0.5')	PCBs	2.1	0.2	1.0

Sample ID (Depth)	Contaminant	Concentration (mg/kg)	NJ Residential SRS (mg/kg)	NJ Non-Residential SRS (mg/kg)
GP-18 (0.0'-0.5')	Lead	524	400	800

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**PASSAIC COUNTY DEPARTMENT OF ECONOMIC DEVELOPMENT**

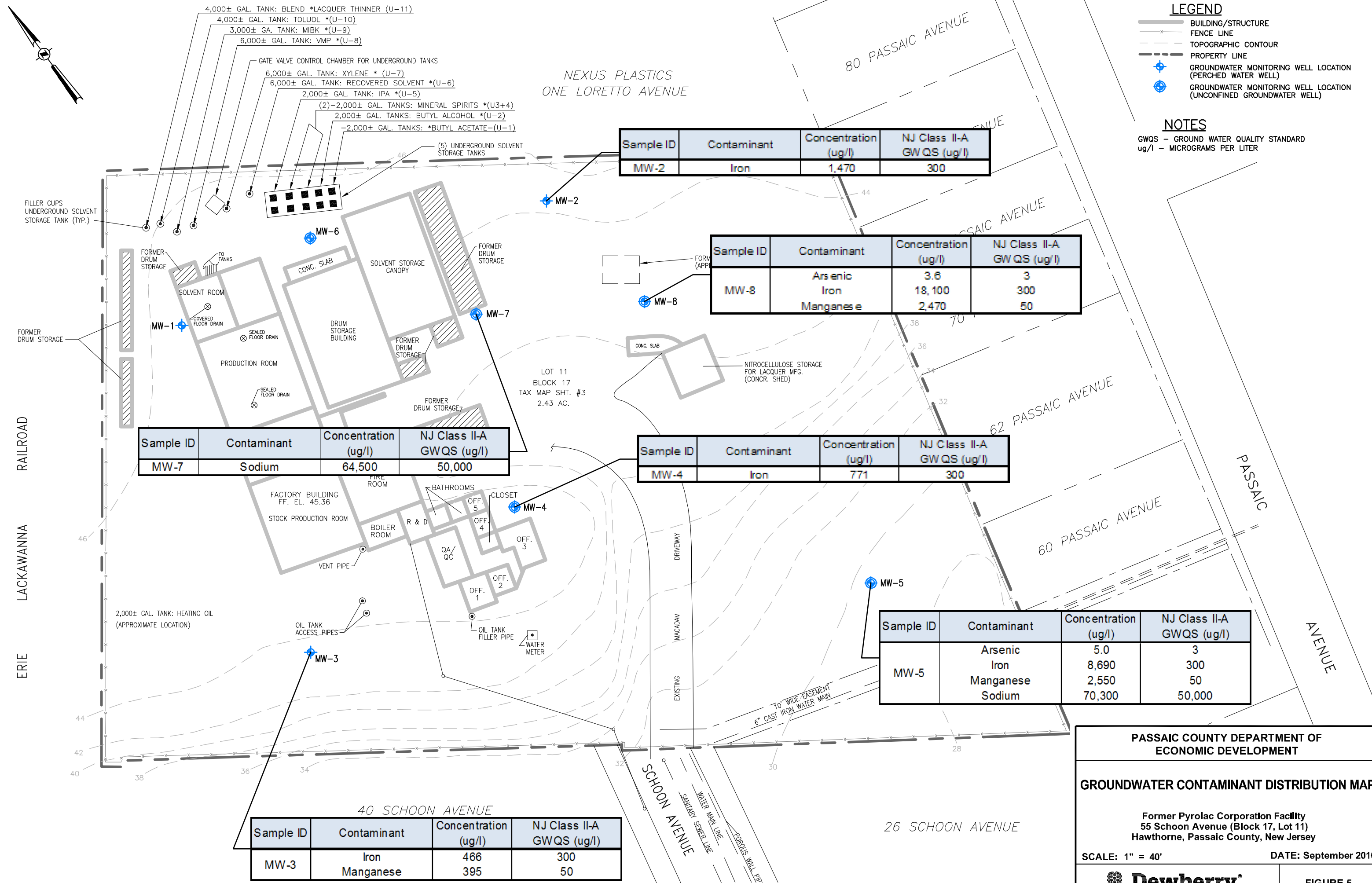
**SOIL BORING LOCATION AND SOIL CONTAMINANT DISTRIBUTION MAP**

Former Pyrolac Corporation Facility  
 55 Schoon Avenue (Block 17, Lot 11)  
 Hawthorne, Passaic County, New Jersey

SCALE: 1" = 40' DATE: September 2010

FIGURE 4

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**LEGEND**

- BUILDING/STRUCTURE
- - - FENCE LINE
- - - TOPOGRAPHIC CONTOUR
- - - PROPERTY LINE
- ⊕ GROUNDWATER MONITORING WELL LOCATION (PERCHED WATER WELL)
- ⊕ GROUNDWATER MONITORING WELL LOCATION (UNCONFINED GROUNDWATER WELL)

**NOTES**

GWQS - GROUND WATER QUALITY STANDARD  
 ug/l - MICROGRAMS PER LITER

Sample ID	Contaminant	Concentration (ug/l)	NJ Class II-A GW QS (ug/l)
MW-2	Iron	1,470	300

Sample ID	Contaminant	Concentration (ug/l)	NJ Class II-A GW QS (ug/l)
MW-8	Arsenic	3.6	3
	Iron	18,100	300
	Manganese	2,470	50

Sample ID	Contaminant	Concentration (ug/l)	NJ Class II-A GWQS (ug/l)
MW-7	Sodium	64,500	50,000

Sample ID	Contaminant	Concentration (ug/l)	NJ Class II-A GW QS (ug/l)
MW-4	Iron	771	300

Sample ID	Contaminant	Concentration (ug/l)	NJ Class II-A GWQS (ug/l)
MW-5	Arsenic	5.0	3
	Iron	8,690	300
	Manganese	2,550	50
	Sodium	70,300	50,000

Sample ID	Contaminant	Concentration (ug/l)	NJ Class II-A GWQS (ug/l)
MW-3	Iron	466	300
	Manganese	395	50

**PASSAIC COUNTY DEPARTMENT OF ECONOMIC DEVELOPMENT**

**GROUNDWATER CONTAMINANT DISTRIBUTION MAP**

Former Pyrolac Corporation Facility  
 55 Schoon Avenue (Block 17, Lot 11)  
 Hawthorne, Passaic County, New Jersey

SCALE: 1" = 40' DATE: September 2010

**Dewberry** FIGURE 5

## **TABLES**

**Table 1  
Sampling and Analysis Program Summary**

**Former Pyrolac Corporation Facility  
55 Schoon Avenue, Hawthorne, Passaic County, NJ**

AOC	Boring ID	Location and Objective	Matrix	Sample ID	Sample Depth [in feet]	Analytical Parameter (Methodology)
AOC-1 - Former Drum Storage Areas	GP-1	Western drum storage area, determine presence/absence of contamination	Soil	GP-1A, 1B	0.0-0.5, 4.0-4.5	TCL VO+10 (8260B), TCL BNA+20 (8270C), TCL Pest (8081A), TCL PCB (8082), TAL Metals (6010B/7471A)
	GP-2	Western drum storage area, determine presence/absence of contamination	Soil	GP-2A, 2B	0.0-0.5, 4.0-4.5	
	GP-3	Eastern drum storage area, determine presence/absence of contamination	Soil	GP-3A, 3B	0.0-0.5, 10.5-11.0	
	GP-4	Central drum storage area, determine presence/absence of contamination	Soil	GP-4A, 4B	0.0-0.5, 5.0-5.5	
	GP-5	Central drum storage area, determine presence/absence of contamination	Soil	GP-5A, 5B	0.0-0.5, 5.0-5.5	
AOC-2 - Former Disposal Trench	GP-6	Former disposal trench, confirmation of reported historical contamination	Soil	GP-6A, 6B	0.0-0.5, 5.0-5.5	TCL VO+10 (8260B), TCL BNA+20 (8270C), TCL Pest (8081A), TCL PCB (8082), TAL Metals (6010B/7471A)
AOC-3 - Eleven Bulk Chemical USTs	GP-7	Bulk chemical UST area, determine presence/absence of contamination	Soil	GP-7A, 7B	0.0-0.5, 10.5-11.0	TCL VO+10 (8260B), TCL BNA+20 (8270C), TCL Pest (8081A), TCL PCB (8082), TAL Metals (6010B/7471A)
	GP-8	Bulk chemical UST area, determine presence/absence of contamination	Soil	GP-8A, 8B	0.0-0.5, 11.5-12.0	
	GP-9	Bulk chemical UST area, determine presence/absence of contamination	Soil	GP-9A, 9B	0.0-0.5, 11.5-12.0	
AOC-4 - One Heating Oil UST	GP-10	Heating oil UST area, determine presence/absence of contamination	Soil	GP-10	7.5-8.0	TPH/DRO (8015B)  Contingent Analysis*** 2-Methylnaphthalene (8270C) Naphthalene (8270C)
	GP-11	Heating oil UST area, determine presence/absence of contamination	Soil	GP-11	7.5-8.0	
	GP-12	Heating oil UST area, determine presence/absence of contamination	Soil	GP-12	7.5-8.0	
	GP-13	Heating oil UST area, determine presence/absence of contamination	Soil	GP-13	7.5-8.0	
	GP-14	Heating oil UST piping area, determine presence/absence of contamination	Soil	GP-14	3.0-3.5	
	GP-15	Heating oil UST piping area, determine presence/absence of contamination	Soil	GP-15	3.0-3.5	
AOC-5 - Documented Soil Contamination	GP-16	Former sample location S19, determine presence/absence of contamination	Soil	GP-16	Fill Material - 0.0-0.5	TCL VO+10 (8260B), TCL BNA+20 (8270C), TCL Pest (8081A), TCL PCB (8082), TAL Metals (6010B/7471A)
	GP-17	Former sample location S14, determine presence/absence of contamination	Soil	GP-17	Fill Material - 0.0-0.5	
	GP-18	Former sample location S02, determine presence/absence of contamination	Soil	GP-18	Fill Material - 0.0-0.5	
	GP-19	Former sample location S05, determine presence/absence of contamination	Soil	GP-19	Fill Material - 0.0-0.5	
AOC-6 - Documented Groundwater Contamination	MW-1	Perched groundwater table, determine presence/absence of contamination	Groundwater	MW-1	Perched GW Surface	TCL VO+10 (624), TCL BNA+20 (625), TCL Pest (608), TCL PCB (608), TAL Metals (200.8/245.1)
	MW-2	Perched groundwater table, determine presence/absence of contamination	Groundwater	MW-2	Perched GW Surface	
	MW-3	Perched groundwater table, determine presence/absence of contamination	Groundwater	MW-3	GW Table	
	MW-4	Unconfined groundwater table, determine presence/absence of contamination	Groundwater	MW-4	GW Table	
	MW-5	Unconfined groundwater table, determine presence/absence of contamination	Groundwater	MW-5	GW Table	
	MW-6	Unconfined groundwater table, determine presence/absence of contamination	Groundwater	MW-6	GW Table	
	MW-7	Unconfined groundwater table, determine presence/absence of contamination	Groundwater	MW-7	GW Table	
	MW-8	Unconfined groundwater table, determine presence/absence of contamination	Groundwater	MW-8	GW Table	
AOC-7 - Floor Drains and Unknown Integrity of Flooring within Site Structures	GP-20	Production room, determine presence/absence of contamination	Soil	GP-20A, 20B	0.0-0.5, 10.0-10.5	TCL VO+10 (8260B), TCL BNA+20 (8270C), TCL Pest (8081A), TCL PCB (8082), TAL Metals (6010B/7471A)
	GP-21	Production room, determine presence/absence of contamination	Soil	GP-21A, 21B	0.0-0.5, 11.5-12.0	
	GP-22	Solvent room, determine presence/absence of contamination	Soil	GP-22A, 22B	0.0-0.5, 11.5-12.0	
QA/QC Samples	NA	Duplicate sample for TCL/TAL+30 (DUP-1 - Soil)	Soil	TBD	NA	TCL/TAL+30 (See Above - Soil)
	NA	Duplicate sample for TCL/TAL+30 (DUP-2 - Soil)	Soil	TBD	NA	
	NA	Field blank for TCL VO+10 (FB-1 - Soil)	Aqueous	TBD	NA	TCL VO+10 (8260B)
	NA	Field blank for TCL VO+10 (FB-2 - Soil)	Aqueous	TBD	NA	
	NA	Trip blank for TCL VO+10 (TB-1 - Soil)	Aqueous	TBD	NA	
	NA	Trip blank for TCL VO+10 (TB-2 - Soil)	Aqueous	TBD	NA	
	NA	Trip blank for TCL VO+10 (TB-3 - Soil)	Aqueous	TBD	NA	
	NA	Duplicate sample for TCL/TAL+30 (DUP-1 - GW)	Groundwater	TBD	NA	TCL/TAL+30 (See Above - GW)
	NA	Field blank for TCL/TAL+30 (FB-1 - GW)	Aqueous	TBD	NA	
	NA	Trip blank for TCL VO+10 (TB-1 - GW)	Aqueous	TBD	NA	TCL VO+10 (8260B)
NA	Trip blank for TCL VO+10 (TB-2 - GW)	Aqueous	TBD	NA		

Notes:  
GW - Groundwater  
NA - Not Applicable

**Table 2**  
**Groundwater Monitoring Well Gauging Data - April 29, 2010**

**Former Pyrolac Corporation Property**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

<b>Well Designation</b>	<b>Reference Point Elevation (ft above msl)</b>	<b>Depth to Ground Water (feet)</b>	<b>Depth to NAPL (feet)</b>	<b>NAPL Thickness (feet)</b>	<b>Groundwater Elevation (ft, msl)</b>
MW-1 (P)	61.74	9.64	ND	--	52.10
MW-2 (P)	60.68	8.43	ND	--	52.25
MW-3 (P)	59.70	17.84	ND	--	41.86
MW-4	60.36	9.54	ND	--	50.82
MW-5	45.63	7.72	ND	--	37.91
MW-6	60.74	7.98	ND	--	52.76
MW-7	59.54	7.43	ND	--	52.11
MW-8	56.57	10.15	ND	--	46.42

Notes:

ND - Not Detected

MSL - Mean Sea Level

NAPL - Non-Aqueous Phase Liquid

P - Perched Groundwater Monitoring Well

**TABLE 3A  
Soil Sample Analytical Results - TPH**

**Former Pyrolac Corporation Facility  
55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID		NJ Total Organic	GP-10			GP-11			GP-12			GP-13			GP-14			GP-15		
Lab Sample No.		Compound	460-12150-4			460-12150-6			460-12150-5			460-12150-3			460-12150-2			460-12150-1		
Sampling Date		Standard	4/13/2010 10:29:00 AM			4/13/2010 11:07:00 AM			4/13/2010 10:56:00 AM			4/13/2010 10:07:00 AM			4/13/2010 9:35:00 AM			4/13/2010 9:20:00 AM		
Matrix			Solid			Solid			Solid			Solid			Solid			Solid		
Depth (feet)			7.5-8.0			7.5-8.0			7.5-8.0			7.5-8.0			3.0-3.5			3.0-3.5		
Dilution Factor			1			1			1			1			1			1		
Units		mg/kg	mg/Kg			mg/Kg			mg/Kg			mg/Kg			mg/Kg			mg/Kg		
<b>TOTAL PETROLEUM HYDROCARBONS</b>					MDL PQL			MDL PQL			MDL PQL			MDL PQL			MDL PQL			MDL PQL
Diesel Range Organics [C10-C28]		5,100	7.9 U 7.9 7.9			7.5 U 7.5 7.5			7.9 U 7.9 7.9			7.6 U 7.6 7.6			7.5 U 7.5 7.5			7.4 U 7.4 7.4		
Total Confident Conc.			0			0			0			0			0			0		

Notes:  
mg/kg - milligrams per kilogram  
ug/l - micrograms per liter  
MDL - Method Detetion Limit  
PQL - Practicable Quantitation Limit  
U - Analyte was analyzed for bit not detected  
J - Analyte was detected below the PQL (estimated concentration)











TABLE 3B  
Soil Sample Analytical Results - VOCs

Former Pyrolac Corporation Facility  
55 Schoon Avenue, Hawthorne, Passaic County, NJ

Sample ID	NJ Residential	NJ Non-Residential	GP-7BDUP		GP-19DUP			FB41310		FB41410			TRIP		TRIP		TRIP
Lab Sample No.	Soil	Soil	460-12202-9		460-12258-2			460-12150-16		460-12202-18			460-12150-17		460-12202-19		460-12258-5
Sampling Date	Remediation	Remediation	4/14/2010 11:38:00 AM		4/15/2010 8:43:00 AM			4/13/2010 3:06:00 PM		4/14/2010 3:25:00 PM			4/13/2010 12:00:00 AM		4/14/2010 12:00:00 AM		4/15/2010 12:00:00 AM
Matrix	Standard	Standard	Solid		Solid			Water		Water			Water		Water		Water
Depth (feet)			10.5-11.0		0.0-0.5			--		--			--		--		--
Dilution Factor			1		1			1		1			1		1		1
Units	mg/kg	mg/kg	mg/kg		mg/kg			ug/l		ug/l			ug/l		ug/l		ug/l
VOLATILE COMPOUNDS (GC/MS)				MDL	PQL		MDL	PQL		MDL	PQL		MDL	PQL		MDL	PQL
1,1,1-Trichloroethane	290	4200	0.0011 U	0.00021	0.0011	0.0011 U	0.00021	0.0011	1.0 U	0.25	1.0	1.0 U	0.25	1.0	1.0 U	0.25	1.0
1,1,2,2-Tetrachloroethane	1.0	3.0	0.0011 U	0.00084	0.0011	0.0011 U	0.00084	0.0011	1.0 U	0.090	1.0	1.0 U	0.090	1.0	1.0 U	0.090	1.0
1,1,2-Trichloroethane	2.0	6.0	0.0011 U	0.00066	0.0011	0.0011 U	0.00066	0.0011	1.0 U	0.10	1.0	1.0 U	0.10	1.0	1.0 U	0.10	1.0
1,1-Dichloroethane	8.0	24	0.0011 U	0.00028	0.0011	0.0011 U	0.00028	0.0011	1.0 U	0.10	1.0	1.0 U	0.10	1.0	1.0 U	0.10	1.0
1,1-Dichloroethene	11	150	0.0011 U	0.00041	0.0011	0.0011 U	0.00041	0.0011	1.0 U	0.14	1.0	1.0 U	0.14	1.0	1.0 U	0.14	1.0
1,2-Dichloroethane	0.90	3.0	0.0011 U	0.00043	0.0011	0.0011 U	0.00043	0.0011	1.0 U	0.24	1.0	1.0 U	0.24	1.0	1.0 U	0.24	1.0
1,2-Dichloropropane	2.0	5.0	0.0011 U	0.00035	0.0011	0.0011 U	0.00035	0.0011	1.0 U	0.090	1.0	1.0 U	0.090	1.0	1.0 U	0.090	1.0
2-Butanone	3100	44000	0.011 U	0.00063	0.011	0.011 U	0.00063	0.011	10 U	0.82	10	10 U	0.82	10	10 U	0.82	10
2-Hexanone	NA	NA	0.011 U	0.0018	0.011	0.011 U	0.0018	0.011	10 U	0.55	10	10 U	0.55	10	10 U	0.55	10
4-Methyl-2-pentanone	NA	NA	0.011 U	0.00079	0.011	0.011 U	0.00079	0.011	10 U	0.68	10	10 U	0.68	10	10 U	0.68	10
Acetone	70000	NA	0.011 U	0.0041	0.011	0.011 U	0.0041	0.011	24 U	2.5	10	17 U	2.5	10	17 U	2.5	10
Benzene	2.0	5.0	0.0011 U	0.00082	0.0011	0.0011 U	0.00082	0.0011	1.0 U	0.13	1.0	1.0 U	0.13	1.0	1.0 U	0.13	1.0
Bromodichloromethane	1.0	3.0	0.0011 U	0.00034	0.0011	0.0011 U	0.00034	0.0011	1.0 U	0.093	1.0	1.0 U	0.093	1.0	1.0 U	0.093	1.0
Bromoform	81	280	0.0011 U	0.00077	0.0011	0.0011 U	0.00077	0.0011	1.0 U	0.10	1.0	1.0 U	0.10	1.0	1.0 U	0.10	1.0
Bromomethane	25	59	0.0011 U	0.00045	0.0011	0.0011 U	0.00045	0.0011	1.0 U	0.31	1.0	1.0 U	0.31	1.0	1.0 U	0.31	1.0
Carbon disulfide	7800	110000	0.0011 U	0.00051	0.0011	0.0011 U	0.00051	0.0011	1.0 U	0.15	1.0	1.0 U	0.15	1.0	1.0 U	0.15	1.0
Carbon tetrachloride	0.60	2.0	0.0011 U	0.00011	0.0011	0.0011 U	0.00011	0.0011	1.0 U	0.19	1.0	1.0 U	0.19	1.0	1.0 U	0.19	1.0
Chlorobenzene	510	7400	0.0011 U	0.00053	0.0011	0.0011 U	0.00053	0.0011	1.0 U	0.16	1.0	1.0 U	0.16	1.0	1.0 U	0.16	1.0
Chloroethane	220	1100	0.0011 U	0.00044	0.0011	0.0011 U	0.00044	0.0011	1.0 U	0.45	1.0	1.0 U	0.45	1.0	1.0 U	0.45	1.0
Chloroform	0.60	2.0	0.0011 U	0.00026	0.0011	0.0011 U	0.00026	0.0011	1.0 U	0.15	1.0	1.0 U	0.15	1.0	1.0 U	0.15	1.0
Chloromethane	4.0	12	0.0011 U	0.00070	0.0011	0.0011 U	0.00070	0.0011	1.0 U	0.21	1.0	1.0 U	0.21	1.0	1.0 U	0.21	1.0
cis-1,2-Dichloroethene	230	560	0.0011 U	0.00026	0.0011	0.0011 U	0.00026	0.0011	1.0 U	0.20	1.0	1.0 U	0.20	1.0	1.0 U	0.20	1.0
cis-1,3-Dichloropropene	2.0	7.0	0.0011 U	0.00022	0.0011	0.0011 U	0.00022	0.0011	1.0 U	0.11	1.0	1.0 U	0.11	1.0	1.0 U	0.11	1.0
Dibromochloromethane	3.0	8.0	0.0011 U	0.00062	0.0011	0.0011 U	0.00062	0.0011	1.0 U	0.11	1.0	1.0 U	0.11	1.0	1.0 U	0.11	1.0
Ethylbenzene	7800	110000	0.0011 U	0.00021	0.0011	0.0011 U	0.00021	0.0011	1.0 U	0.25	1.0	1.0 U	0.25	1.0	1.0 U	0.25	1.0
Methylene Chloride	34	97	0.0011 U	0.00052	0.0011	0.0011 U	0.00052	0.0011	1.0 U	0.19	1.0	1.0 U	0.19	1.0	1.0 U	0.19	1.0
Styrene	90	260	0.0011 U	0.00038	0.0011	0.0011 U	0.00038	0.0011	1.0 U	0.13	1.0	1.0 U	0.13	1.0	1.0 U	0.13	1.0
Tetrachloroethene	2.0	5.0	0.0011 U	0.00036	0.0011	0.0011 U	0.00036	0.0011	1.0 U	0.20	1.0	1.0 U	0.20	1.0	1.0 U	0.20	1.0
Toluene	6300	91000	0.0011 U	0.00033	0.0011	0.0011 U	0.00033	0.0011	1.0 U	0.090	1.0	1.0 U	0.090	1.0	1.0 U	0.090	1.0
trans-1,2-Dichloroethene	300	720	0.0011 U	0.00031	0.0011	0.0011 U	0.00031	0.0011	1.0 U	0.14	1.0	1.0 U	0.14	1.0	1.0 U	0.14	1.0
trans-1,3-Dichloropropene	2.0	7.0	0.0011 U	0.00024	0.0011	0.0011 U	0.00024	0.0011	1.0 U	0.12	1.0	1.0 U	0.12	1.0	1.0 U	0.12	1.0
Trichloroethene	7.0	20	0.0011 U	0.00040	0.0011	0.0011 U	0.00040	0.0011	1.0 U	0.18	1.0	1.0 U	0.18	1.0	1.0 U	0.18	1.0
Vinyl chloride	0.70	2.0	0.0011 U	0.00026	0.0011	0.0011 U	0.00026	0.0011	1.0 U	0.13	1.0	1.0 U	0.13	1.0	1.0 U	0.13	1.0
Xylenes, Total	12000	170000	0.0033 U	0.00087	0.0033	0.0034 U	0.00087	0.0033	3.0 U	0.43	3.0	3.0 U	0.43	3.0	3.0 U	0.43	3.0
Total Confident Conc.			0		0			24		0			17		0		
Total TICs			ND		ND			ND		ND			ND		ND		

Notes:  
mg/kg - milligrams per kilogram  
ug/l - micrograms per liter  
MDL - Method Detection Limit  
PQL - Practicable Quantitation Limit  
U - Analyte was analyzed for but not detected  
J - Analyte was detected below the PQL (estimated concentration)  
ND - None Detected



**TABLE 3C**  
**Soil Sample Analytical Results - SVOCs**  
**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-1A			GP-1B			GP-2A			GP-2B			GP-3A			GP-3B			GP-4A			GP-4B		
Lab Sample No.	Soil	Soil	460-12150-10			460-12150-11			460-12150-8			460-12150-9			460-12202-10			460-12202-11			460-12202-14			460-12202-15		
Sampling Date	Remediation	Remediation	4/13/2010 12:26:00 PM			4/13/2010 12:37:00 PM			4/13/2010 12:06:00 PM			4/13/2010 12:14:00 PM			4/14/2010 12:58:00 PM			4/14/2010 1:06:00 PM			4/14/2010 2:21:00 PM			4/14/2010 2:32:00 PM		
Matrix	Standard	Standard	Solid			Solid			Solid			Solid			Solid			Solid			Solid			Solid		
Depth (feet)			0.0-0.5			4.0-4.5			0.0-0.5			4.0-4.5			0.0-0.5			10.5-11.0			0.0-0.5			5.0-5.5		
Dilution Factor			1			1			1			1			5			1			1			1		
Units	mg/kg	mg/kg	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg		
SEMIVOLATILE COMPOUNDS (GC/MS)																										
				MDL	PQL		MDL	PQL		MDL	PQL		MDL	PQL		MDL	PQL		MDL	PQL		MDL	PQL		MDL	
N-Nitrosodi-n-propylamine	0.20	0.30	0.036 U	0.0048	0.036	0.035 U	0.0046	0.035	0.035 U	0.0046	0.035	0.040 U	0.0053	0.040	0.17 U	0.023	0.17	0.041 U	0.0054	0.041	0.039 U	0.0052	0.039	0.040 U	0.0053	
N-Nitrosodiphenylamine	99	390	0.36 U	0.059	0.36	0.35 U	0.057	0.35	0.35 U	0.056	0.35	0.40 U	0.065	0.40	1.7 U	0.28	1.7	0.41 U	0.067	0.41	0.39 U	0.064	0.39	0.40 U	0.066	
Pentachlorophenol	3.0	10	1.1 U	0.18	1.1	1.1 U	0.17	1.1	1.0 U	0.17	1.0	1.2 U	0.19	1.2	5.3 U	0.85	5.3	1.2 U	0.20	1.2	1.2 U	0.19	1.2	1.2 U	0.20	
Phenanthrene	NA	300000	0.36 U	0.063	0.36	0.35 U	0.061	0.35	0.35 U	0.060	0.35	0.40 U	0.069	0.40	1.7 U	0.30	1.7	0.41 U	0.071	0.41	0.39 U	0.069	0.39	0.40 U	0.070	
Phenol	18000	210000	0.36 U	0.044	0.36	0.35 U	0.043	0.35	0.35 U	0.042	0.35	0.40 U	0.049	0.40	1.7 U	0.21	1.7	0.41 U	0.050	0.41	0.39 U	0.048	0.39	0.40 U	0.049	
Pyrene	1700	18000	0.36 U	0.062	0.36	0.35 U	0.060	0.35	0.35 U	0.060	0.35	0.40 U	0.069	0.40	1.7 U	0.30	1.7	0.41 U	0.071	0.41	0.39 U	0.068	0.39	0.40 U	0.070	
Total Confident Conc.			0.294			0			0.44			0			0			0			0.53			0		
Total TICs			0.81			ND			3.46			0.39			ND			ND			0.7			ND		

Notes:  
mg/kg - milligrams per kilogram  
MDL - Method Detection Limit  
PQL - Practicable Quantitation Limit  
U - Analyte was analyzed for but not detected  
J - Analyte was detected below the PQL (estimated concentration)  
ND - None Detected





**TABLE 3C**  
**Soil Sample Analytical Results - SVOCs**  
**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-5A			GP-5B			GP-6A			GP-6B			GP-7A			GP-7B			GP-8A			GP-8B											
Lab Sample No.	Soil	Soil	460-12202-16			460-12202-17			460-12202-12			460-12202-13			460-12202-7			460-12202-8			460-12150-12			460-12150-13											
Sampling Date	Remediation	Remediation	4/14/2010 3:07:00 PM			4/14/2010 3:17:00 PM			4/14/2010 1:33:00 PM			4/14/2010 1:43:00 PM			4/14/2010 11:22:00 AM			4/14/2010 11:38:00 AM			4/13/2010 1:48:00 PM			4/13/2010 2:06:00 PM											
Matrix	Standard	Standard	Solid			Solid			Solid			Solid			Solid			Solid			Solid			Solid											
Depth (feet)			0.0-0.5			5.0-5.5			0.0-0.5			5.0-5.5			0.0-0.5			10.5-11.0			0.0-0.5			11.5-12.0											
Dilution Factor			1			1			1			1			1			1			1			1											
Units	mg/kg	mg/kg	mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg			mg/kg											
SEMIVOLATILE COMPOUNDS (GC/MS)			PQL		MDL	PQL			MDL	PQL			MDL	PQL			MDL	PQL			MDL	PQL			MDL	PQL									
N-Nitrosodi-n-propylamine	0.20	0.30	0.040		0.035	U	0.0047	0.035	0.042	U	0.0056	0.042	0.036	U	0.0047	0.036	0.041	U	0.0054	0.041	0.035	U	0.0047	0.035	0.040	U	0.0053	0.040	0.036	U	0.0048	0.036	0.042	U	0.0056
N-Nitrosodiphenylamine	99	390	0.40		0.35	U	0.058	0.35	0.42	U	0.069	0.42	0.36	U	0.058	0.36	0.41	U	0.066	0.41	0.35	U	0.057	0.35	0.40	U	0.066	0.40	0.36	U	0.059	0.36	0.42	U	0.069
Pentachlorophenol	3.0	10	1.2		1.1	U	0.17	1.1	1.3	U	0.21	1.3	1.1	U	0.18	1.1	1.2	U	0.20	1.2	1.1	U	0.17	1.1	1.2	U	0.20	1.2	1.1	U	0.18	1.1	1.3	U	0.21
Phenanthrene	NA	300000	0.40		0.35	U	0.062	0.35	0.42	U	0.074	0.42	0.36	U	0.063	0.36	0.41	U	0.071	0.41	0.35	U	0.061	0.35	0.40	U	0.071	0.40	0.36	U	0.063	0.36	0.42	U	0.074
Phenol	18000	210000	0.40		0.35	U	0.043	0.35	0.42	U	0.052	0.42	0.36	U	0.044	0.36	0.41	U	0.050	0.41	0.35	U	0.043	0.35	0.40	U	0.050	0.40	0.36	U	0.044	0.36	0.42	U	0.052
Pyrene	1700	18000	0.40		0.35	U	0.061	0.35	0.42	U	0.073	0.42	0.36	U	0.062	0.36	0.41	U	0.070	0.41	0.35	U	0.061	0.35	0.40	U	0.070	0.40	0.12	J	0.062	0.36	0.42	U	0.074
Total Confident Conc.					0.6132				0				2.213				0				0.682					1.477								0.495	
Total TICs					2.14				ND				0.64				0.39				ND					2.55								64.06	

Notes:  
mg/kg - milligrams per kilogram  
MDL - Method Detetion Limit  
PQL - Practicable Quantitation Limit  
U - Analyte was analyzed for bit not detected  
J - Analyte was detected below the PQL (estimated concentration)  
ND - None Detected



**TABLE 3C**  
**Soil Sample Analytical Results - SVOCs**  
**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-9A	GP-9B	GP-16	GP-17	GP-18	GP-19	GP-20A	GP-20B																										
Lab Sample No.	Soil	Soil	460-12150-14	460-12150-15	460-12150-7	460-12258-4	460-12258-3	460-12258-1	460-12202-1	460-12202-2																										
Sampling Date	Remediation	Remediation	4/13/2010 2:28:00 PM	4/13/2010 2:37:00 PM	4/13/2010 11:38:00 AM	4/15/2010 10:54:00 AM	4/15/2010 9:20:00 AM	4/15/2010 8:43:00 AM	4/14/2010 9:12:00 AM	4/14/2010 9:22:00 AM																										
Matrix	Standard	Standard	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid																										
Depth (feet)			0.0-0.5	11.5-12.0	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	0.0-0.5	10.0-10.5																										
Dilution Factor			1	1	1	1	1	1	1	1																										
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg																										
<b>SEMIVOLATILE COMPOUNDS (GC/MS)</b>																																				
N-Nitrosodi-n-propylamine	0.20	0.30	0.042	0.036	U	MDL	PQL	0.0048	0.036	0.040	U	MDL	PQL	0.0052	0.040	0.035	U	0.0046	0.036	0.038	U	MDL	PQL	0.0054	0.036	0.036	U	0.0048	0.036	0.035	U	0.0047	0.035	0.037	U	
N-Nitrosodiphenylamine	99	390	0.42	0.36	U	0.059	0.36	0.40	U	0.065	0.40	0.35	U	0.057	0.35	0.36	U	0.056	0.36	0.38	U	0.066	0.36	0.36	U	0.059	0.36	0.35	U	0.058	0.35	0.37	U			
Pentachlorophenol	3.0	10	1.3	1.1	U	0.18	1.1	1.2	U	0.19	1.2	1.1	U	0.17	1.1	1.1	U	0.17	1.1	1.1	U	0.20	1.1	1.1	U	0.18	1.1	1.1	U	0.17	1.1	1.1	U			
Phenanthrene	NA	300000	0.42	0.36	U	0.063	0.36	0.40	U	0.069	0.40	0.35	U	0.061	0.35	0.36	U	0.060	0.36	0.38	U	0.071	0.36	0.36	U	0.063	0.36	0.35	U	0.062	0.35	0.37	U			
Phenol	18000	210000	0.42	0.36	U	0.044	0.36	0.40	U	0.049	0.40	0.35	U	0.043	0.35	0.36	U	0.042	0.36	0.38	U	0.050	0.36	0.36	U	0.044	0.36	0.35	U	0.043	0.35	0.37	U			
Pyrene	1700	18000	0.42	0.36	U	0.063	0.36	0.40	U	0.069	0.40	0.35	U	0.061	0.35	0.36	U	0.060	0.36	0.38	U	0.070	0.36	0.36	U	0.062	0.36	0.35	U	0.061	0.35	0.37	U			
Total Confident Conc.						1.259					0.015					0.187						0.267						0.91					0.688			0
Total TICs						0.78					0.33					ND						0.34						2.53					3.95			0.34

Notes:  
mg/kg - milligrams per kilogram  
MDL - Method Detection Limit  
PQL - Practicable Quantitation Limit  
U - Analyte was analyzed for but not detected  
J - Analyte was detected below the PQL (estimated concentration)  
ND - None Detected



**TABLE 3C**  
**Soil Sample Analytical Results - SVOCs**  
**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-21A				GP-21B				GP-22A				GP-22B				GP-7BDUP				GP-19DUP					
Lab Sample No.	Soil	Soil	460-12202-3				460-12202-4				460-12202-5				460-12202-6				460-12202-9				460-12258-2					
Sampling Date	Remediation	Remediation	4/14/2010 9:33:00 AM				4/14/2010 9:47:00 AM				4/14/2010 10:06:00 AM				4/14/2010 10:13:00 AM				4/14/2010 11:38:00 AM				4/15/2010 8:43:00 AM					
Matrix	Standard	Standard	Solid				Solid				Solid				Solid				Solid									
Depth (feet)			0.0-0.5				11.5-12.0				0.0-0.5				11.5-12.0				10.5-11.0				0.0-0.5					
Dilution Factor			1				1				1				1				1				1					
Units	mg/kg	mg/kg	mg/kg				mg/kg				mg/kg				mg/kg				mg/kg									
SEMIVOLATILE COMPOUNDS (GC/MS)			MDL	PQL			MDL	PQL			MDL	PQL			MDL	PQL			MDL	PQL			MDL	PQL				
N-Nitrosodi-n-propylamine	0.20	0.30	0.0049	0.037	0.035	U	0.0046	0.035	0.041	U	0.0054	0.041	0.036	U	0.0048	0.036	0.042	U	0.0056	0.042	0.040	U	0.0053	0.040	0.036	J	0.0048	0.036
N-Nitrosodiphenylamine	99	390	0.060	0.37	0.35	U	0.056	0.35	0.41	U	0.066	0.41	0.36	U	0.059	0.36	0.42	U	0.069	0.42	0.40	U	0.066	0.40	0.36	U	0.059	0.36
Pentachlorophenol	3.0	10	0.18	1.1	1.0	U	0.17	1.0	1.2	U	0.20	1.2	1.1	U	0.18	1.1	1.3	U	0.21	1.3	1.2	U	0.20	1.2	1.1	U	0.18	1.1
Phenanthrene	NA	300000	0.064	0.37	0.35	U	0.060	0.35	0.41	U	0.071	0.41	0.36	U	0.063	0.36	0.42	U	0.074	0.42	0.40	U	0.070	0.40	0.36	U	0.063	0.36
Phenol	18000	210000	0.045	0.37	0.35	U	0.042	0.35	0.41	U	0.050	0.41	0.36	U	0.044	0.36	0.42	U	0.052	0.42	0.40	U	0.049	0.40	0.36	U	0.044	0.36
Pyrene	1700	18000	0.064	0.37	0.35	U	0.060	0.35	0.41	U	0.070	0.41	0.36	U	0.062	0.36	0.42	U	0.073	0.42	0.40	U	0.070	0.40	0.36	U	0.062	0.36
Total Confident Conc.					0.43				0				0.142		0				0						1.514			
Total TICs					ND				ND				ND		ND				ND						1.13			

Notes:  
mg/kg - milligrams per kilogram  
MDL - Method Detection Limit  
PQL - Practicable Quantitation Limit  
U - Analyte was analyzed for but not detected  
J - Analyte was detected below the PQL (estimated concentration)  
ND - None Detected

**TABLE 3D**  
**Soil Sample Analytical Results - PESTICIDES/PCBs**

**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-1A			GP-1B			GP-2A			GP-2B						
Lab Sample No.	Soil	Soil	460-12150-10			460-12150-11			460-12150-8			460-12150-9						
Sampling Date	Remediation	Remediation	4/13/2010 12:26:00 PM			4/13/2010 12:37:00 PM			4/13/2010 12:06:00 PM			4/13/2010 12:14:00 PM						
Matrix	Standard	Standard	Solid			Solid			Solid			Solid						
Depth (feet)			0.0-0.5			4.0-4.5			0.0-0.5			4.0-4.5						
Dilution Factor			1			1			1			1						
Units	mg/kg	mg/kg	mg/kg			mg/kg			mg/kg			mg/kg						
PESTICIDES/PCBs					MDL	PQL			MDL	PQL				MDL	PQL			
4,4'-DDD	3.0	13	0.0073	U	0.00087	0.0073	0.0071	U	0.00084	0.0071	0.007	U	0.00084	0.007	0.0081	U	0.00096	0.0081
4,4'-DDE	2.0	9.0	0.0073	U	0.0014	0.0073	0.0071	U	0.0014	0.0071	0.0029	J	0.0014	0.007	0.0081	U	0.0016	0.0081
4,4'-DDT	2.0	8.0	0.0073	U	0.00092	0.0073	0.013	U	0.00088	0.0071	0.016	U	0.00088	0.007	0.0081	U	0.001	0.0081
Aldrin	0.040	0.20	0.0073	U	0.0016	0.0073	0.0071	U	0.0015	0.0071	0.007	U	0.0015	0.007	0.0081	U	0.0018	0.0081
alpha-BHC	0.10	0.50	0.0073	U	0.0014	0.0073	0.0071	U	0.0013	0.0071	0.007	U	0.0013	0.007	0.0081	U	0.0015	0.0081
Aroclor 1016	0.20	1.0	0.073	U	0.014	0.073	0.071	U	0.013	0.071	0.070	U	0.013	0.070	0.081	U	0.015	0.081
Aroclor 1221	0.20	1.0	0.073	U	0.022	0.073	0.071	U	0.021	0.071	0.070	U	0.021	0.070	0.081	U	0.024	0.081
Aroclor 1232	0.20	1.0	0.073	U	0.041	0.073	0.071	U	0.040	0.071	0.070	U	0.040	0.070	0.081	U	0.046	0.081
Aroclor 1242	0.20	1.0	0.073	U	0.014	0.073	0.071	U	0.013	0.071	0.070	U	0.013	0.070	0.081	U	0.015	0.081
Aroclor 1248	0.20	1.0	0.073	U	0.019	0.073	0.071	U	0.019	0.071	0.070	U	0.019	0.070	0.081	U	0.021	0.081
Aroclor 1254	0.20	1.0	0.074	U	0.025	0.073	0.071	U	0.024	0.071	0.14	U	0.024	0.070	0.081	U	0.028	0.081
Aroclor 1260	0.20	1.0	0.073	U	0.0082	0.073	0.071	U	0.0079	0.071	0.070	U	0.0078	0.070	0.081	U	0.009	0.081
Aroclor 1262	NA	NA	0.073	U	0.013	0.073	0.071	U	0.012	0.071	0.070	U	0.012	0.070	0.081	U	0.014	0.081
Aroclor 1268	NA	NA	0.073	U	0.013	0.073	0.071	U	0.012	0.071	0.070	U	0.012	0.070	0.081	U	0.014	0.081
beta-BHC	0.40	2.0	0.0073	U	0.00099	0.0073	0.0071	U	0.00096	0.0071	0.007	U	0.00095	0.007	0.0081	U	0.0011	0.0081
Chlordane	0.20	1.0	0.073	U	0.016	0.073	0.071	U	0.015	0.071	0.070	U	0.015	0.070	0.081	U	0.017	0.081
delta-BHC	NA	NA	0.0073	U	0.0011	0.0073	0.0071	U	0.0011	0.0071	0.007	U	0.0011	0.007	0.0081	U	0.0012	0.0081
Dieldrin	0.040	0.20	0.0073	U	0.0014	0.0073	0.0071	U	0.0014	0.0071	0.007	U	0.0013	0.007	0.0081	U	0.0016	0.0081
Endosulfan I	470	6800	0.0073	U	0.0015	0.0073	0.0071	U	0.0015	0.0071	0.007	U	0.0015	0.007	0.0081	U	0.0017	0.0081
Endosulfan II	470	6800	0.0073	U	0.0011	0.0073	0.0071	U	0.0011	0.0071	0.007	U	0.0011	0.007	0.0081	U	0.0012	0.0081
Endosulfan sulfate	470	6800	0.0073	U	0.00094	0.0073	0.0071	U	0.00091	0.0071	0.007	U	0.00090	0.007	0.0081	U	0.001	0.0081
Endrin	23	340	0.0073	U	0.001	0.0073	0.0071	U	0.00099	0.0071	0.007	U	0.00098	0.007	0.0081	U	0.0011	0.0081
Endrin aldehyde	NA	NA	0.0073	U	0.0018	0.0073	0.014	U	0.0018	0.0071	0.010	U	0.0017	0.007	0.0081	U	0.002	0.0081
Endrin ketone	NA	NA	0.0073	U	0.0011	0.0073	0.0071	U	0.001	0.0071	0.007	U	0.001	0.007	0.0081	U	0.0012	0.0081
gamma-BHC (Lindane)	0.40	2.0	0.0073	U	0.00085	0.0073	0.0071	U	0.00082	0.0071	0.007	U	0.00082	0.007	0.0081	U	0.00094	0.0081
Heptachlor	0.10	0.70	0.0073	U	0.001	0.0073	0.0071	U	0.001	0.0071	0.007	U	0.001	0.007	0.0081	U	0.0012	0.0081
Heptachlor epoxide	0.070	0.30	0.0073	U	0.0015	0.0073	0.0071	U	0.0014	0.0071	0.007	U	0.0014	0.007	0.0081	U	0.0016	0.0081
Methoxychlor	390	5700	0.0073	U	0.00082	0.0073	0.0071	U	0.00079	0.0071	0.007	U	0.00078	0.007	0.0081	U	0.00090	0.0081
Toxaphene	0.60	3.0	0.073	U	0.015	0.073	0.071	U	0.015	0.071	0.070	U	0.015	0.070	0.081	U	0.017	0.081

Notes:

mg/kg - milligrams per kilogram

MDL - Method Detection Limit

PQL - Practicable Quantitation Limit

U - Analyte was analyzed for but not detected

J - Analyte was detected below the PQL (estimated concentration)

ND - None Detected

Analyte detected in excess of NJDEP soil remediation standard

**TABLE 3D**  
**Soil Sample Analytical Results - PESTICIDES/PCBs**

**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-3A			GP-3B			GP-4A			GP-4B						
Lab Sample No.	Soil	Soil	460-12202-10			460-12202-11			460-12202-14			460-12202-15						
Sampling Date	Remediation	Remediation	4/14/2010 12:58:00 PM			4/14/2010 1:06:00 PM			4/14/2010 2:21:00 PM			4/14/2010 2:32:00 PM						
Matrix	Standard	Standard	Solid			Solid			Solid			Solid						
Depth (feet)			0.0-0.5			10.5-11.0			0.0-0.5			5.0-5.5						
Dilution Factor			1			1			1			1						
Units	mg/kg	mg/kg	mg/kg			mg/kg			mg/kg			mg/kg						
PESTICIDES/PCBs					MDL	PQL			MDL	PQL				MDL	PQL			
4,4'-DDD	3.0	13	0.0071	U	0.00084	0.0071	0.0083	U	0.00099	0.0083	0.008	U	0.00095	0.008	0.0082	U	0.00097	0.0082
4,4'-DDE	2.0	9.0	0.0071	U	0.0014	0.0071	0.0083	U	0.0016	0.0083	0.008	U	0.0015	0.008	0.0082	U	0.0016	0.0082
4,4'-DDT	2.0	8.0	0.014	p	0.00088	0.0071	0.0083	U	0.001	0.0083	0.005	J	0.001	0.008	0.0082	U	0.001	0.0082
Aldrin	0.040	0.20	0.0071	U	0.0015	0.0071	0.0083	U	0.0018	0.0083	0.008	U	0.0017	0.008	0.0082	U	0.0018	0.0082
alpha-BHC	0.10	0.50	0.0071	U	0.0013	0.0071	0.0083	U	0.0015	0.0083	0.008	U	0.0015	0.008	0.0082	U	0.0015	0.0082
Aroclor 1016	0.20	1.0	0.071	U	0.013	0.071	0.083	U	0.016	0.083	0.080	U	0.015	0.080	0.082	U	0.016	0.082
Aroclor 1221	0.20	1.0	0.071	U	0.021	0.071	0.083	U	0.025	0.083	0.080	U	0.024	0.080	0.082	U	0.025	0.082
Aroclor 1232	0.20	1.0	0.071	U	0.040	0.071	0.083	U	0.047	0.083	0.080	U	0.045	0.080	0.082	U	0.046	0.082
Aroclor 1242	0.20	1.0	0.071	U	0.013	0.071	0.083	U	0.016	0.083	0.080	U	0.015	0.080	0.082	U	0.015	0.082
Aroclor 1248	0.20	1.0	0.071	U	0.019	0.071	0.083	U	0.022	0.083	0.080	U	0.021	0.080	0.082	U	0.022	0.082
Aroclor 1254	0.20	1.0	0.071	U	0.024	0.071	0.083	U	0.028	0.083	0.080	U	0.027	0.080	0.082	U	0.028	0.082
Aroclor 1260	0.20	1.0	0.071	U	0.0079	0.071	0.083	U	0.0093	0.083	0.080	U	0.0089	0.080	0.082	U	0.0091	0.082
Aroclor 1262	NA	NA	0.071	U	0.012	0.071	0.083	U	0.014	0.083	0.080	U	0.014	0.080	0.082	U	0.014	0.082
Aroclor 1268	NA	NA	0.071	U	0.012	0.071	0.083	U	0.014	0.083	0.080	U	0.014	0.080	0.082	U	0.014	0.082
beta-BHC	0.40	2.0	0.0071	U	0.00096	0.0071	0.0083	U	0.0011	0.0083	0.008	U	0.0011	0.008	0.0082	U	0.0011	0.0082
Chlordane	0.20	1.0	0.071	U	0.015	0.071	0.083	U	0.018	0.083	0.080	U	0.017	0.080	0.082	U	0.018	0.082
delta-BHC	NA	NA	0.0071	U	0.0011	0.0071	0.0083	U	0.0013	0.0083	0.008	U	0.0012	0.008	0.0082	U	0.0012	0.0082
Dieldrin	0.040	0.20	0.0071	U	0.0014	0.0071	0.0083	U	0.0016	0.0083	0.008	U	0.0015	0.008	0.0082	U	0.0016	0.0082
Endosulfan I	470	6800	0.0071	U	0.0015	0.0071	0.0083	U	0.0017	0.0083	0.008	U	0.0017	0.008	0.0082	U	0.0017	0.0082
Endosulfan II	470	6800	0.0071	U	0.0011	0.0071	0.0083	U	0.0013	0.0083	0.008	U	0.0012	0.008	0.0082	U	0.0012	0.0082
Endosulfan sulfate	470	6800	0.0071	U	0.00091	0.0071	0.0083	U	0.0011	0.0083	0.008	U	0.001	0.008	0.0082	U	0.001	0.0082
Endrin	23	340	0.0071	U	0.00099	0.0071	0.0083	U	0.0012	0.0083	0.008	U	0.0011	0.008	0.0082	U	0.0011	0.0082
Endrin aldehyde	NA	NA	0.019		0.0018	0.0071	0.0083	U	0.0021	0.0083	0.008	U	0.002	0.008	0.0082	U	0.002	0.0082
Endrin ketone	NA	NA	0.0071	U	0.001	0.0071	0.0083	U	0.0012	0.0083	0.008	U	0.0012	0.008	0.0082	U	0.0012	0.0082
gamma-BHC (Lindane)	0.40	2.0	0.0071	U	0.00082	0.0071	0.0083	U	0.00097	0.0083	0.008	U	0.00093	0.008	0.0082	U	0.00095	0.0082
Heptachlor	0.10	0.70	0.0071	U	0.001	0.0071	0.0083	U	0.0012	0.0083	0.008	U	0.0011	0.008	0.0082	U	0.0012	0.0082
Heptachlor epoxide	0.070	0.30	0.0071	U	0.0014	0.0071	0.0083	U	0.0017	0.0083	0.008	U	0.0016	0.008	0.0082	U	0.0016	0.0082
Methoxychlor	390	5700	0.0071	U	0.00079	0.0071	0.0083	U	0.00093	0.0083	0.008	U	0.00089	0.008	0.0082	U	0.00091	0.0082
Toxaphene	0.60	3.0	0.071	U	0.015	0.071	0.083	U	0.017	0.083	0.080	U	0.017	0.080	0.082	U	0.017	0.082

Notes:

mg/kg - milligrams per kilogram

MDL - Method Detection Limit

PQL - Practicable Quantitation Limit

U - Analyte was analyzed for but not detected

J - Analyte was detected below the PQL (estimated concentration)

ND - None Detected

Analyte detected in excess of NJDEP soil remediation standard

**TABLE 3D**  
**Soil Sample Analytical Results - PESTICIDES/PCBs**

**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-5A			GP-5B			GP-6A			GP-6B								
Lab Sample No.	Soil	Soil	460-12202-16			460-12202-17			460-12202-12			460-12202-13								
Sampling Date	Remediation	Remediation	4/14/2010 3:07:00 PM			4/14/2010 3:17:00 PM			4/14/2010 1:33:00 PM			4/14/2010 1:43:00 PM								
Matrix	Standard	Standard	Solid			Solid			Solid			Solid								
Depth (feet)			0.0-0.5			5.0-5.5			0.0-0.5			5.0-5.5								
Dilution Factor			2			1			1			1								
Units	mg/kg	mg/kg	mg/kg			mg/kg			mg/kg			mg/kg								
PESTICIDES/PCBs					MDL	PQL			MDL	PQL		MDL	PQL							
4,4'-DDD	3.0	13	0.096		0.0017	0.014			0.0085	U	0.001	0.0085	0.0073	U	0.00087	0.0073	0.0082	U	0.00098	0.0082
4,4'-DDE	2.0	9.0	0.066		0.0028	0.014			0.0085	U	0.0017	0.0085	0.0073	U	0.0014	0.0073	0.0082	U	0.0016	0.0082
4,4'-DDT	2.0	8.0	0.20		0.0018	0.014			0.011		0.0011	0.0085	0.0073	U	0.00091	0.0073	0.0082	U	0.001	0.0082
Aldrin	0.040	0.20	0.014	U	0.0031	0.014			0.0085	U	0.0019	0.0085	0.0073	U	0.0016	0.0073	0.0082	U	0.0018	0.0082
alpha-BHC	0.10	0.50	0.014	U	0.0026	0.014			0.0085	U	0.0016	0.0085	0.0073	U	0.0013	0.0073	0.0082	U	0.0015	0.0082
Aroclor 1016	0.20	1.0	0.14	U	0.027	0.14			0.086	U	0.016	0.086	0.073	U	0.014	0.073	0.082	U	0.016	0.082
Aroclor 1221	0.20	1.0	0.14	U	0.043	0.14			0.086	U	0.026	0.086	0.073	U	0.022	0.073	0.082	U	0.025	0.082
Aroclor 1232	0.20	1.0	0.14	U	0.081	0.14			0.086	U	0.049	0.086	0.073	U	0.041	0.073	0.082	U	0.047	0.082
Aroclor 1242	0.20	1.0	0.14	U	0.027	0.14			0.086	U	0.016	0.086	0.073	U	0.014	0.073	0.082	U	0.016	0.082
Aroclor 1248	0.20	1.0	0.14	U	0.038	0.14			0.086	U	0.023	0.086	0.073	U	0.019	0.073	0.082	U	0.022	0.082
Aroclor 1254	0.20	1.0	2.1		0.049	0.14			0.069	J	0.029	0.086	0.073	U	0.025	0.073	0.082	U	0.028	0.082
Aroclor 1260	0.20	1.0	0.14	U	0.016	0.14			0.086	U	0.0096	0.086	0.073	U	0.0081	0.073	0.082	U	0.0092	0.082
Aroclor 1262	NA	NA	0.14	U	0.025	0.14			0.086	U	0.015	0.086	0.073	U	0.012	0.073	0.082	U	0.014	0.082
Aroclor 1268	NA	NA	0.14	U	0.025	0.14			0.086	U	0.015	0.086	0.073	U	0.012	0.073	0.082	U	0.014	0.082
beta-BHC	0.40	2.0	0.014	U	0.0019	0.014			0.0085	U	0.0012	0.0085	0.0073	U	0.00099	0.0073	0.0082	U	0.0011	0.0082
Chlordane	0.20	1.0	0.14	U	0.031	0.14			0.085	U	0.018	0.085	0.073	U	0.016	0.073	0.082	U	0.018	0.082
delta-BHC	NA	NA	0.014	U	0.0022	0.014			0.0085	U	0.0013	0.0085	0.0073	U	0.0011	0.0073	0.0082	U	0.0013	0.0082
Dieldrin	0.040	0.20	0.043	p	0.0028	0.014			0.0085	U	0.0016	0.0085	0.0073	U	0.0014	0.0073	0.0082	U	0.0016	0.0082
Endosulfan I	470	6800	0.014	U	0.003	0.014			0.0085	U	0.0018	0.0085	0.0073	U	0.0015	0.0073	0.0082	U	0.0017	0.0082
Endosulfan II	470	6800	0.014	U	0.0022	0.014			0.0085	U	0.0013	0.0085	0.0073	U	0.0011	0.0073	0.0082	U	0.0012	0.0082
Endosulfan sulfate	470	6800	0.014	U	0.0018	0.014			0.0085	U	0.0011	0.0085	0.0073	U	0.00093	0.0073	0.0082	U	0.0011	0.0082
Endrin	23	340	0.0091	p	0.002	0.014			0.0085	U	0.0012	0.0085	0.0073	U	0.001	0.0073	0.0082	U	0.0012	0.0082
Endrin aldehyde	NA	NA	0.011	p	0.0036	0.014			0.0085	U	0.0021	0.0085	0.0073	U	0.0018	0.0073	0.0082	U	0.0021	0.0082
Endrin ketone	NA	NA	0.014	U	0.0021	0.014			0.0085	U	0.0013	0.0085	0.0073	U	0.0011	0.0073	0.0082	U	0.0012	0.0082
gamma-BHC (Lindane)	0.40	2.0	0.014	U	0.0017	0.014			0.0085	U	0.00099	0.0085	0.0073	U	0.00085	0.0073	0.0082	U	0.00096	0.0082
Heptachlor	0.10	0.70	0.014	U	0.002	0.014			0.0085	U	0.0012	0.0085	0.0073	U	0.001	0.0073	0.0082	U	0.0012	0.0082
Heptachlor epoxide	0.070	0.30	0.014	U	0.0029	0.014			0.0085	U	0.0017	0.0085	0.0073	U	0.0015	0.0073	0.0082	U	0.0017	0.0082
Methoxychlor	390	5700	0.038	p	0.0016	0.014			0.0085	U	0.00096	0.0085	0.0073	U	0.00081	0.0073	0.0082	U	0.00092	0.0082
Toxaphene	0.60	3.0	0.14	U	0.030	0.14			0.085	U	0.018	0.085	0.073	U	0.015	0.073	0.082	U	0.017	0.082

Notes:

mg/kg - milligrams per kilogram

MDL - Method Detection Limit

PQL - Practicable Quantitation Limit

U - Analyte was analyzed for but not detected

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ND - None Detected

  Analyte detected in excess of NJDEP soil remediation standard



**TABLE 3D**  
**Soil Sample Analytical Results - PESTICIDES/PCBs**

**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-7A			GP-7B			GP-8A			GP-8B								
Lab Sample No.	Soil	Soil	460-12202-7			460-12202-8			460-12150-12			460-12150-13								
Sampling Date	Remediation	Remediation	4/14/2010 11:22:00 AM			4/14/2010 11:38:00 AM			4/13/2010 1:48:00 PM			4/13/2010 2:06:00 PM								
Matrix	Standard	Standard	Solid			Solid			Solid			Solid								
Depth (feet)			0.0-0.5			10.5-11.0			0.0-0.5			11.5-12.0								
Dilution Factor			1			1			1			1								
Units	mg/kg	mg/kg	mg/kg			mg/kg			mg/kg			mg/kg								
PESTICIDES/PCBs					MDL	PQL			MDL	PQL		MDL	PQL							
4,4'-DDD	3.0	13	0.0071	U	0.00085	0.0071			0.0082	U	0.00098	0.0082	0.0073	U	0.00087	0.0073	0.0086	U	0.001	0.0086
4,4'-DDE	2.0	9.0	0.0071	U	0.0014	0.0071			0.0082	U	0.0016	0.0082	0.0073	U	0.0014	0.0073	0.0086	U	0.0017	0.0086
4,4'-DDT	2.0	8.0	0.0071	U	0.00090	0.0071			0.0082	U	0.001	0.0082	0.0073	U	0.00091	0.0073	0.0086	U	0.0011	0.0086
Aldrin	0.040	0.20	0.0071	U	0.0016	0.0071			0.0082	U	0.0018	0.0082	0.0073	U	0.0016	0.0073	0.0086	U	0.0019	0.0086
alpha-BHC	0.10	0.50	0.0071	U	0.0013	0.0071			0.0082	U	0.0015	0.0082	0.0088		0.0013	0.0073	0.0086	U	0.0016	0.0086
Aroclor 1016	0.20	1.0	0.071	U	0.014	0.071			0.082	U	0.016	0.082	0.073	U	0.014	0.073	0.086	U	0.016	0.086
Aroclor 1221	0.20	1.0	0.071	U	0.022	0.071			0.082	U	0.025	0.082	0.073	U	0.022	0.073	0.086	U	0.026	0.086
Aroclor 1232	0.20	1.0	0.071	U	0.040	0.071			0.082	U	0.047	0.082	0.073	U	0.041	0.073	0.086	U	0.049	0.086
Aroclor 1242	0.20	1.0	0.071	U	0.014	0.071			0.082	U	0.016	0.082	0.073	U	0.014	0.073	0.086	U	0.016	0.086
Aroclor 1248	0.20	1.0	0.071	U	0.019	0.071			0.082	U	0.022	0.082	0.073	U	0.019	0.073	0.086	U	0.023	0.086
Aroclor 1254	0.20	1.0	0.071	U	0.024	0.071			0.082	U	0.028	0.082	0.067	J	0.025	0.073	0.086	U	0.029	0.086
Aroclor 1260	0.20	1.0	0.019	J	0.008	0.071			0.082	U	0.0092	0.082	0.073	U	0.0081	0.073	0.086	U	0.0096	0.086
Aroclor 1262	NA	NA	0.071	U	0.012	0.071			0.082	U	0.014	0.082	0.073	U	0.012	0.073	0.086	U	0.015	0.086
Aroclor 1268	NA	NA	0.071	U	0.012	0.071			0.082	U	0.014	0.082	0.073	U	0.012	0.073	0.086	U	0.015	0.086
beta-BHC	0.40	2.0	0.0071	U	0.00097	0.0071			0.0082	U	0.0011	0.0082	0.0073	U	0.00099	0.0073	0.0086	U	0.0012	0.0086
Chlordane	0.20	1.0	0.071	U	0.015	0.071			0.082	U	0.018	0.082	0.073	U	0.016	0.073	0.086	U	0.019	0.086
delta-BHC	NA	NA	0.0071	U	0.0011	0.0071			0.0082	U	0.0013	0.0082	0.0073	U	0.0011	0.0073	0.0086	U	0.0013	0.0086
Dieldrin	0.040	0.20	0.0071	U	0.0014	0.0071			0.0082	U	0.0016	0.0082	0.0073	U	0.0014	0.0073	0.0086	U	0.0017	0.0086
Endosulfan I	470	6800	0.0071	U	0.0015	0.0071			0.0082	U	0.0017	0.0082	0.0073	U	0.0015	0.0073	0.0086	U	0.0018	0.0086
Endosulfan II	470	6800	0.0071	U	0.0011	0.0071			0.0082	U	0.0012	0.0082	0.0073	U	0.0011	0.0073	0.0086	U	0.0013	0.0086
Endosulfan sulfate	470	6800	0.0071	U	0.00092	0.0071			0.0082	U	0.0011	0.0082	0.0073	U	0.00093	0.0073	0.0086	U	0.0011	0.0086
Endrin	23	340	0.0071	U	0.001	0.0071			0.0082	U	0.0012	0.0082	0.0073	U	0.001	0.0073	0.0086	U	0.0012	0.0086
Endrin aldehyde	NA	NA	0.0071	U	0.0018	0.0071			0.0082	U	0.002	0.0082	0.012		0.0018	0.0073	0.0086	U	0.0021	0.0086
Endrin ketone	NA	NA	0.0071	U	0.0011	0.0071			0.0082	U	0.0012	0.0082	0.0073	U	0.0011	0.0073	0.0086	U	0.0013	0.0086
gamma-BHC (Lindane)	0.40	2.0	0.0071	U	0.00083	0.0071			0.0082	U	0.00096	0.0082	0.0073	U	0.00085	0.0073	0.0086	U	0.001	0.0086
Heptachlor	0.10	0.70	0.0071	U	0.001	0.0071			0.0082	U	0.0012	0.0082	0.0073	U	0.001	0.0073	0.0086	U	0.0012	0.0086
Heptachlor epoxide	0.070	0.30	0.0071	U	0.0014	0.0071			0.0082	U	0.0017	0.0082	0.0073	U	0.0015	0.0073	0.0086	U	0.0017	0.0086
Methoxychlor	390	5700	0.0071	U	0.00080	0.0071			0.0082	U	0.00092	0.0082	0.0073	U	0.00081	0.0073	0.0086	U	0.00096	0.0086
Toxaphene	0.60	3.0	0.071	U	0.015	0.071			0.082	U	0.017	0.082	0.073	U	0.015	0.073	0.086	U	0.018	0.086

Notes:

mg/kg - milligrams per kilogram

MDL - Method Detection Limit

PQL - Practicable Quantitation Limit

U - Analyte was analyzed for but not detected

J - Analyte was detected below the PQL (estimated concentration)

ND - None Detected

Analyte detected in excess of NJDEP soil remediation standard

**TABLE 3D**  
**Soil Sample Analytical Results - PESTICIDES/PCBs**

**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-9A			GP-9B			GP-16			GP-17								
Lab Sample No.	Soil	Soil	460-12150-14			460-12150-15			460-12150-7			460-12258-4								
Sampling Date	Remediation	Remediation	4/13/2010 2:28:00 PM			4/13/2010 2:37:00 PM			4/13/2010 11:38:00 AM			4/15/2010 10:54:00 AM								
Matrix	Standard	Standard	Solid			Solid			Solid			Solid								
Depth (feet)			0.0-0.5			11.5-12.0			0.0-0.5			0.0-0.5								
Dilution Factor			1			1			1			1								
Units	mg/kg	mg/kg	mg/kg			mg/kg			mg/kg			mg/kg								
PESTICIDES/PCBs					MDL	PQL			MDL	PQL		MDL	PQL							
4,4'-DDD	3.0	13	0.0073	U	0.00087	0.0073			0.0081	U	0.00096	0.0081	0.0071	U	0.00085	0.0071	0.0073	U	0.00098	0.0082
4,4'-DDE	2.0	9.0	0.016		0.0014	0.0073			0.0081	U	0.0016	0.0081	0.0071	U	0.0014	0.0071	0.0073	U	0.0016	0.0082
4,4'-DDT	2.0	8.0	0.025	p	0.00092	0.0073			0.0081	U	0.001	0.0081	0.0071	U	0.00089	0.0071	0.0073	U	0.001	0.0082
Aldrin	0.040	0.20	0.0073	U	0.0016	0.0073			0.0081	U	0.0018	0.0081	0.0071	U	0.0016	0.0071	0.0073	U	0.0018	0.0082
alpha-BHC	0.10	0.50	0.0073	U	0.0014	0.0073			0.0081	U	0.0015	0.0081	0.0071	U	0.0013	0.0071	0.0073	U	0.0015	0.0082
Aroclor 1016	0.20	1.0	0.073	U	0.014	0.073			0.081	U	0.015	0.081	0.071	U	0.014	0.071	0.073	U	0.013	0.070
Aroclor 1221	0.20	1.0	0.073	U	0.022	0.073			0.081	U	0.024	0.081	0.071	U	0.021	0.071	0.073	U	0.021	0.070
Aroclor 1232	0.20	1.0	0.073	U	0.042	0.073			0.081	U	0.046	0.081	0.071	U	0.040	0.071	0.073	U	0.040	0.070
Aroclor 1242	0.20	1.0	0.073	U	0.014	0.073			0.081	U	0.015	0.081	0.071	U	0.013	0.071	0.073	U	0.013	0.070
Aroclor 1248	0.20	1.0	0.073	U	0.019	0.073			0.081	U	0.021	0.081	0.071	U	0.019	0.071	0.073	U	0.019	0.070
Aroclor 1254	0.20	1.0	<b>0.23</b>		0.025	0.073			0.081	U	0.028	0.081	0.071	U	0.024	0.071	0.073	U	0.024	0.070
Aroclor 1260	0.20	1.0	0.073	U	0.0082	0.073			0.081	U	0.009	0.081	0.071	U	0.0079	0.071	0.073	U	0.0078	0.070
Aroclor 1262	NA	NA	0.073	U	0.013	0.073			0.081	U	0.014	0.081	0.071	U	0.012	0.071	0.073	U	0.012	0.070
Aroclor 1268	NA	NA	0.073	U	0.013	0.073			0.081	U	0.014	0.081	0.071	U	0.012	0.071	0.073	U	0.012	0.070
beta-BHC	0.40	2.0	0.0073	U	0.00099	0.0073			0.0081	U	0.0011	0.0081	0.0071	U	0.00096	0.0071	0.0073	U	0.0011	0.0082
Chlordane	0.20	1.0	0.073	U	0.016	0.073			0.081	U	0.017	0.081	0.071	U	0.015	0.071	0.073	U	0.018	0.082
delta-BHC	NA	NA	0.0073	U	0.0011	0.0073			0.0081	U	0.0012	0.0081	0.0071	U	0.0011	0.0071	0.0073	U	0.0012	0.0082
Dieldrin	0.040	0.20	0.0057	p	0.0014	0.0073			0.0081	U	0.0016	0.0081	0.0071	U	0.0014	0.0071	0.0073	U	0.0016	0.0082
Endosulfan I	470	6800	0.0073	U	0.0015	0.0073			0.0081	U	0.0017	0.0081	0.0071	U	0.0015	0.0071	0.0073	U	0.0017	0.0082
Endosulfan II	470	6800	0.0073	U	0.0011	0.0073			0.0081	U	0.0012	0.0081	0.0071	U	0.0011	0.0071	0.0073	U	0.0012	0.0082
Endosulfan sulfate	470	6800	0.0073	U	0.00094	0.0073			0.0081	U	0.001	0.0081	0.0071	U	0.00091	0.0071	0.0073	U	0.0011	0.0082
Endrin	23	340	0.0073	U	0.001	0.0073			0.0081	U	0.0011	0.0081	0.0071	U	0.001	0.0071	0.0073	U	0.0012	0.0082
Endrin aldehyde	NA	NA	0.0073	U	0.0018	0.0073			0.0081	U	0.002	0.0081	0.0071	U	0.0018	0.0071	0.0073	U	0.002	0.0082
Endrin ketone	NA	NA	0.0073	U	0.0011	0.0073			0.0081	U	0.0012	0.0081	0.0071	U	0.001	0.0071	0.0073	U	0.0012	0.0082
gamma-BHC (Lindane)	0.40	2.0	0.0073	U	0.00085	0.0073			0.0081	U	0.00094	0.0081	0.0071	U	0.00083	0.0071	0.0073	U	0.00095	0.0082
Heptachlor	0.10	0.70	0.0073	U	0.001	0.0073			0.0081	U	0.0012	0.0081	0.0071	U	0.001	0.0071	0.0073	U	0.0012	0.0082
Heptachlor epoxide	0.070	0.30	0.0073	U	0.0015	0.0073			0.0081	U	0.0016	0.0081	0.0071	U	0.0014	0.0071	0.0073	U	0.0017	0.0082
Methoxychlor	390	5700	0.0073	U	0.00082	0.0073			0.0081	U	0.00090	0.0081	0.0071	U	0.00079	0.0071	0.0073	U	0.00092	0.0082
Toxaphene	0.60	3.0	0.073	U	0.015	0.073			0.081	U	0.017	0.081	0.071	U	0.015	0.071	0.073	U	0.017	0.082

Notes:

mg/kg - milligrams per kilogram

MDL - Method Detection Limit

PQL - Practicable Quantitation Limit

U - Analyte was analyzed for but not detected

J - Analyte was detected below the PQL (estimated concentration)

ND - None Detected

  Analyte detected in excess of NJDEP soil remediation standard

**TABLE 3D**  
**Soil Sample Analytical Results - PESTICIDES/PCBs**

**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-18			GP-19			GP-20A			GP-20B						
Lab Sample No.	Soil	Soil	460-12258-3			460-12258-1			460-12202-1			460-12202-2						
Sampling Date	Remediation	Remediation	4/15/2010 9:20:00 AM			4/15/2010 8:43:00 AM			4/14/2010 9:12:00 AM			4/14/2010 9:22:00 AM						
Matrix	Standard	Standard	Solid			Solid			Solid			Solid						
Depth (feet)			0.0-0.5			0.0-0.5			0.0-0.5			10.0-10.5						
Dilution Factor			1			1			1			1						
Units	mg/kg	mg/kg	mg/kg			mg/kg			mg/kg			mg/kg						
PESTICIDES/PCBs					MDL	PQL			MDL	PQL				MDL	PQL			
4,4'-DDD	3.0	13	0.0077	U	0.00087	0.0073	0.0073	U	0.001	0.0086	0.0072	U	0.00086	0.0072	0.0075	U	0.00089	0.0075
4,4'-DDE	2.0	9.0	0.0077	U	0.0014	0.0073	0.0073	U	0.0017	0.0086	0.0072	U	0.0014	0.0072	0.0075	U	0.0015	0.0075
4,4'-DDT	2.0	8.0	0.0077	U	0.00092	0.0073	0.0073	U	0.0011	0.0086	0.0074	U	0.00090	0.0072	0.0075	U	0.00094	0.0075
Aldrin	0.040	0.20	0.0077	U	0.0016	0.0073	0.0073	U	0.0019	0.0086	0.0072	U	0.0016	0.0072	0.0075	U	0.0016	0.0075
alpha-BHC	0.10	0.50	0.0077	U	0.0014	0.0073	0.0073	U	0.0016	0.0086	0.0072	U	0.0013	0.0072	0.0075	U	0.0014	0.0075
Aroclor 1016	0.20	1.0	0.077	U	0.016	0.082	0.073	U	0.014	0.073	0.072	U	0.014	0.072	0.075	U	0.014	0.075
Aroclor 1221	0.20	1.0	0.077	U	0.025	0.082	0.073	U	0.022	0.073	0.072	U	0.022	0.072	0.075	U	0.023	0.075
Aroclor 1232	0.20	1.0	0.077	U	0.047	0.082	0.073	U	0.041	0.073	0.072	U	0.041	0.072	0.075	U	0.042	0.075
Aroclor 1242	0.20	1.0	0.077	U	0.016	0.082	0.073	U	0.014	0.073	0.072	U	0.014	0.072	0.075	U	0.014	0.075
Aroclor 1248	0.20	1.0	0.077	U	0.022	0.082	0.073	U	0.019	0.073	0.072	U	0.019	0.072	0.075	U	0.020	0.075
Aroclor 1254	0.20	1.0	0.077	U	0.028	0.082	0.073	U	0.025	0.073	0.055	J	0.025	0.072	0.075	U	0.026	0.075
Aroclor 1260	0.20	1.0	0.077	U	0.0092	0.082	0.073	U	0.0082	0.073	0.072	U	0.008	0.072	0.075	U	0.0084	0.075
Aroclor 1262	NA	NA	0.077	U	0.014	0.082	0.073	U	0.013	0.073	0.072	U	0.012	0.072	0.075	U	0.013	0.075
Aroclor 1268	NA	NA	0.077	U	0.014	0.082	0.073	U	0.013	0.073	0.072	U	0.012	0.072	0.075	U	0.013	0.075
beta-BHC	0.40	2.0	0.0077	U	0.00099	0.0073	0.0073	U	0.0012	0.0086	0.0072	U	0.00098	0.0072	0.0075	U	0.001	0.0075
Chlordane	0.20	1.0	0.077	U	0.016	0.073	0.073	U	0.019	0.086	0.072	U	0.016	0.072	0.075	U	0.016	0.075
delta-BHC	NA	NA	0.0077	U	0.0011	0.0073	0.0073	U	0.0013	0.0086	0.0072	U	0.0011	0.0072	0.0075	U	0.0011	0.0075
Dieldrin	0.040	0.20	0.0077	U	0.0014	0.0073	0.0073	U	0.0016	0.0086	0.0072	U	0.0014	0.0072	0.0075	U	0.0014	0.0075
Endosulfan I	470	6800	0.0077	U	0.0015	0.0073	0.0073	U	0.0018	0.0086	0.0072	U	0.0015	0.0072	0.0075	U	0.0016	0.0075
Endosulfan II	470	6800	0.0077	U	0.0011	0.0073	0.0073	U	0.0013	0.0086	0.0072	U	0.0011	0.0072	0.0075	U	0.0011	0.0075
Endosulfan sulfate	470	6800	0.0077	U	0.00094	0.0073	0.0073	U	0.0011	0.0086	0.0072	U	0.00092	0.0072	0.0075	U	0.00096	0.0075
Endrin	23	340	0.0077	U	0.001	0.0073	0.0073	U	0.0012	0.0086	0.0072	U	0.001	0.0072	0.0075	U	0.001	0.0075
Endrin aldehyde	NA	NA	0.0077	U	0.0018	0.0073	0.0073	U	0.0021	0.0086	0.0072	U	0.0018	0.0072	0.0075	U	0.0019	0.0075
Endrin ketone	NA	NA	0.0077	U	0.0011	0.0073	0.0073	U	0.0013	0.0086	0.0072	U	0.0011	0.0072	0.0075	U	0.0011	0.0075
gamma-BHC (Lindane)	0.40	2.0	0.0077	U	0.00085	0.0073	0.0073	U	0.001	0.0086	0.0072	U	0.00084	0.0072	0.0075	U	0.00087	0.0075
Heptachlor	0.10	0.70	0.0077	U	0.001	0.0073	0.0073	U	0.0012	0.0086	0.0072	U	0.001	0.0072	0.0075	U	0.0011	0.0075
Heptachlor epoxide	0.070	0.30	0.0077	U	0.0015	0.0073	0.0073	U	0.0017	0.0086	0.0072	U	0.0014	0.0072	0.0075	U	0.0015	0.0075
Methoxychlor	390	5700	0.0077	U	0.00082	0.0073	0.0073	U	0.00096	0.0086	0.0072	U	0.00080	0.0072	0.0075	U	0.00084	0.0075
Toxaphene	0.60	3.0	0.077	U	0.015	0.073	0.073	U	0.018	0.086	0.072	U	0.015	0.072	0.075	U	0.016	0.075

Notes:

mg/kg - milligrams per kilogram

MDL - Method Detection Limit

PQL - Practicable Quantitation Limit

U - Analyte was analyzed for but not detected

J - Analyte was detected below the PQL (estimated concentration)

ND - None Detected

  Analyte detected in excess of NJDEP soil remediation standard

**TABLE 3D**  
**Soil Sample Analytical Results - PESTICIDES/PCBs**

**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-21A			GP-21B			GP-22A			GP-22B										
Lab Sample No.	Soil	Soil	460-12202-3			460-12202-4			460-12202-5			460-12202-6										
Sampling Date	Remediation	Remediation	4/14/2010 9:33:00 AM			4/14/2010 9:47:00 AM			4/14/2010 10:06:00 AM			4/14/2010 10:13:00 AM										
Matrix	Standard	Standard	Solid			Solid			Solid			Solid										
Depth (feet)			0.0-0.5			11.5-12.0			0.0-0.5			11.5-12.0										
Dilution Factor			1			1			1			1										
Units	mg/kg	mg/kg	mg/kg			mg/kg			mg/kg			mg/kg										
PESTICIDES/PCBs					MDL	PQL			MDL	PQL				MDL	PQL							
4,4'-DDD	3.0	13	0.007	U	0.00084	0.007			0.0082	U	0.00098	0.0082		0.0073	U	0.00087	0.0073		0.0086	U	0.001	0.0086
4,4'-DDE	2.0	9.0	0.007	U	0.0014	0.007			0.0082	U	0.0016	0.0082		0.0073	U	0.0014	0.0073		0.0086	U	0.0017	0.0086
4,4'-DDT	2.0	8.0	0.007	U	0.00088	0.007			0.0082	U	0.001	0.0082		0.0073	U	0.00092	0.0073		0.0086	U	0.0011	0.0086
Aldrin	0.040	0.20	0.007	U	0.0015	0.007			0.0082	U	0.0018	0.0082		0.0073	U	0.0016	0.0073		0.0086	U	0.0019	0.0086
alpha-BHC	0.10	0.50	0.007	U	0.0013	0.007			0.0082	U	0.0015	0.0082		0.0073	U	0.0014	0.0073		0.0086	U	0.0016	0.0086
Aroclor 1016	0.20	1.0	0.070	U	0.013	0.070			0.082	U	0.016	0.082		0.073	U	0.014	0.073		0.086	U	0.016	0.086
Aroclor 1221	0.20	1.0	0.070	U	0.021	0.070			0.082	U	0.025	0.082		0.073	U	0.022	0.073		0.086	U	0.026	0.086
Aroclor 1232	0.20	1.0	0.070	U	0.040	0.070			0.082	U	0.047	0.082		0.073	U	0.041	0.073		0.086	U	0.049	0.086
Aroclor 1242	0.20	1.0	0.070	U	0.013	0.070			0.082	U	0.016	0.082		0.073	U	0.014	0.073		0.086	U	0.016	0.086
Aroclor 1248	0.20	1.0	0.070	U	0.019	0.070			0.082	U	0.022	0.082		0.073	U	0.019	0.073		0.086	U	0.023	0.086
Aroclor 1254	0.20	1.0	0.070	U	0.024	0.070			0.082	U	0.028	0.082		0.073	U	0.025	0.073		0.086	U	0.029	0.086
Aroclor 1260	0.20	1.0	0.070	U	0.0078	0.070			0.082	U	0.0092	0.082		0.073	U	0.0082	0.073		0.086	U	0.0096	0.086
Aroclor 1262	NA	NA	0.070	U	0.012	0.070			0.082	U	0.014	0.082		0.073	U	0.013	0.073		0.086	U	0.015	0.086
Aroclor 1268	NA	NA	0.070	U	0.012	0.070			0.082	U	0.014	0.082		0.073	U	0.013	0.073		0.086	U	0.015	0.086
beta-BHC	0.40	2.0	0.007	U	0.00095	0.007			0.0082	U	0.0011	0.0082		0.0073	U	0.00099	0.0073		0.0086	U	0.0012	0.0086
Chlordane	0.20	1.0	0.070	U	0.015	0.070			0.082	U	0.018	0.082		0.073	U	0.016	0.073		0.086	U	0.019	0.086
delta-BHC	NA	NA	0.007	U	0.0011	0.007			0.0082	U	0.0012	0.0082		0.0073	U	0.0011	0.0073		0.0086	U	0.0013	0.0086
Dieldrin	0.040	0.20	0.007	U	0.0014	0.007			0.0082	U	0.0016	0.0082		0.0073	U	0.0014	0.0073		0.0086	U	0.0016	0.0086
Endosulfan I	470	6800	0.007	U	0.0015	0.007			0.0082	U	0.0017	0.0082		0.0073	U	0.0015	0.0073		0.0086	U	0.0018	0.0086
Endosulfan II	470	6800	0.007	U	0.0011	0.007			0.0082	U	0.0012	0.0082		0.0073	U	0.0011	0.0073		0.0086	U	0.0013	0.0086
Endosulfan sulfate	470	6800	0.007	U	0.00090	0.007			0.0082	U	0.0011	0.0082		0.0073	U	0.00094	0.0073		0.0086	U	0.0011	0.0086
Endrin	23	340	0.007	U	0.00099	0.007			0.0082	U	0.0012	0.0082		0.0073	U	0.001	0.0073		0.0086	U	0.0012	0.0086
Endrin aldehyde	NA	NA	0.007	U	0.0018	0.007			0.0082	U	0.002	0.0082		0.0073	U	0.0018	0.0073		0.0086	U	0.0021	0.0086
Endrin ketone	NA	NA	0.007	U	0.001	0.007			0.0082	U	0.0012	0.0082		0.0073	U	0.0011	0.0073		0.0086	U	0.0013	0.0086
gamma-BHC (Lindane)	0.40	2.0	0.007	U	0.00082	0.007			0.0082	U	0.00095	0.0082		0.0073	U	0.00085	0.0073		0.0086	U	0.001	0.0086
Heptachlor	0.10	0.70	0.007	U	0.001	0.007			0.0082	U	0.0012	0.0082		0.0073	U	0.001	0.0073		0.0086	U	0.0012	0.0086
Heptachlor epoxide	0.070	0.30	0.007	U	0.0014	0.007			0.0082	U	0.0017	0.0082		0.0073	U	0.0015	0.0073		0.0086	U	0.0017	0.0086
Methoxychlor	390	5700	0.007	U	0.00079	0.007			0.0082	U	0.00092	0.0082		0.0073	U	0.00082	0.0073		0.0086	U	0.00096	0.0086
Toxaphene	0.60	3.0	0.070	U	0.015	0.070			0.082	U	0.017	0.082		0.073	U	0.015	0.073		0.086	U	0.018	0.086

Notes:

mg/kg - milligrams per kilogram

MDL - Method Detection Limit

PQL - Practicable Quantitation Limit

U - Analyte was analyzed for but not detected

J - Analyte was detected below the PQL (estimated concentration)

ND - None Detected

Analyte detected in excess of NJDEP soil remediation standard

**TABLE 3D**  
**Soil Sample Analytical Results - PESTICIDES/PCBs**

**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-7BDUP			GP-19DUP				
Lab Sample No.	Soil	Soil	460-12202-9			460-12258-2				
Sampling Date	Remediation	Remediation	4/14/2010 11:38:00 AM			4/15/2010 8:43:00 AM				
Matrix	Standard	Standard	Solid			Solid				
Depth (feet)			10.5-11.0			0.0-0.5				
Dilution Factor			1			1				
Units	mg/kg	mg/kg	mg/kg			mg/kg				
PESTICIDES/PCBs					MDL	PQL		MDL	PQL	
4,4'-DDD	3.0	13	0.0082	U	0.00097	0.0082	0.0073	U	0.00097	0.0082
4,4'-DDE	2.0	9.0	0.0082	U	0.0016	0.0082	0.0073	U	0.0016	0.0082
4,4'-DDT	2.0	8.0	0.0082	U	0.001	0.0082	0.0073	U	0.001	0.0082
Aldrin	0.040	0.20	0.0082	U	0.0018	0.0082	0.0073	U	0.0018	0.0082
alpha-BHC	0.10	0.50	0.0082	U	0.0015	0.0082	0.0073	U	0.0015	0.0082
Aroclor 1016	0.20	1.0	0.082	U	0.016	0.082	0.073	U	0.016	0.082
Aroclor 1221	0.20	1.0	0.082	U	0.025	0.082	0.073	U	0.025	0.082
Aroclor 1232	0.20	1.0	0.082	U	0.046	0.082	0.073	U	0.046	0.082
Aroclor 1242	0.20	1.0	0.082	U	0.015	0.082	0.073	U	0.015	0.082
Aroclor 1248	0.20	1.0	0.082	U	0.022	0.082	0.073	U	0.022	0.082
Aroclor 1254	0.20	1.0	0.082	U	0.028	0.082	0.073	U	0.028	0.082
Aroclor 1260	0.20	1.0	0.082	U	0.0091	0.082	0.073	U	0.0091	0.082
Aroclor 1262	NA	NA	0.082	U	0.014	0.082	0.073	U	0.014	0.082
Aroclor 1268	NA	NA	0.082	U	0.014	0.082	0.073	U	0.014	0.082
beta-BHC	0.40	2.0	0.0082	U	0.0011	0.0082	0.0073	U	0.0011	0.0082
Chlordane	0.20	1.0	0.082	U	0.018	0.082	0.073	U	0.018	0.082
delta-BHC	NA	NA	0.0082	U	0.0012	0.0082	0.0073	U	0.0012	0.0082
Dieldrin	0.040	0.20	0.0082	U	0.0016	0.0082	0.0073	U	0.0016	0.0082
Endosulfan I	470	6800	0.0082	U	0.0017	0.0082	0.0073	U	0.0017	0.0082
Endosulfan II	470	6800	0.0082	U	0.0012	0.0082	0.0073	U	0.0012	0.0082
Endosulfan sulfate	470	6800	0.0082	U	0.001	0.0082	0.0073	U	0.001	0.0082
Endrin	23	340	0.0082	U	0.0011	0.0082	0.0073	U	0.0011	0.0082
Endrin aldehyde	NA	NA	0.0082	U	0.002	0.0082	0.0073	U	0.002	0.0082
Endrin ketone	NA	NA	0.0082	U	0.0012	0.0082	0.0073	U	0.0012	0.0082
gamma-BHC (Lindane)	0.40	2.0	0.0082	U	0.00095	0.0082	0.0073	U	0.00095	0.0082
Heptachlor	0.10	0.70	0.0082	U	0.0012	0.0082	0.0073	U	0.0012	0.0082
Heptachlor epoxide	0.070	0.30	0.0082	U	0.0016	0.0082	0.0073	U	0.0016	0.0082
Methoxychlor	390	5700	0.0082	U	0.00091	0.0082	0.0073	U	0.00091	0.0082
Toxaphene	0.60	3.0	0.082	U	0.017	0.082	0.073	U	0.017	0.082

Notes:

mg/kg - milligrams per kilogram

MDL - Method Detection Limit

PQL - Practicable Quantitation Limit

U - Analyte was analyzed for but not detected

J - Analyte was detected below the PQL (estimated concentration)

ND - None Detected

Analyte detected in excess of NJDEP soil remediation standard

**TABLE 3E**  
**Soil Sample Analytical Results - METALS**  
**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-1A			GP-1B			GP-2A			GP-2B					
Lab Sample No.	Soil	Soil	460-12150-10			460-12150-11			460-12150-8			460-12150-9					
Sampling Date	Remediation	Remediation	4/13/2010 12:26:00 PM			4/13/2010 12:37:00 PM			4/13/2010 12:06:00 PM			4/13/2010 12:14:00 PM					
Matrix	Standard	Standard	Solid			Solid			Solid			Solid					
Depth (feet)			0.0-0.5			4.0-4.5			0.0-0.5			4.0-4.5					
Dilution Factor																	
Units	mg/kg	mg/kg	mg/kg			mg/kg			mg/kg			mg/kg					
<b>METALS</b>					MDL	PQL			MDL	PQL		MDL	PQL				
Aluminum	78,000	NA	9600		15.8	43.2			2500	15.1	41.3	4630	15.1	41.1	6130	17.1	46.8
Antimony	31	450	2.2	U	0.95	2.2			2.1	U	0.91	2.1	2.1	U	0.90	2.1	2.3
Arsenic	19	19	2.8		0.75	1.1			1.1		0.72	1.0	1.7		0.72	1.0	1.4
Barium	16000	59000	62.0		1.3	43.2			8.7	J	1.2	41.3	22.2	J	1.2	41.1	24.5
Beryllium	16	140	0.66		0.19	0.43			0.18	J	0.18	0.41	0.23	J	0.18	0.41	0.35
Cadmium	78	78	1.1	U	0.17	1.1			1.0	U	0.16	1.0	1.0	U	0.16	1.0	1.2
Calcium	NA	NA	467	J	28.4	1080			368	J	27.2	1030	346	J	27.0	1030	585
Chromium	NA	NA	21.8		1.3	2.2			4.3		1.2	2.1	13.5		1.2	2.1	8.5
Cobalt	1600	590	4.5	J	1.3	10.8			2.2	J	1.3	10.3	2.1	J	1.3	10.3	4.1
Copper	3100	45000	21.5		0.88	5.4			3.8	J	0.84	5.2	8.7		0.84	5.1	6.8
Iron	NA	NA	14000		11.5	32.4			6860		11.0	31.0	8420		10.9	30.8	12000
Lead	400	800	60.1		0.54	1.1			1.7		0.52	1.0	40.9		0.51	1.0	3.6
Magnesium	NA	NA	1300		11.4	1080			742	J	10.9	1030	893	J	10.9	1030	1150
Manganese	11000	5900	252		1.2	3.2			105		1.2	3.1	81.1		1.2	3.1	213
Mercury	23	65	0.073		0.025	0.032			0.032	U	0.025	0.032	0.092		0.026	0.033	0.036
Nickel	1600	23000	11.7		0.58	8.6			4.0	J	0.55	8.3	4.8	J	0.55	8.2	6.3
Potassium	NA	NA	324	J	48.8	1080			222	J	46.6	1030	268	J	46.4	1030	431
Selenium	390	5700	2.2	U	1.0	2.2			2.1	U	0.97	2.1	2.1	U	0.96	2.1	2.3
Silver	390	5700	2.2	U	0.16	2.2			2.1	U	0.16	2.1	2.1	U	0.16	2.1	2.3
Sodium	NA	NA	1080	U	66.4	1080			1030	U	63.4	1030	1030	U	63.1	1030	1170
Thallium	5	79	2.2	U	1.0	2.2			2.1	U	1.0	2.1	2.1	U	0.99	2.1	2.3
Vanadium	78	1100	18.4		0.56	10.8			8.0	J	0.54	10.3	11.7		0.53	10.3	16.8
Zinc	23000	110000	79.7		1.1	6.5			17.8		1.0	6.2	20.5		1.0	6.2	17.1

**Notes:**

mg/kg - milligrams per kilogram

ug/l - micrograms per liter

MDL - Method Detection Limit

PQL - Practicable Quantitation Limit

U - Analyte was analyzed for but not detected

J - Analyte was detected below the PQL (estimated concentration)

ND - None Detected

- Analyte detected in excess of NJDEP soil remediation standard

**TABLE 3E**  
**Soil Sample Analytical Results - METALS**  
**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-3A				GP-3B				GP-4A				GP-4B			
Lab Sample No.	Soil	Soil	460-12202-10				460-12202-11				460-12202-14				460-12202-15			
Sampling Date	Remediation	Remediation	4/14/2010 12:58:00 PM				4/14/2010 1:06:00 PM				4/14/2010 2:21:00 PM				4/14/2010 2:32:00 PM			
Matrix	Standard	Standard	Solid				Solid				Solid				Solid			
Depth (feet)			0.0-0.5				10.5-11.0				0.0-0.5				5.0-5.5			
Dilution Factor																		
Units	mg/kg	mg/kg	mg/kg				mg/kg				mg/kg				mg/kg			
<b>METALS</b>				MDL	PQL		MDL	PQL		MDL	PQL		MDL	PQL		MDL	PQL	
Aluminum	78,000	NA	6970	15.2	41.4		3710	16.9	46.2		3890	17.3	47.2		3160	17.2	46.9	
Antimony	31	450	2.1	U	0.91	2.1	2.3	U	1.0	2.3	2.4	U	1.0	2.4	2.3	U	1.0	2.3
Arsenic	19	19	3.1		0.72	1.0	1.2		0.80	1.2	1.5		0.82	1.2	1.2		0.82	1.2
Barium	16000	59000	137		1.2	41.4	20.6	J	1.4	46.2	33.6	J	1.4	47.2	18.9	J	1.4	46.9
Beryllium	16	140	0.29	J	0.18	0.41	0.22	J	0.20	0.46	0.47	U	0.21	0.47	0.23	J	0.21	0.47
Cadmium	78	78	0.20	J	0.16	1.0	1.2	U	0.18	1.2	0.22	J	0.18	1.2	1.2	U	0.18	1.2
Calcium	NA	NA	669	J	27.2	1030	669	J	30.4	1150	1120	J	31.0	1180	385	J	30.8	1170
Chromium	NA	NA	17.1		1.2	2.1	6.2		1.4	2.3	7.5		1.4	2.4	4.6		1.4	2.3
Cobalt	1600	590	4.3	J	1.3	10.3	3.0	J	1.4	11.5	3.9	J	1.4	11.8	3.0	J	1.4	11.7
Copper	3100	45000	11.5		0.84	5.2	5.2	J	0.94	5.8	13.5		0.96	5.9	5.4	J	0.96	5.9
Iron	NA	NA	13100		11.0	31.0	9120		12.3	34.6	9100		12.5	35.4	6280		12.4	35.2
Lead	400	800	89.6	B	0.52	1.0	2.8	B	0.58	1.2	46.3	B	0.59	1.2	2.3	B	0.59	1.2
Magnesium	NA	NA	1610		10.9	1030	876	J	12.2	1150	1250		12.5	1180	672	J	12.4	1170
Manganese	11000	5900	96.1		1.2	3.1	55.8		1.3	3.5	98.1		1.3	3.5	36.1		1.3	3.5
Mercury	23	65	0.057		0.026	0.033	0.038	U	0.030	0.038	0.038	U	0.030	0.038	0.040	U	0.032	0.040
Nickel	1600	23000	9.6		0.55	8.3	5.6	J	0.62	9.2	7.4	J	0.63	9.4	4.5	J	0.63	9.4
Potassium	NA	NA	143	J	46.7	1030	176	J	52.1	1150	165	J	53.3	1180	102	J	52.9	1170
Selenium	390	5700	2.1	U	0.97	2.1	2.3	U	1.1	2.3	2.4	U	1.1	2.4	2.3	U	1.1	2.3
Silver	390	5700	2.1	U	0.16	2.1	2.3	U	0.18	2.3	2.4	U	0.18	2.4	2.3	U	0.18	2.3
Sodium	NA	NA	66.6	J B	63.5	1030	169	J B	70.9	1150	129	J B	72.5	1180	1170	U	72.0	1170
Thallium	5	79	2.1	U	1.0	2.1	2.3	U	1.1	2.3	2.4	U	1.1	2.4	2.3	U	1.1	2.3
Vanadium	78	1100	19.9		0.54	10.3	12.9		0.60	11.5	13.6		0.61	11.8	9.4	J	0.61	11.7
Zinc	23000	110000	46.5		1.0	6.2	12.6		1.1	6.9	27.1		1.2	7.1	12.7		1.1	7.0

**Notes:**

mg/kg - milligrams per kilogram

ug/l - micrograms per liter

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PQL - Practicable Quantitation Limit

U - Analyte was analyzed for but not detected

J - Analyte was detected below the PQL (estimated concentration)

ND - None Detected

- Analyte detected in excess of NJDEP soil remediation standard

**TABLE 3E**  
**Soil Sample Analytical Results - METALS**  
**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-5A				GP-5B				GP-6A				GP-6B							
Lab Sample No.	Soil	Soil	460-12202-16				460-12202-17				460-12202-12				460-12202-13							
Sampling Date	Remediation	Remediation	4/14/2010 3:07:00 PM				4/14/2010 3:17:00 PM				4/14/2010 1:33:00 PM				4/14/2010 1:43:00 PM							
Matrix	Standard	Standard	Solid				Solid				Solid				Solid							
Depth (feet)			0.0-0.5				5.0-5.5				0.5-5.5				5.0-5.5							
Dilution Factor																						
Units	mg/kg	mg/kg	mg/kg				mg/kg				mg/kg				mg/kg							
<b>METALS</b>					MDL	PQL			MDL	PQL			MDL	PQL			MDL	PQL				
Aluminum	78,000	NA	3530		15.2	41.5			2360	18.4	50.1			3370	15.2	41.6			2380	17.7	48.2	
Antimony	31	450	2.1	U	0.91	2.1			2.5	U	1.1	2.5		2.1	U	0.91	2.1		2.4	U	1.1	2.4
Arsenic	19	19	1.4		0.72	1.0			1.2	J	0.87	1.3		3.2		0.72	1.0		1.2	U	0.84	1.2
Barium	16000	59000	16.9	J	1.3	41.5			14.5	J	1.5	50.1		46.6		1.3	41.6		9.7	J	1.5	48.2
Beryllium	16	140	0.21	J	0.18	0.41			0.50	U	0.22	0.50		0.21	J	0.18	0.42		0.48	U	0.21	0.48
Cadmium	78	78	0.18	J	0.16	1.0			1.3	U	0.20	1.3		0.29	J	0.16	1.0		0.24	J	0.19	1.2
Calcium	NA	NA	1870		27.3	1040			361	J	32.9	1250		871	J	27.3	1040		403	J	31.7	1200
Chromium	NA	NA	8.6		1.2	2.1			4.4		1.5	2.5		66.8		1.2	2.1		4.9		1.4	2.4
Cobalt	1600	590	4.4	J	1.3	10.4			2.2	J	1.5	12.5		3.3	J	1.3	10.4		5.4	J	1.5	12.0
Copper	3100	45000	15.6		0.85	5.2			4.6	J	1.0	6.3		11.2		0.85	5.2		4.2	J	0.98	6.0
Iron	NA	NA	8690		11.0	31.1			6210		13.3	37.6		8910		11.0	31.2		6120		12.8	36.1
Lead	400	800	10.2	B	0.52	1.0			2.7	B	0.63	1.3		348	B	0.52	1.0		2.3	B	0.60	1.2
Magnesium	NA	NA	1750		11.0	1040			655	J	13.2	1250		941	J	11.0	1040		613	J	12.7	1200
Manganese	11000	5900	143		1.2	3.1			58.4		1.4	3.8		134		1.2	3.1		203		1.4	3.6
Mercury	23	65	0.031	U	0.024	0.031			0.040	U	0.031	0.040		0.043		0.027	0.034		0.035	U	0.027	0.035
Nickel	1600	23000	8.3		0.56	8.3			4.0	J	0.67	10.0		5.9	J	0.56	8.3		4.5	J	0.65	9.6
Potassium	NA	NA	113	J	46.8	1040			107	J	56.5	1250		158	J	46.9	1040		80.0	J	54.4	1200
Selenium	390	5700	2.1	U	0.97	2.1			2.5	U	1.2	2.5		2.1	U	0.97	2.1		2.4	U	1.1	2.4
Silver	390	5700	2.1	U	0.16	2.1			2.5	U	0.19	2.5		2.1	U	0.16	2.1		2.4	U	0.18	2.4
Sodium	NA	NA	171	J B	63.7	1040			81.8	J B	76.9	1250		1040	U	63.8	1040		115	J B	74.0	1200
Thallium	5	79	2.1	U	1.0	2.1			2.5	U	1.2	2.5		2.1	U	1.0	2.1		2.4	U	1.2	2.4
Vanadium	78	1100	13.4		0.54	10.4			7.6	J	0.65	12.5		13.1		0.54	10.4		9.4	J	0.63	12.0
Zinc	23000	110000	16.0		1.0	6.2			9.4		1.2	7.5		32.4		1.0	6.2		20.4		1.2	7.2

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**TABLE 3E**  
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**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-7A				GP-7B				GP-8A				GP-8B			
Lab Sample No.	Soil	Soil	460-12202-7				460-12202-8				460-12150-12				460-12150-13			
Sampling Date	Remediation	Remediation	4/14/2010 11:22:00 AM				4/14/2010 11:38:00 AM				4/13/2010 1:48:00 PM				4/13/2010 2:06:00 PM			
Matrix	Standard	Standard	Solid				Solid				Solid				Solid			
Depth (feet)			0.0-0.5				10.5-11.0				0.0-0.5				11.5-12.0			
Dilution Factor																		
Units	mg/kg	mg/kg	mg/kg				mg/kg				mg/kg				mg/kg			
<b>METALS</b>					MDL	PQL			MDL	PQL			MDL	PQL			MDL	PQL
Aluminum	78,000	NA	2590		15.3	41.8	3950		18.0	49.0	4500		14.9	40.7	5250		17.9	49.0
Antimony	31	450	2.1	U	0.92	2.1	2.5	U	1.1	2.5	2.0	U	0.90	2.0	2.4	U	1.1	2.4
Arsenic	19	19	1.9		0.73	1.0	0.93	J	0.85	1.2	1.9		0.71	1.0	0.97	J	0.85	1.2
Barium	16000	59000	26.1	J	1.3	41.8	22.0	J	1.5	49.0	22.7	J	1.2	40.7	23.7	J	1.5	49.0
Beryllium	16	140	0.42	U	0.18	0.42	0.23	J	0.22	0.49	0.29	J	0.18	0.41	0.46	J	0.22	0.49
Cadmium	78	78	0.19	J	0.16	1.0	1.2	U	0.19	1.2	1.0	U	0.16	1.0	1.2	U	0.19	1.2
Calcium	NA	NA	747	J	27.5	1040	531	J	32.2	1230	5070		26.7	1020	1200	J	32.2	1220
Chromium	NA	NA	10.3		1.2	2.1	6.6		1.5	2.5	10.8		1.2	2.0	11.2		1.5	2.4
Cobalt	1600	590	2.8	J	1.3	10.4	3.7	J	1.5	12.3	4.1	J	1.2	10.2	4.9	J	1.5	12.2
Copper	3100	45000	11.1		0.85	5.2	6.3		1.0	6.1	13.7		0.83	5.1	8.2		1.0	6.1
Iron	NA	NA	7840		11.1	31.3	8060		13.0	36.8	10200		10.8	30.5	12600		13.0	36.7
Lead	400	800	18.3	B	0.52	1.0	2.9	B	0.61	1.2	25.3		0.51	1.0	3.3		0.61	1.2
Magnesium	NA	NA	751	J	11.1	1040	965	J	13.0	1230	1720		10.8	1020	1520		13.0	1220
Manganese	11000	5900	154		1.2	3.1	52.0		1.4	3.7	158		1.1	3.1	82.0		1.4	3.7
Mercury	23	65	0.18		0.028	0.035	0.040	U	0.031	0.040	0.044		0.028	0.035	0.037	U	0.029	0.037
Nickel	1600	23000	5.6	J	0.56	8.4	6.1	J	0.66	9.8	10.4		0.55	8.1	8.5	J	0.66	9.8
Potassium	NA	NA	96.8	J	47.2	1040	189	J	55.3	1230	415	J	45.9	1020	524	J	55.3	1220
Selenium	390	5700	2.1	U	0.98	2.1	2.5	U	1.1	2.5	2.0	U	0.95	2.0	2.4	U	1.1	2.4
Silver	390	5700	2.1	U	0.16	2.1	2.5	U	0.19	2.5	2.0	U	0.15	2.0	2.4	U	0.19	2.4
Sodium	NA	NA	1040	U	64.2	1040	1230	U	75.3	1230	159	J	62.5	1020	1220	U	75.2	1220
Thallium	5	79	2.1	U	1.0	2.1	2.5	U	1.2	2.5	2.0	U	0.98	2.0	2.4	U	1.2	2.4
Vanadium	78	1100	13.5		0.54	10.4	12.6		0.64	12.3	30.8		0.53	10.2	24.2		0.64	12.2
Zinc	23000	110000	30.5		1.0	6.3	33.3		1.2	7.4	34.7		1.0	6.1	18.4		1.2	7.3

**Notes:**

mg/kg - milligrams per kilogram

ug/l - micrograms per liter

MDL - Method Detection Limit

PQL - Practicable Quantitation Limit

U - Analyte was analyzed for but not detected

J - Analyte was detected below the PQL (estimated concentration)

ND - None Detected

- Analyte detected in excess of NJDEP soil remediation standard

**TABLE 3E**  
**Soil Sample Analytical Results - METALS**  
**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-9A			GP-9B			GP-16			GP-17		
Lab Sample No.	Soil	Soil	460-12150-14			460-12150-15			460-12150-7			460-12258-4		
Sampling Date	Remediation	Remediation	4/13/2010 2:28:00 PM			4/13/2010 2:37:00 PM			4/13/2010 11:38:00 AM			4/15/2010 10:54:00 AM		
Matrix	Standard	Standard	Solid			Solid			Solid			Solid		
Depth (feet)			0.0-0.5			11.5-12.0			0.0-0.5			0.0-0.5		
Dilution Factor														
Units	mg/kg	mg/kg	mg/kg			mg/kg			mg/kg			mg/kg		
<b>METALS</b>				MDL	PQL		MDL	PQL		MDL	PQL		MDL	PQL
Aluminum	78,000	NA	5320	15.4	42.1	6000	16.8	45.8	8980	15.3	41.6	6460	15.2	41.4
Antimony	31	450	2.1	U	0.93	2.1	2.3	U	1.0	2.3	2.1	U	0.92	2.1
Arsenic	19	19	2.1		0.73	1.1	1.4		0.80	1.1	2.9		0.72	1.0
Barium	16000	59000	35.1	J	1.3	42.1	27.2	J	1.4	45.8	34.3	J	1.3	41.6
Beryllium	16	140	0.28	J	0.19	0.42	0.39	J	0.20	0.46	0.46		0.18	0.42
Cadmium	78	78	1.1	U	0.16	1.1	1.1	U	0.18	1.1	1.0	U	0.16	1.0
Calcium	NA	NA	1740		27.7	1050	1230		30.1	1150	548	J	27.4	1040
Chromium	NA	NA	19.0		1.3	2.1	10.8		1.4	2.3	13.3		1.2	2.1
Cobalt	1600	590	3.4	J	1.3	10.5	5.2	J	1.4	11.5	3.8	J	1.3	10.4
Copper	3100	45000	14.1		0.86	5.3	9.1		0.93	5.7	18.8		0.85	5.2
Iron	NA	NA	12700		11.2	31.6	15200		12.2	34.4	14600		11.1	31.2
Lead	400	800	60.7		0.53	1.1	5.8		0.57	1.1	15.1		0.52	1.0
Magnesium	NA	NA	1520		11.1	1050	1600		12.1	1150	1530		11.0	1040
Manganese	11000	5900	90.7		1.2	3.2	253		1.3	3.4	212		1.2	3.1
Mercury	23	65	0.11		0.025	0.032	0.036	U	0.028	0.036	0.053		0.027	0.034
Nickel	1600	23000	7.7	J	0.56	8.4	8.7	J	0.61	9.2	8.5		0.56	8.3
Potassium	NA	NA	444	J	47.5	1050	600	J	51.7	1150	373	J	47.0	1040
Selenium	390	5700	2.1	U	0.99	2.1	2.3	U	1.1	2.3	2.1	U	0.97	2.1
Silver	390	5700	2.1	U	0.16	2.1	2.3	U	0.17	2.3	2.1	U	0.16	2.1
Sodium	NA	NA	72.1	J	64.7	1050	132	J	70.4	1150	1040	U	63.9	1040
Thallium	5	79	2.1	U	1.0	2.1	2.3	U	1.1	2.3	2.1	U	1.0	2.1
Vanadium	78	1100	22.7		0.55	10.5	22.6		0.60	11.5	19.6		0.54	10.4
Zinc	23000	110000	53.6		1.0	6.3	21.1		1.1	6.9	34.9		1.0	6.2

**Notes:**

mg/kg - milligrams per kilogram

ug/l - micrograms per liter

MDL - Method Detection Limit

PQL - Practicable Quantitation Limit

U - Analyte was analyzed for but not detected

J - Analyte was detected below the PQL (estimated concentration)

ND - None Detected

- Analyte detected in excess of NJDEP soil remediation standard

**TABLE 3E**  
**Soil Sample Analytical Results - METALS**  
**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-18			GP-19				GP-20A				GP-20B						
Lab Sample No.	Soil	Soil	460-12258-3			460-12258-1				460-12202-1				460-12202-2						
Sampling Date	Remediation	Remediation	4/15/2010 9:20:00 AM			4/15/2010 8:43:00 AM				4/14/2010 9:12:00 AM				4/14/2010 9:22:00 AM						
Matrix	Standard	Standard	Solid			Solid				Solid				Solid						
Depth (feet)			0.0-0.5			0.0-0.5				0.0-0.5				10.0-10.5						
Dilution Factor																				
Units	mg/kg	mg/kg	mg/kg			mg/kg				mg/kg				mg/kg						
<b>METALS</b>					MDL	PQL			MDL	PQL			MDL	PQL			MDL	PQL		
Aluminum	78,000	NA	4910		16.9	46.2			4080	15.2	41.6		12300	15.4	42.1		4880	16.0	43.7	
Antimony	31	450	7.4		1.0	2.3			2.0	U	0.91	2.1	2.3	0.93	2.1		2.2	U	0.96	2.2
Arsenic	19	19	7.1		0.80	1.2			1.9		0.72	1.0	1.4	0.73	1.1		1.6		0.76	1.1
Barium	16000	59000	53.5		1.4	46.2			27.5	J	1.3	41.6	151	1.3	42.1		22.5	J	1.3	43.7
Beryllium	16	140	0.32	J	0.20	0.46			0.27	J	0.18	0.42	0.68	0.19	0.42		0.31	J	0.19	0.44
Cadmium	78	78	0.76	J	0.18	1.2			1.0	U	0.16	1.0	0.32	J	0.16	1.1	0.19	J	0.17	1.1
Calcium	NA	NA	934	J	30.4	1150			742	J	27.3	1040	80600	55.3	2100		511	J	28.7	1090
Chromium	NA	NA	13.3		1.4	2.3			9.0		1.2	2.1	235	1.2	2.1		9.0		1.3	2.2
Cobalt	1600	590	4.0	J	1.4	11.5			3.0	J	1.3	10.4	33.5	1.3	10.5		5.2	J	1.3	10.9
Copper	3100	45000	53.4		0.94	5.8			17.3		0.85	5.2	14.9	0.86	5.3		8.2		0.89	5.5
Iron	NA	NA	20500	B	12.3	34.6			10500	B	11.0	31.2	14700	11.2	31.6		12100		11.6	32.8
Lead	400	800	524		0.58	1.2			44.2		0.52	1.0	26.6	B	0.53	1.1	3.9	B	0.55	1.1
Magnesium	NA	NA	1280		12.2	1150			868	J	11.0	1040	11000	11.1	1050		1180		11.6	1090
Manganese	11000	5900	184		1.3	3.5			166		1.2	3.1	483	1.2	3.2		103		1.2	3.3
Mercury	23	65	0.72		0.030	0.038			0.20		0.027	0.034	0.035	U	0.027	0.035	0.032	U	0.026	0.032
Nickel	1600	23000	9.6		0.62	9.2			5.7	J	0.56	8.3	25.7	0.56	8.4		8.9		0.59	8.7
Potassium	NA	NA	210	J	52.1	1150			255	J	46.9	1040	3010	47.5	1050		326	J	49.3	1090
Selenium	390	5700	2.3	U	1.1	2.3			2.0	U	0.97	2.1	2.1	U	0.98	2.1	2.2	U	1.0	2.2
Silver	390	5700	1.1	J	0.18	2.3			2.0	U	0.16	2.1	0.28	J	0.16	2.1	2.2	U	0.17	2.2
Sodium	NA	NA	1140	U	70.9	1150			1000	U	63.8	1040	1040	J	64.6	1050	76.3	J	67.1	1090
Thallium	5	79	2.3	U	1.1	2.3			2.0	U	1.0	2.1	4.2	U	2.0	4.2	2.2	U	1.1	2.2
Vanadium	78	1100	24.1		0.60	11.5			15.4		0.54	10.4	25.1	0.55	10.5		17.4		0.57	10.9
Zinc	23000	110000	329		1.1	6.9			67.8		1.0	6.2	32.4	1.0	6.3		18.7		1.1	6.6

**Notes:**

mg/kg - milligrams per kilogram

ug/l - micrograms per liter

MDL - Method Detection Limit

PQL - Practicable Quantitation Limit

U - Analyte was analyzed for but not detected

J - Analyte was detected below the PQL (estimated concentration)

ND - None Detected

  - Analyte detected in excess of NJDEP soil remediation standard

**TABLE 3E**  
**Soil Sample Analytical Results - METALS**  
**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-21A				GP-21B				GP-22A				GP-22B			
Lab Sample No.	Soil	Soil	460-12202-3				460-12202-4				460-12202-5				460-12202-6			
Sampling Date	Remediation	Remediation	4/14/2010 9:33:00 AM				4/14/2010 9:47:00 AM				4/14/2010 10:06:00 AM				4/14/2010 10:13:00 AM			
Matrix	Standard	Standard	Solid				Solid				Solid				Solid			
Depth (feet)			0.0-0.5				11.5-12.0				0.0-0.5				11.5-12.0			
Dilution Factor																		
Units	mg/kg	mg/kg	mg/kg				mg/kg				mg/kg				mg/kg			
<b>METALS</b>					MDL	PQL			MDL	PQL			MDL	PQL			MDL	PQL
Aluminum	78,000	NA	7740		15.2	41.4	3660		17.5	47.7	6380		15.8	43.2	9180		18.7	51.2
Antimony	31	450	1.4	J	0.91	2.1	2.4	U	1.0	2.4	2.2	U	0.95	2.2	2.6	U	1.1	2.6
Arsenic	19	19	1.5		0.72	1.0	1.2		0.83	1.2	1.3		0.75	1.1	3.2		0.89	1.3
Barium	16000	59000	94.8		1.3	41.4	17.7	J	1.4	47.7	69.2		1.3	43.2	53.4		1.5	51.2
Beryllium	16	140	0.39	J	0.18	0.41	0.23	J	0.21	0.48	0.35	J	0.19	0.43	0.56		0.23	0.51
Cadmium	78	78	1.0	U	0.16	1.0	1.2	U	0.19	1.2	1.1	U	0.17	1.1	0.24	J	0.20	1.3
Calcium	NA	NA	46100		27.2	1040	863	J	31.3	1190	36200		28.4	1080	994	J	33.6	1280
Chromium	NA	NA	153		1.2	2.1	7.5		1.4	2.4	98.1		1.3	2.2	18.6		1.5	2.6
Cobalt	1600	590	6.1	J	1.3	10.4	4.8	J	1.5	11.9	4.5	J	1.3	10.8	21.4		1.6	12.8
Copper	3100	45000	8.7		0.84	5.2	6.5		0.97	6.0	8.1		0.88	5.4	17.8		1.0	6.4
Iron	NA	NA	8820		11.0	31.1	9070		12.7	35.8	8070		11.5	32.4	17800		13.6	38.4
Lead	400	800	5.6	B	0.52	1.0	3.1	B	0.60	1.2	2.7	B	0.54	1.1	6.4	B	0.64	1.3
Magnesium	NA	NA	6800		11.0	1040	885	J	12.6	1190	4410		11.4	1080	2450		13.5	1280
Manganese	11000	5900	187		1.2	3.1	64.0		1.3	3.6	178		1.2	3.2	232		1.4	3.8
Mercury	23	65	0.032	U	0.025	0.032	0.038	U	0.030	0.038	0.035	U	0.027	0.035	0.042	U	0.033	0.042
Nickel	1600	23000	17.7		0.55	8.3	7.6	J	0.64	9.5	12.3		0.58	8.6	20.7		0.69	10.2
Potassium	NA	NA	2000		46.7	1040	240	J	53.8	1190	1130		48.7	1080	796	J	57.7	1280
Selenium	390	5700	2.1	U	0.97	2.1	2.4	U	1.1	2.4	2.2	U	1.0	2.2	2.6	U	1.2	2.6
Silver	390	5700	2.1	U	0.16	2.1	2.4	U	0.18	2.4	2.2	U	0.16	2.2	0.23	J	0.19	2.6
Sodium	NA	NA	154	J B	63.6	1040	90.8	J B	73.2	1190	147	J B	66.3	1080	132	J B	78.5	1280
Thallium	5	79	2.1	U	1.0	2.1	2.4	U	1.2	2.4	2.2	U	1.0	2.2	2.6	U	1.2	2.6
Vanadium	78	1100	14.4		0.54	10.4	15.6		0.62	11.9	12.7		0.56	10.8	23.5		0.67	12.8
Zinc	23000	110000	15.3		1.0	6.2	14.5		1.2	7.2	15.7		1.1	6.5	37.2		1.3	7.7

**Notes:**

mg/kg - milligrams per kilogram

ug/l - micrograms per liter

MDL - Method Detection Limit

PQL - Practicable Quantitation Limit

U - Analyte was analyzed for but not detected

J - Analyte was detected below the PQL (estimated concentration)

ND - None Detected

- Analyte detected in excess of NJDEP soil remediation standard

**TABLE 3E**  
**Soil Sample Analytical Results - METALS**  
**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJ Residential	NJ Non-Residential	GP-7BDUP				GP-19DUP			
Lab Sample No.	Soil	Soil	460-12202-9				460-12258-2			
Sampling Date	Remediation	Remediation	4/14/2010 11:38:00 AM				4/15/2010 8:43:00 AM			
Matrix	Standard	Standard	Solid				Solid			
Depth (feet)			10.5-11.0				0.0-0.5			
Dilution Factor										
Units	mg/kg	mg/kg	mg/kg				mg/kg			
<b>METALS</b>					MDL	PQL			MDL	PQL
Aluminum	78,000	NA	4200		17.4	47.4	3750		17.4	47.4
Antimony	31	450	2.4	U	1.0	2.4	2.1	U	1.0	2.4
Arsenic	19	19	1.6		0.82	1.2	1.3		0.82	1.2
Barium	16000	59000	21.5	J	1.4	47.4	27.0	J	1.4	47.4
Beryllium	16	140	0.26	J	0.21	0.47	0.25	J	0.21	0.47
Cadmium	78	78	1.2	U	0.18	1.2	1.1	U	0.18	1.2
Calcium	NA	NA	677	J	31.1	1180	560	J	31.1	1180
Chromium	NA	NA	8.2		1.4	2.4	8.7		1.4	2.4
Cobalt	1600	590	4.3	J	1.5	11.8	2.7	J	1.5	11.8
Copper	3100	45000	5.9		0.97	5.9	7.9		0.97	5.9
Iron	NA	NA	9080		12.6	35.5	7660	B	12.6	35.5
Lead	400	800	3.1	B	0.59	1.2	44.8		0.59	1.2
Magnesium	NA	NA	883	J	12.5	1180	755	J	12.5	1180
Manganese	11000	5900	48.9		1.3	3.6	142		1.3	3.6
Mercury	23	65	0.040	U	0.032	0.040	0.20		0.032	0.040
Nickel	1600	23000	6.7	J	0.63	9.5	5.4	J	0.63	9.5
Potassium	NA	NA	194	J	53.5	1180	212	J	53.5	1180
Selenium	390	5700	2.4	U	1.1	2.4	2.1	U	1.1	2.4
Silver	390	5700	2.4	U	0.18	2.4	2.1	U	0.18	2.4
Sodium	NA	NA	78.7	J B	72.7	1180	1050	U	72.7	1180
Thallium	5	79	2.4	U	1.1	2.4	2.1	U	1.1	2.4
Vanadium	78	1100	14.9		0.62	11.8	13.2		0.62	11.8
Zinc	23000	110000	17.9		1.2	7.1	41.0		1.2	7.1

**Notes:**

mg/kg - milligrams per kilogram

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MDL - Method Detection Limit

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ND - None Detected

- Analyte detected in excess of NJDEP soil remediation standard

**TABLE 4A**  
**Groundwater Sample Analytical Results - VOCs**

**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJDEP	MW-1			MW-2			MW-3			MW-4			MW-5			MW-6				
Lab Sample No.	2005	460-12759-2			460-12759-3			460-12716-2			460-12716-3			460-12716-1			460-12759-4				
Sampling Date	GW Quality	4/30/2010 11:20:00 AM			4/30/2010 12:45:00 PM			4/29/2010 12:41:00 PM			4/29/2010 2:30:00 PM			4/29/2010 10:55:00 AM			4/30/2010 2:25:00 PM				
Matrix	Criteria	Water			Water			Water			Water			Water			Water				
Dilution Factor		1			1			1			1			1			1				
Units	ug/l	ug/l			ug/l			ug/l			ug/l			ug/l			ug/l				
VOLATILE COMPOUNDS (GC/MS)				MDL	PQL			MDL	PQL			MDL	PQL			MDL	PQL				
1,1,1-Trichloroethane	30	1.0	U	0.25	1.0	1.0	U	0.25	1.0	1.0	U	0.25	1.0	1.0	U	0.25	1.0	0.81	J	0.25	1.0
1,1,2,2-Tetrachloroethane	1	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0
1,1,2-Trichloroethane	3	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0
1,1-Dichloroethane	50	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0
1,1-Dichloroethene	1	1.0	U	0.14	1.0	1.0	U	0.14	1.0	1.0	U	0.14	1.0	1.0	U	0.14	1.0	1.0	U	0.14	1.0
1,2-Dichloroethane	2	1.0	U	0.24	1.0	1.0	U	0.24	1.0	1.0	U	0.24	1.0	1.0	U	0.24	1.0	1.0	U	0.24	1.0
1,2-Dichloropropane	1	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0
2-Butanone	300	10	U	0.82	10	10	U	0.82	10	10	U	0.82	10	10	U	0.82	10	10	U	0.82	10
2-Hexanone	NA	10	U	0.55	10	10	U	0.55	10	10	U	0.55	10	10	U	0.55	10	10	U	0.55	10
4-Methyl-2-pentanone	NA	10	U	0.68	10	10	U	0.68	10	10	U	0.68	10	10	U	0.68	10	10	U	0.68	10
Acetone	6000	10	U	2.5	10	10	U	2.5	10	10	U	2.5	10	10	U	2.5	10	10	U	2.5	10
Benzene	1	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0
Bromodichloromethane	1	1.0	U	0.093	1.0	1.0	U	0.093	1.0	1.0	U	0.093	1.0	1.0	U	0.093	1.0	1.0	U	0.093	1.0
Bromoform	4	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0
Bromomethane	10	1.0	U	0.31	1.0	1.0	U	0.31	1.0	1.0	U	0.31	1.0	1.0	U	0.31	1.0	1.0	U	0.31	1.0
Carbon disulfide	700	1.0	U	0.15	1.0	1.0	U	0.15	1.0	1.0	U	0.15	1.0	1.0	U	0.15	1.0	1.0	U	0.15	1.0
Carbon tetrachloride	1	1.0	U	0.19	1.0	1.0	U	0.19	1.0	1.0	U	0.19	1.0	1.0	U	0.19	1.0	1.0	U	0.19	1.0
Chlorobenzene	50	1.0	U	0.16	1.0	1.0	U	0.16	1.0	1.0	U	0.16	1.0	1.0	U	0.16	1.0	1.0	U	0.16	1.0
Chloroethane	NA	1.0	U	0.45	1.0	1.0	U	0.45	1.0	1.0	U	0.45	1.0	1.0	U	0.45	1.0	1.0	U	0.45	1.0
Chloroform	70	1.0	U	0.15	1.0	1.0	U	0.15	1.0	1.0	U	0.15	1.0	1.0	U	0.15	1.0	1.0	U	0.15	1.0
Chloromethane	NA	1.0	U	0.21	1.0	1.0	U	0.21	1.0	1.0	U	0.21	1.0	1.0	U	0.21	1.0	1.0	U	0.21	1.0
cis-1,2-Dichloroethene	70	1.0	U	0.20	1.0	1.0	U	0.20	1.0	1.0	U	0.20	1.0	1.0	U	0.20	1.0	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1	1.0	U	0.11	1.0	1.0	U	0.11	1.0	1.0	U	0.11	1.0	1.0	U	0.11	1.0	1.0	U	0.11	1.0
Dibromochloromethane	1	1.0	U	0.11	1.0	1.0	U	0.11	1.0	1.0	U	0.11	1.0	1.0	U	0.11	1.0	1.0	U	0.11	1.0
Ethylbenzene	700	1.0	U	0.25	1.0	1.0	U	0.25	1.0	1.0	U	0.25	1.0	1.0	U	0.25	1.0	1.0	U	0.25	1.0
Methylene Chloride	3	1.0	U	0.19	1.0	1.0	U	0.19	1.0	1.0	U	0.19	1.0	1.0	U	0.19	1.0	1.0	U	0.19	1.0
Styrene	100	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0
Tetrachloroethene	1	0.70	J	0.20	1.0	1.0	U	0.20	1.0	1.0	U	0.20	1.0	1.0	U	0.20	1.0	0.39	J	0.20	1.0
Toluene	600	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0
trans-1,2-Dichloroethene	100	1.0	U	0.14	1.0	1.0	U	0.14	1.0	1.0	U	0.14	1.0	1.0	U	0.14	1.0	1.0	U	0.14	1.0
trans-1,3-Dichloropropene	NA	1.0	U	0.12	1.0	1.0	U	0.12	1.0	1.0	U	0.12	1.0	1.0	U	0.12	1.0	1.0	U	0.12	1.0
Trichloroethene	1	1.0	U	0.18	1.0	1.0	U	0.18	1.0	1.0	U	0.18	1.0	1.0	U	0.18	1.0	1.0	U	0.18	1.0
Vinyl chloride	1	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0
Xylenes, Total	1000	3.0	U	0.43	3.0	3.0	U	0.43	3.0	3.0	U	0.43	3.0	3.0	U	0.43	3.0	3.0	U	0.43	3.0
Total Confident Conc.		0.7				0				0				0				1.2			
Total TICs		ND				ND				ND				ND				10.8			

Notes:  
 ug/l - micrograms per liter  
 MDL - Method Detection Limit  
 PQL - Practicable Quantitation Limit  
 U - Analyte was analyzed for but not detected  
 J - Analyte was detected below the PQL (estimated concentration)  
 ND - None Detected

**TABLE 4A**  
**Groundwater Sample Analytical Results - VOCs**

**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJDEP	MW-7			MW-8			DUP043010 (MW-2)			FB043010			Trip			Trip				
Lab Sample No.	2005	460-12716-4			460-12759-1			460-12759-5			460-12759-6			460-12716-5			460-12759-7				
Sampling Date	GW Quality	4/29/2010 3:40:00 PM			4/30/2010 9:45:00 AM			4/30/2010 12:00:00 AM			4/30/2010 12:00:00 AM			4/29/2010 12:00:00 AM			4/30/2010 12:00:00 AM				
Matrix	Criteria	Water			Water			Water			Water			Water			Water				
Dilution Factor		1			1			1			1			1			1				
Units	ug/l	ug/l			ug/l			ug/l			ug/l			ug/l			ug/l				
VOLATILE COMPOUNDS (GC/MS)				MDL	PQL			MDL	PQL				MDL	PQL			MDL	PQL			
1,1,1-Trichloroethane	30	1.0	U	0.25	1.0	1.0	U	0.25	1.0	1.0	U	0.25	1.0	1.0	U	0.25	1.0	1.0	U	0.25	1.0
1,1,2,2-Tetrachloroethane	1	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0
1,1,2-Trichloroethane	3	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0
1,1-Dichloroethane	50	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0
1,1-Dichloroethene	1	1.0	U	0.14	1.0	1.0	U	0.14	1.0	1.0	U	0.14	1.0	1.0	U	0.14	1.0	1.0	U	0.14	1.0
1,2-Dichloroethane	2	1.0	U	0.24	1.0	1.0	U	0.24	1.0	1.0	U	0.24	1.0	1.0	U	0.24	1.0	1.0	U	0.24	1.0
1,2-Dichloropropane	1	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0
2-Butanone	300	10	U	0.82	10	10	U	0.82	10	10	U	0.82	10	10	U	0.82	10	10	U	0.82	10
2-Hexanone	NA	10	U	0.55	10	10	U	0.55	10	10	U	0.55	10	10	U	0.55	10	10	U	0.55	10
4-Methyl-2-pentanone	NA	10	U	0.68	10	10	U	0.68	10	10	U	0.68	10	10	U	0.68	10	10	U	0.68	10
Acetone	6000	10	U	2.5	10	10	U	2.5	10	10	U	2.5	10	10	U	2.5	10	10	U	2.5	10
Benzene	1	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0
Bromodichloromethane	1	1.0	U	0.093	1.0	1.0	U	0.093	1.0	1.0	U	0.093	1.0	1.0	U	0.093	1.0	1.0	U	0.093	1.0
Bromoform	4	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0	1.0	U	0.10	1.0
Bromomethane	10	1.0	U	0.31	1.0	1.0	U	0.31	1.0	1.0	U	0.31	1.0	1.0	U	0.31	1.0	1.0	U	0.31	1.0
Carbon disulfide	700	1.0	U	0.15	1.0	1.0	U	0.15	1.0	1.0	U	0.15	1.0	1.0	U	0.15	1.0	1.0	U	0.15	1.0
Carbon tetrachloride	1	1.0	U	0.19	1.0	1.0	U	0.19	1.0	1.0	U	0.19	1.0	1.0	U	0.19	1.0	1.0	U	0.19	1.0
Chlorobenzene	50	1.0	U	0.16	1.0	1.0	U	0.16	1.0	1.0	U	0.16	1.0	1.0	U	0.16	1.0	1.0	U	0.16	1.0
Chloroethane	NA	1.0	U	0.45	1.0	1.0	U	0.45	1.0	1.0	U	0.45	1.0	1.0	U	0.45	1.0	1.0	U	0.45	1.0
Chloroform	70	1.0	U	0.15	1.0	1.0	U	0.15	1.0	1.0	U	0.15	1.0	1.0	U	0.15	1.0	1.0	U	0.15	1.0
Chloromethane	NA	1.0	U	0.21	1.0	1.0	U	0.21	1.0	1.0	U	0.21	1.0	1.0	U	0.21	1.0	1.0	U	0.21	1.0
cis-1,2-Dichloroethene	70	1.0	U	0.20	1.0	1.0	U	0.20	1.0	1.0	U	0.20	1.0	1.0	U	0.20	1.0	1.0	U	0.20	1.0
cis-1,3-Dichloropropene	1	1.0	U	0.11	1.0	1.0	U	0.11	1.0	1.0	U	0.11	1.0	1.0	U	0.11	1.0	1.0	U	0.11	1.0
Dibromochloromethane	1	1.0	U	0.11	1.0	1.0	U	0.11	1.0	1.0	U	0.11	1.0	1.0	U	0.11	1.0	1.0	U	0.11	1.0
Ethylbenzene	700	1.0	U	0.25	1.0	1.0	U	0.25	1.0	1.0	U	0.25	1.0	1.0	U	0.25	1.0	1.0	U	0.25	1.0
Methylene Chloride	3	1.0	U	0.19	1.0	1.0	U	0.19	1.0	1.0	U	0.19	1.0	1.0	U	0.19	1.0	1.0	U	0.19	1.0
Styrene	100	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0
Tetrachloroethene	1	1.0	U	0.20	1.0	1.0	U	0.20	1.0	1.0	U	0.20	1.0	1.0	U	0.20	1.0	1.0	U	0.20	1.0
Toluene	600	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0	1.0	U	0.090	1.0
trans-1,2-Dichloroethene	100	1.0	U	0.14	1.0	1.0	U	0.14	1.0	1.0	U	0.14	1.0	1.0	U	0.14	1.0	1.0	U	0.14	1.0
trans-1,3-Dichloropropene	NA	1.0	U	0.12	1.0	1.0	U	0.12	1.0	1.0	U	0.12	1.0	1.0	U	0.12	1.0	1.0	U	0.12	1.0
Trichloroethene	1	1.0	U	0.18	1.0	0.22	J	0.18	1.0	1.0	U	0.18	1.0	1.0	U	0.18	1.0	1.0	U	0.18	1.0
Vinyl chloride	1	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0
Xylenes, Total	1000	3.0	U	0.43	3.0	3.0	U	0.43	3.0	3.0	U	0.43	3.0	3.0	U	0.43	3.0	3.0	U	0.43	3.0
Total Confident Conc.		0				0.22				0				0			0			0	
Total TICs		ND				ND				ND				ND			ND			ND	

Notes:  
ug/l - micrograms per liter  
MDL - Method Detection Limit  
PQL - Practicable Quantitation Limit  
U - Analyte was analyzed for but not detected  
J - Analyte was detected below the PQL (estimated concentration)  
ND - None Detected





**TABLE 4B**  
**Groundwater Sample Analytical Results - SVOCs**

**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJDEP	MW-1				MW-2				MW-3				MW-4				MW-5				MW-6			
Lab Sample No.	2005	460-12759-2				460-12759-3				460-12716-2				460-12716-3				460-12716-1				460-12759-4			
Sampling Date	GW Quality	4/30/2010 11:20:00 AM				4/30/2010 12:45:00 PM				4/29/2010 12:41:00 PM				4/29/2010 2:30:00 PM				4/29/2010 10:55:00 AM				4/30/2010 2:25:00 PM			
Matrix	Criteria	Water				Water				Water				Water				Water							
Dilution Factor		1				1				1				1				1							
Units	ug/l	ug/L				ug/l				ug/l				ug/l				ug/l							
SEMIVOLATILE COMPOUNDS (GC/MS)			MDL	PQL			MDL	PQL			MDL	PQL			MDL	PQL			MDL	PQL			MDL	PQL	
Diethyl phthalate	6000	11	U	4.2	11	10	U	3.9	10	10	U	3.9	10	10	U	3.9	10	11	U	4.0	11	11	U	4.2	11
Dimethyl phthalate	NA	11	U	3.6	11	10	U	3.3	10	10	U	3.3	10	10	U	3.3	10	11	U	3.4	11	11	U	3.5	11
Di-n-butyl phthalate	700	11	U	3.1	11	10	U	2.8	10	10	U	2.8	10	10	U	2.8	10	11	U	2.9	11	11	U	3.0	11
Di-n-octyl phthalate	100	11	U	2.1	11	10	U	1.9	10	10	U	1.9	10	10	U	1.9	10	11	U	2.0	11	11	U	2.1	11
Fluoranthene	300	11	U	2.9	11	10	U	2.7	10	10	U	2.7	10	10	U	2.7	10	11	U	2.8	11	11	U	2.9	11
Fluorene	300	11	U	3.6	11	10	U	3.3	10	10	U	3.3	10	10	U	3.3	10	11	U	3.4	11	11	U	3.5	11
Hexachlorobenzene	0.02	0.02	U	0.01	0.02	0.02	U	0.01	0.02	0.02	U	0.01	0.02	0.02	U	0.01	0.02	0.02	U	0.01	0.02	0.02	U	0.01	0.02
Hexachlorobutadiene	1	2.2	U	1.0	2.2	2.0	U	0.95	2.0	2.0	U	0.95	2.0	2.0	U	0.96	2.0	2.1	U	0.99	2.1	2.2	U	1.0	2.2
Hexachlorocyclopentadiene	40	11	U	5.1	11	10	U	4.6	10	10	U*	4.6	10	10	U*	4.7	10	11	U*	4.8	11	11	U	5.0	11
Hexachloroethane	7	1.1	U	0.56	1.1	1.0	U	0.51	1.0	1.0	U	0.51	1.0	1.0	U	0.51	1.0	1.1	U	0.53	1.1	1.1	U	0.54	1.1
Indeno[1,2,3-cd]pyrene	0.2	1.1	U	0.13	1.1	1.0	U	0.12	1.0	1.0	U	0.12	1.0	1.0	U	0.12	1.0	1.1	U	0.13	1.1	1.1	U	0.13	1.1
Isophorone	40	11	U	4.0	11	10	U	3.6	10	10	U	3.6	10	10	U	3.7	10	11	U	3.8	11	11	U	3.9	11
Naphthalene	300	11	U	4.1	11	10	U	3.7	10	10	U	3.7	10	10	U	3.7	10	11	U	3.9	11	11	U	4.0	11
Nitrobenzene	6	1.1	U	0.46	1.1	1.0	U	0.41	1.0	1.0	U	0.41	1.0	1.0	U	0.42	1.0	1.1	U	0.43	1.1	1.1	U	0.45	1.1
N-Nitrosodi-n-propylamine	10	1.1	U	0.36	1.1	1.0	U	0.32	1.0	1.0	U	0.32	1.0	1.0	U	0.33	1.0	1.1	U	0.34	1.1	1.1	U	0.35	1.1
N-Nitrosodiphenylamine	10	11	U	4.3	11	10	U	3.9	10	10	U	3.9	10	10	U	3.9	10	11	U	4.1	11	11	U	4.2	11
Pentachlorophenol	0.3	0.22	U	0.16	0.22	0.20	U	0.14	0.20	0.20	U	0.14	0.20	0.20	U	0.14	0.20	0.21	U	0.15	0.21	0.22	U	0.15	0.22
Phenanthrene	NA	11	U	4.0	11	10	U	3.6	10	10	U	3.6	10	10	U	3.6	10	11	U	3.7	11	11	U	3.9	11
Phenol	2000	11	U	0.99	11	10	U	0.90	10	10	U	0.90	10	10	U	0.91	10	11	U	0.94	11	11	U	0.97	11
Pyrene	200	11	U	4.7	11	10	U	4.3	10	10	U	4.3	10	10	U	4.4	10	11	U	4.5	11	11	U	4.6	11
Total Confident Conc.		0				0				0				0				0							
Total TICs		ND				ND				ND				ND				ND							

Notes:  
ug/l - micrograms per liter  
MDL - Method Detection Limit  
PQL - Practicable Quantitation Limit  
U - Analyte was analyzed for but not detected  
J - Analyte was detected below the PQL (estimated concentration)  
ND - None Detected

**TABLE 4B**  
**Groundwater Sample Analytical Results - SVOCs**

**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJDEP	MW-7			MW-8			DUP043010 (MW-2)			FB043010		
Lab Sample No.	2005	460-12716-4			460-12759-1			460-12759-5			460-12759-6		
Sampling Date	GW Quality	4/29/2010 3:40:00 PM			4/30/2010 9:45:00 AM			4/30/2010 12:00:00 AM			4/30/2010 12:00:00 AM		
Matrix	Criteria	Water			Water			Water			Water		
Dilution Factor		1			1			1			1		
Units	ug/l	ug/l			ug/l			ug/l			ug/l		
SEMIVOLATILE COMPOUNDS (GC/MS)				MDL PQL		MDL PQL			MDL PQL			MDL PQL	
1,2,4-Trichlorobenzene	9	1.0	U	0.54 1.0	1.1	U	0.58 1.1	1.0	U	0.53 1.0	1.0	U	0.53 1.0
1,2-Dichlorobenzene	600	10	U	3.9 10	11	U	4.2 11	10	U	3.8 10	10	U	3.8 10
1,3-Dichlorobenzene	600	10	U	3.9 10	11	U	4.2 11	10	U	3.8 10	10	U	3.8 10
1,4-Dichlorobenzene	75	10	U	3.8 10	11	U	4.1 11	10	U	3.6 10	10	U	3.7 10
2,4,5-Trichlorophenol	700	10	U	2.6 10	11	U	2.8 11	10	U	2.5 10	10	U	2.6 10
2,4,6-Trichlorophenol	20	10	U	3.3 10	11	U	3.6 11	10	U	3.2 10	10	U	3.2 10
2,4-Dichlorophenol	20	10	U	2.9 10	11	U	3.1 11	10	U	2.8 10	10	U	2.8 10
2,4-Dimethylphenol	100	10	U	2.6 10	11	U	2.8 11	10	U	2.5 10	10	U	2.6 10
2,4-Dinitrophenol	40	31	U	5.0 31	34	U	5.4 34	30	U	4.9 30	31	U	4.9 31
2,4-Dinitrotoluene	10	2.1	U	0.45 2.1	2.2	U	0.48 2.2	2.0	U	0.43 2.0	2.0	U	0.44 2.0
2,6-Dinitrotoluene	NA	2.1	U	0.61 2.1	2.2	U	0.66 2.2	2.0	U	0.60 2.0	2.0	U	0.60 2.0
2-Chloronaphthalene	600	10	U	3.9 10	11	U	4.2 11	10	U	3.8 10	10	U	3.8 10
2-Chlorophenol	40	10	U	2.7 10	11	U	2.9 11	10	U	2.6 10	10	U	2.7 10
2-Methylnaphthalene	NA	10	U*	3.2 10	11	U	3.5 11	10	U	3.1 10	10	U	3.2 10
2-Methylphenol	NA	10	U*	1.7 10	11	U*	1.9 11	10	U*	1.7 10	10	U*	1.7 10
2-Nitroaniline	NA	21	U	5.9 21	22	U	6.4 22	20	U	5.8 20	20	U	5.8 20
2-Nitrophenol	NA	10	U	3.5 10	11	U	3.8 11	10	U	3.4 10	10	U	3.5 10
3,3'-Dichlorobenzidine	30	21	U	7.3 21	22	U	7.8 22	20	U	7.0 20	20	U	7.1 20
3-Nitroaniline	NA	21	U*	4.5 21	22	U	4.9 22	20	U	4.4 20	20	U	4.4 20
4,6-Dinitro-2-methylphenol	NA	31	U	5.4 31	34	U	5.9 34	30	U	5.3 30	31	U	5.3 31
4-Bromophenyl phenyl ether	NA	10	U	4.1 10	11	U	4.4 11	10	U	4.0 10	10	U	4.0 10
4-Chloro-3-methylphenol	NA	10	U	2.1 10	11	U	2.2 11	10	U	2.0 10	10	U	2.0 10
4-Chloroaniline	30	10	U*	2.2 10	11	U	2.3 11	10	U	2.1 10	10	U	2.1 10
4-Chlorophenyl phenyl ether	NA	10	U	4.1 10	11	U	4.4 11	10	U	4.0 10	10	U	4.0 10
4-Methylphenol	NA	10	U*	1.6 10	11	U*	1.8 11	10	U*	1.6 10	10	U*	1.6 10
4-Nitroaniline	NA	21	U	4.1 21	22	U	4.5 22	20	U	4.0 20	20	U	4.1 20
4-Nitrophenol	NA	31	U	2.4 31	34	U	2.6 34	30	U	2.3 30	31	U	2.4 31
Acenaphthene	400	10	U	3.9 10	11	U	4.2 11	10	U	3.8 10	10	U	3.8 10
Acenaphthylene	NA	10	U	4.2 10	11	U	4.5 11	10	U	4.1 10	10	U	4.1 10
Anthracene	2000	10	U	3.7 10	11	U	4.0 11	10	U	3.6 10	10	U	3.6 10
Benzo[a]anthracene	0.1	0.05	U	0.02 0.05	0.06	U	0.02 0.06	0.05	U	0.02 0.05	0.05	U	0.02 0.05
Benzo[a]pyrene	0.1	0.05	U	0.03 0.05	0.06	U	0.03 0.06	0.05	U	0.03 0.05	0.05	U	0.03 0.05
Benzo[b]fluoranthene	0.2	0.05	U	0.04 0.05	0.06	U	0.04 0.06	0.05	U	0.04 0.05	0.05	U	0.04 0.05
Benzo[g,h,i]perylene	NA	10	U	2.8 10	11	U	3.1 11	10	U	2.7 10	10	U	2.8 10
Benzo[k]fluoranthene	0.5	1.0	U	0.31 1.0	1.1	U	0.34 1.1	1.0	U	0.30 1.0	1.0	U	0.31 1.0
bis (2-chloroisopropyl) ether	300	10	U	3.3 10	11	U	3.6 11	10	U	3.2 10	10	U	3.3 10
Bis(2-chloroethoxy)methane	NA	10	U	3.6 10	11	U	3.9 11	10	U	3.5 10	10	U	3.5 10
Bis(2-chloroethyl)ether	7	1.0	U	0.43 1.0	1.1	U	0.46 1.1	1.0	U	0.41 1.0	1.0	U	0.42 1.0
Bis(2-ethylhexyl) phthalate	3	10	U	2.5 10	11	U	2.7 11	10	U	2.4 10	10	U	2.4 10
Butyl benzyl phthalate	100	10	U	2.9 10	11	U	3.1 11	10	U	2.8 10	10	U	2.8 10
Carbazole	NA	10	U	3.2 10	11	U	3.4 11	10	U	3.1 10	10	U	3.1 10
Chrysene	5	10	U	3.9 10	11	U	4.2 11	10	U	3.8 10	10	U	3.8 10
Dibenz(a,h)anthracene	0.3	1.0	U	0.17 1.0	1.1	U	0.18 1.1	1.0	U	0.16 1.0	1.0	U	0.16 1.0
Dibenzofuran	NA	10	U	3.7 10	11	U	4.0 11	10	U	3.6 10	10	U	3.7 10

**TABLE 4B**  
**Groundwater Sample Analytical Results - SVOCs**

**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJDEP	MW-7			MW-8			DUP043010 (MW-2)			FB043010						
Lab Sample No.	2005	460-12716-4			460-12759-1			460-12759-5			460-12759-6						
Sampling Date	GW Quality	4/29/2010 3:40:00 PM			4/30/2010 9:45:00 AM			4/30/2010 12:00:00 AM			4/30/2010 12:00:00 AM						
Matrix	Criteria	Water			Water			Water			Water						
Dilution Factor		1			1			1			1						
Units	ug/l	ug/l			ug/l			ug/l			ug/l						
SEMIVOLATILE COMPOUNDS (GC/MS)				MDL PQL			MDL PQL			MDL PQL			MDL PQL				
Diethyl phthalate	6000	10	U	4.0	10			11	U	4.3	11			10	U	3.9	10
Dimethyl phthalate	NA	10	U	3.4	10			11	U	3.7	11			10	U	3.3	10
Di-n-butyl phthalate	700	10	U	2.9	10			11	U	3.1	11			10	U	2.8	10
Di-n-octyl phthalate	100	10	U	2.0	10			11	U	2.1	11			10	U	1.9	10
Fluoranthene	300	10	U	2.8	10			11	U	3.0	11			10	U	2.7	10
Fluorene	300	10	U	3.4	10			11	U	3.7	11			10	U	3.3	10
Hexachlorobenzene	0.02	0.02	U	0.01	0.02			0.02	U	0.01	0.02			0.02	U	0.01	0.02
Hexachlorobutadiene	1	2.1	U	0.98	2.1			2.2	U	1.1	2.2			2.0	U	0.95	2.0
Hexachlorocyclopentadiene	40	10	U*	4.8	10			11	U	5.1	11			10	U	4.6	10
Hexachloroethane	7	1.0	U	0.52	1.0			1.1	U	0.56	1.1			1.0	U	0.51	1.0
Indeno[1,2,3-cd]pyrene	0.2	1.0	U	0.12	1.0			1.1	U	0.13	1.1			1.0	U	0.12	1.0
Isophorone	40	10	U	3.7	10			11	U	4.0	11			10	U	3.6	10
Naphthalene	300	10	U	3.8	10			11	U	4.1	11			10	U	3.7	10
Nitrobenzene	6	1.0	U	0.43	1.0			1.1	U	0.46	1.1			1.0	U	0.41	1.0
N-Nitrosodi-n-propylamine	10	1.0	U	0.33	1.0			1.1	U	0.36	1.1			1.0	U	0.32	1.0
N-Nitrosodiphenylamine	10	10	U	4.0	10			11	U	4.3	11			10	U	3.9	10
Pentachlorophenol	0.3	0.21	U	0.15	0.21			0.22	U	0.16	0.22			0.20	U	0.14	0.20
Phenanthrene	NA	10	U	3.7	10			11	U	4.0	11			10	U	3.6	10
Phenol	2000	10	U	0.93	10			11	U	1.0	11			10	U	0.90	10
Pyrene	200	10	U	4.4	10			11	U	4.8	11			10	U	4.3	10
Total Confident Conc.		0						0						0			
Total TICs		ND						ND						ND			

Notes:

- ug/l - micrograms per liter
- MDL - Method Detetion Limit
- PQL - Practicable Quantitation Limit
- U - Analyte was analyzed for bit not detected
- J - Analyte was detected below the PQL (estimated concentration)
- ND - None Detected

**TABLE 4C**  
**Groundwater Sample Analytical Results - PESTICIDES/PCBs**

**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJDEP	MW-1			MW-2			MW-3			MW-4			MW-5			MW-6			MW-7	
Lab Sample No.	2005	460-12759-2			460-12759-3			460-12716-2			460-12716-3			460-12716-1			460-12759-4			460-12716-4	
Sampling Date	GW Quality	4/30/2010 11:20:00 AM			4/30/2010 12:45:00 PM			4/29/2010 12:41:00 PM			4/29/2010 2:30:00 PM			4/29/2010 10:55:00 AM			4/30/2010 2:25:00 PM			4/29/2010 3:40:00 PM	
Matrix	Criteria	Water			Water			Water			Water			Water			Water			Water	
Dilution Factor		1			1			1			1			1			1			1	
Units	ug/l	ug/l			ug/l			ug/l			ug/l			ug/l			ug/l			ug/l	
PESTICIDES/PCBs				MDL PQL			MDL PQL			MDL PQL			MDL PQL			MDL PQL			MDL PQL		
4,4'-DDD	0.1	0.20	U	0.051 0.20	0.20	U	0.051 0.20	0.22	U	0.054 0.22	0.22	U	0.056 0.22	0.20	U	0.051 0.20	0.21	U	0.052 0.21	0.21	U
4,4'-DDE	0.1	0.20	U	0.061 0.20	0.20	U	0.061 0.20	0.22	U	0.065 0.22	0.22	U	0.067 0.22	0.20	U	0.061 0.20	0.21	U	0.062 0.21	0.21	U
4,4'-DDT	0.1	0.20	U	0.051 0.20	0.20	U	0.051 0.20	0.22	U	0.054 0.22	0.22	U	0.056 0.22	0.20	U	0.051 0.20	0.21	U	0.052 0.21	0.21	U
Aldrin	0.04	0.20	U	0.040 0.20	0.20	U	0.041 0.20	0.22	U	0.043 0.22	0.22	U	0.044 0.22	0.20	U	0.041 0.20	0.21	U	0.041 0.21	0.21	U
alpha-BHC	0.02	0.20	U	0.051 0.20	0.20	U	0.051 0.20	0.22	U	0.054 0.22	0.22	U	0.056 0.22	0.20	U	0.051 0.20	0.21	U	0.052 0.21	0.21	U
Aroclor 1016	0.5	1.0	U	0.15 1.0	1.0	U	0.15 1.0	1.1	U	0.16 1.1	1.1	U	0.17 1.1	1.0	U	0.15 1.0	1.0	U	0.15 1.0	1.0	U
Aroclor 1221	0.5	1.0	U	0.12 1.0	1.0	U	0.12 1.0	1.1	U	0.13 1.1	1.1	U	0.13 1.1	1.0	U	0.12 1.0	1.0	U	0.12 1.0	1.0	U
Aroclor 1232	0.5	1.0	U	0.12 1.0	1.0	U	0.12 1.0	1.1	U	0.13 1.1	1.1	U	0.13 1.1	1.0	U	0.12 1.0	1.0	U	0.12 1.0	1.0	U
Aroclor 1242	0.5	1.0	U	0.16 1.0	1.0	U	0.16 1.0	1.1	U	0.17 1.1	1.1	U	0.18 1.1	1.0	U	0.16 1.0	1.0	U	0.16 1.0	1.0	U
Aroclor 1248	0.5	1.0	U	0.21 1.0	1.0	U	0.21 1.0	1.1	U	0.23 1.1	1.1	U	0.23 1.1	1.0	U	0.21 1.0	1.0	U	0.22 1.0	1.0	U
Aroclor 1254	0.5	1.0	U	0.13 1.0	1.0	U	0.13 1.0	1.1	U	0.14 1.1	1.1	U	0.14 1.1	1.0	U	0.13 1.0	1.0	U	0.13 1.0	1.0	U
Aroclor 1260	0.5	1.0	U	0.12 1.0	1.0	U	0.12 1.0	1.1	U	0.13 1.1	1.1	U	0.13 1.1	1.0	U	0.12 1.0	1.0	U	0.12 1.0	1.0	U
Aroclor 1262	NA	1.0	U	0.11 1.0	1.0	U	0.11 1.0	1.1	U	0.12 1.1	1.1	U	0.12 1.1	1.0	U	0.11 1.0	1.0	U	0.11 1.0	1.0	U
Aroclor 1268	NA	1.0	U	0.11 1.0	1.0	U	0.11 1.0	1.1	U	0.12 1.1	1.1	U	0.12 1.1	1.0	U	0.11 1.0	1.0	U	0.11 1.0	1.0	U
beta-BHC	0.04	0.20	U	0.040 0.20	0.20	U	0.041 0.20	0.22	U	0.043 0.22	0.22	U	0.044 0.22	0.20	U	0.041 0.20	0.21	U	0.041 0.21	0.21	U
Chlordane	0.5	2.0	U	0.46 2.0	2.0	U	0.47 2.0	2.2	U	0.50 2.2	2.2	U	0.51 2.2	2.0	U	0.47 2.0	2.1	U	0.47 2.1	2.1	U
delta-BHC	NA	0.20	U	0.040 0.20	0.20	U	0.041 0.20	0.22	U	0.043 0.22	0.22	U	0.044 0.22	0.20	U	0.041 0.20	0.21	U	0.041 0.21	0.21	U
Dieldrin	0.03	0.20	U	0.040 0.20	0.20	U	0.041 0.20	0.22	U	0.043 0.22	0.22	U	0.044 0.22	0.20	U	0.041 0.20	0.21	U	0.041 0.21	0.21	U
Endosulfan I	40	0.20	U	0.040 0.20	0.20	U	0.041 0.20	0.22	U	0.043 0.22	0.22	U	0.044 0.22	0.20	U	0.041 0.20	0.21	U	0.041 0.21	0.21	U
Endosulfan II	40	0.20	U	0.040 0.20	0.20	U	0.041 0.20	0.22	U	0.043 0.22	0.22	U	0.044 0.22	0.20	U	0.041 0.20	0.21	U	0.041 0.21	0.21	U
Endosulfan sulfate	40	0.20	U	0.040 0.20	0.20	U	0.041 0.20	0.22	U	0.043 0.22	0.22	U	0.044 0.22	0.20	U	0.041 0.20	0.21	U	0.041 0.21	0.21	U
Endrin	2	0.20	U	0.051 0.20	0.20	U	0.051 0.20	0.22	U	0.054 0.22	0.22	U	0.056 0.22	0.20	U	0.051 0.20	0.21	U	0.052 0.21	0.21	U
Endrin aldehyde	NA	0.20	U	0.040 0.20	0.20	U	0.041 0.20	0.22	U	0.043 0.22	0.22	U	0.044 0.22	0.20	U	0.041 0.20	0.21	U	0.041 0.21	0.21	U
Endrin ketone	NA	0.20	U	0.040 0.20	0.20	U	0.041 0.20	0.22	U	0.043 0.22	0.22	U	0.044 0.22	0.20	U	0.041 0.20	0.21	U	0.041 0.21	0.21	U
gamma-BHC (Lindane)	0.03	0.20	U	0.040 0.20	0.20	U	0.041 0.20	0.22	U	0.043 0.22	0.22	U	0.044 0.22	0.20	U	0.041 0.20	0.21	U	0.041 0.21	0.21	U
Heptachlor	0.05	0.20	U	0.051 0.20	0.20	U	0.051 0.20	0.22	U	0.054 0.22	0.22	U	0.056 0.22	0.20	U	0.051 0.20	0.21	U	0.052 0.21	0.21	U
Heptachlor epoxide	0.2	0.20	U	0.051 0.20	0.20	U	0.051 0.20	0.22	U	0.054 0.22	0.22	U	0.056 0.22	0.20	U	0.051 0.20	0.21	U	0.052 0.21	0.21	U
Methoxychlor	40	0.20	U	0.051 0.20	0.20	U	0.051 0.20	0.22	U	0.054 0.22	0.22	U	0.056 0.22	0.20	U	0.051 0.20	0.21	U	0.052 0.21	0.21	U
Toxaphene	2	2.0	U	0.52 2.0	2.0	U	0.52 2.0	2.2	U	0.55 2.2	2.2	U	0.57 2.2	2.0	U	0.52 2.0	2.1	U	0.53 2.1	2.1	U

Notes:  
ug/l - micrograms per liter  
MDL - Method Detection Limit  
PQL - Practicable Quantitation Limit  
U - Analyte was analyzed for but not detected  
J - Analyte was detected below the PQL (estimated concentration)  
ND - None Detected

**TABLE 4C**  
**Groundwater Sample Analytical Results - PESTICIDES/PCBs**

**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJDEP			MW-8			DUP043010 (MW-2)			FB043010					
Lab Sample No.	2005			460-12759-1			460-12759-5			460-12759-6					
Sampling Date	GW Quality			4/30/2010 9:45:00 AM			4/30/2010 12:00:00 AM			4/30/2010 12:00:00 AM					
Matrix	Criteria			Water			Water			Water					
Dilution Factor				1			1			1					
Units	ug/l			ug/l			ug/l			ug/l					
PESTICIDES/PCBs		MDL	PQL		MDL	PQL		MDL	PQL		MDL	PQL			
4,4'-DDD	0.1	0.052	0.21	0.20	U	0.051	0.20	0.20	U	0.051	0.20	0.21	U	0.052	0.21
4,4'-DDE	0.1	0.062	0.21	0.20	U	0.061	0.20	0.20	U	0.061	0.20	0.21	U	0.062	0.21
4,4'-DDT	0.1	0.052	0.21	0.20	U	0.051	0.20	0.20	U	0.051	0.20	0.21	U	0.052	0.21
Aldrin	0.04	0.041	0.21	0.20	U	0.041	0.20	0.20	U	0.041	0.20	0.21	U	0.041	0.21
alpha-BHC	0.02	0.052	0.21	0.20	U	0.051	0.20	0.20	U	0.051	0.20	0.21	U	0.052	0.21
Aroclor 1016	0.5	0.15	1.0	1.0	U	0.15	1.0	1.0	U	0.15	1.0	1.0	U	0.15	1.0
Aroclor 1221	0.5	0.12	1.0	1.0	U	0.12	1.0	1.0	U	0.12	1.0	1.0	U	0.12	1.0
Aroclor 1232	0.5	0.12	1.0	1.0	U	0.12	1.0	1.0	U	0.12	1.0	1.0	U	0.12	1.0
Aroclor 1242	0.5	0.16	1.0	1.0	U	0.16	1.0	1.0	U	0.16	1.0	1.0	U	0.16	1.0
Aroclor 1248	0.5	0.22	1.0	1.0	U	0.21	1.0	1.0	U	0.21	1.0	1.0	U	0.22	1.0
Aroclor 1254	0.5	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0	1.0	U	0.13	1.0
Aroclor 1260	0.5	0.12	1.0	1.0	U	0.12	1.0	1.0	U	0.12	1.0	1.0	U	0.12	1.0
Aroclor 1262	NA	0.11	1.0	1.0	U	0.11	1.0	1.0	U	0.11	1.0	1.0	U	0.11	1.0
Aroclor 1268	NA	0.11	1.0	1.0	U	0.11	1.0	1.0	U	0.11	1.0	1.0	U	0.11	1.0
beta-BHC	0.04	0.041	0.21	0.20	U	0.041	0.20	0.20	U	0.041	0.20	0.21	U	0.041	0.21
Chlordane	0.5	0.47	2.1	2.0	U	0.47	2.0	2.0	U	0.47	2.0	2.1	U	0.47	2.1
delta-BHC	NA	0.041	0.21	0.20	U	0.041	0.20	0.20	U	0.041	0.20	0.21	U	0.041	0.21
Dieldrin	0.03	0.041	0.21	0.20	U	0.041	0.20	0.20	U	0.041	0.20	0.21	U	0.041	0.21
Endosulfan I	40	0.041	0.21	0.20	U	0.041	0.20	0.20	U	0.041	0.20	0.21	U	0.041	0.21
Endosulfan II	40	0.041	0.21	0.20	U	0.041	0.20	0.20	U	0.041	0.20	0.21	U	0.041	0.21
Endosulfan sulfate	40	0.041	0.21	0.20	U	0.041	0.20	0.20	U	0.041	0.20	0.21	U	0.041	0.21
Endrin	2	0.052	0.21	0.20	U	0.051	0.20	0.20	U	0.051	0.20	0.21	U	0.052	0.21
Endrin aldehyde	NA	0.041	0.21	0.20	U	0.041	0.20	0.20	U	0.041	0.20	0.21	U	0.041	0.21
Endrin ketone	NA	0.041	0.21	0.20	U	0.041	0.20	0.20	U	0.041	0.20	0.21	U	0.041	0.21
gamma-BHC (Lindane)	0.03	0.041	0.21	0.20	U	0.041	0.20	0.20	U	0.041	0.20	0.21	U	0.041	0.21
Heptachlor	0.05	0.052	0.21	0.20	U	0.051	0.20	0.20	U	0.051	0.20	0.21	U	0.052	0.21
Heptachlor epoxide	0.2	0.052	0.21	0.20	U	0.051	0.20	0.20	U	0.051	0.20	0.21	U	0.052	0.21
Methoxychlor	40	0.052	0.21	0.20	U	0.051	0.20	0.20	U	0.051	0.20	0.21	U	0.052	0.21
Toxaphene	2	0.53	2.1	2.0	U	0.52	2.0	2.0	U	0.52	2.0	2.1	U	0.53	2.1

Notes:  
ug/l - micrograms per liter  
MDL - Method Detection Limit  
PQL - Practicable Quantitation Limit  
U - Analyte was analyzed for but not detected  
J - Analyte was detected below the PQL (estimated concentration)  
ND - None Detected

**TABLE 4D**  
**Groundwater Sample Analytical Results - METALS**

**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJDEP	MW-1			MW-2			MW-3			MW-4			MW-5			MW-6			MW-7	
Lab Sample No.	2005	460-12759-2			460-12759-3			460-12716-2			460-12716-3			460-12716-1			460-12759-4			460-12716-4	
Sampling Date	GW Quality	4/30/2010 11:20:00 AM			4/30/2010 12:45:00 PM			4/29/2010 12:41:00 PM			4/29/2010 2:30:00 PM			4/29/2010 10:55:00 AM			4/30/2010 2:25:00 PM			4/29/2010 3:40:00 PM	
Matrix	Criteria	Water			Water			Water			Water			Water			Water			Water	
Dilution Factor																					
Units	ug/l	ug/l			ug/l			ug/l			ug/l			ug/l			ug/l			ug/l	
METALS			MDL	PQL		MDL	PQL		MDL	PQL		MDL	PQL		MDL	PQL		MDL	PQL		
Aluminum	200	50.0	U	48.5	50.0	50.2	48.5	50.0	83.1	48.5	50.0	50.0	48.5	50.0	50.0	48.5	50.0	50.0	48.5	50.0	50.0
Antimony	6	2.5	U	1.8	2.5	2.5	1.8	2.5	2.5	1.8	2.5	2.5	1.8	2.5	2.5	1.8	2.5	2.5	1.8	2.5	2.5
Arsenic	3	2.5	U	2.3	2.5	2.5	2.3	2.5	2.5	2.3	2.5	2.5	2.3	2.5	2.5	2.3	2.5	2.5	2.3	2.5	2.5
Barium	6000	5.0	U	4.1	5.0	10.8	4.1	5.0	14.9	4.1	5.0	4.5	4.1	5.0	89.5	4.1	5.0	16.3	4.1	5.0	35.3
Beryllium	1	1.0	U	0.72	1.0	1.0	0.72	1.0	1.0	0.72	1.0	1.0	0.72	1.0	1.0	0.72	1.0	1.0	0.72	1.0	1.0
Cadmium	4	2.5	U	2.0	2.5	2.5	2.0	2.5	2.5	2.0	2.5	2.5	2.0	2.5	2.5	2.0	2.5	2.5	2.0	2.5	2.5
Calcium	NA	7990		212	250	18300	212	250	19600	212	250	5580	212	250	55900	212	250	23800	212	250	25800
Chromium	70	5.0	U	3.7	5.0	5.0	3.7	5.0	5.0	3.7	5.0	5.0	3.7	5.0	5.0	3.7	5.0	5.0	3.7	5.0	5.0
Cobalt	NA	5.0	U	4.1	5.0	5.0	4.1	5.0	5.0	4.1	5.0	5.0	4.1	5.0	5.0	4.1	5.0	5.0	4.1	5.0	5.0
Copper	1300	5.0	U	4.1	5.0	5.0	4.1	5.0	5.0	4.1	5.0	5.0	4.1	5.0	5.0	4.1	5.0	5.0	4.1	5.0	5.0
Iron	300	285		126	150	1470	126	150	466	126	150	771	126	150	8690	126	150	260	126	150	212
Lead	5	1.5	U	1.2	1.5	1.5	1.2	1.5	1.5	1.2	1.5	1.5	1.2	1.5	1.5	1.2	1.5	1.5	1.2	1.5	1.5
Magnesium	NA	531		203	250	3050	203	250	3760	203	250	1810	203	250	25300	203	250	6650	203	250	7300
Manganese	50	8.9	J	8.5	10.0	24.2	8.5	10.0	395	8.5	10.0	9.4	8.5	10.0	2550	8.5	10.0	10.0	8.5	10.0	31.7
Mercury	2	0.20	U	0.18	0.20	0.20	0.18	0.20	0.20	0.18	0.20	0.20	0.18	0.20	0.20	0.18	0.20	0.20	0.18	0.20	0.20
Nickel	100	5.0	U	4.3	5.0	5.0	4.3	5.0	5.0	4.3	5.0	5.0	4.3	5.0	5.0	4.3	5.0	5.0	4.3	5.0	5.0
Potassium	NA	250	U	201	250	435	201	250	423	201	250	250	201	250	1290	201	250	865	201	250	1760
Selenium	40	2.5	U	1.9	2.5	2.5	1.9	2.5	2.5	1.9	2.5	2.5	1.9	2.5	2.5	1.9	2.5	2.5	1.9	2.5	2.5
Silver	40	5.0	U	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0	4.0	5.0	5.0
Sodium	50000	2300		224	250	16900	224	250	31200	224	250	12400	224	250	70300	224	250	24200	224	250	64500
Thallium	2	1.0	U	0.78	1.0	1.0	0.78	1.0	1.0	0.78	1.0	1.0	0.78	1.0	1.0	0.78	1.0	1.0	0.78	1.0	1.0
Vanadium	60	5.0	U	4.3	5.0	5.0	4.3	5.0	5.0	4.3	5.0	5.0	4.3	5.0	5.0	4.3	5.0	5.0	4.3	5.0	5.0
Zinc	2000	20.0	U	16.4	20.0	20.0	16.4	20.0	20.0	16.4	20.0	20.0	16.4	20.0	20.0	16.4	20.0	20.0	16.4	20.0	20.0

Notes:  
 ug/l - micrograms per liter  
 MDL - Method Detection Limit  
 PQL - Practicable Quantitation Limit  
 U - Analyte was analyzed for but not detected  
 J - Analyte was detected below the PQL (estimated concentration)  
 ND - None Detected

  - Concentration detected in excess of NJDEP GW Quality Standard

**TABLE 4D**  
**Groundwater Sample Analytical Results - METALS**

**Former Pyrolac Corporation Facility**  
**55 Schoon Avenue, Hawthorne, Passaic County, NJ**

Sample ID	NJDEP			MW-8			DUP043010			FB043010		
Lab Sample No.	2005			460-12759-1			460-12759-5			460-12759-6		
Sampling Date	GW Quality			4/30/2010 9:45:00 AM			4/30/2010 12:00:00 AM			4/30/2010 12:00:00 AM		
Matrix	Criteria			Water			Water			Water		
Dilution Factor												
Units	ug/l			ug/l			ug/l			ug/l		
METALS		MDL	PQL		MDL	PQL		MDL	PQL		MDL	PQL
Aluminum	200	U 48.5	50.0	189	U 48.5	50.0	50.0	U 48.5	50.0	50.0	U 48.5	50.0
Antimony	6	U 1.8	2.5	2.5	U 1.8	2.5	2.5	U 1.8	2.5	2.5	U 1.8	2.5
Arsenic	3	U 2.3	2.5	<b>3.6</b>	U 2.3	2.5	2.5	U 2.3	2.5	2.5	U 2.3	2.5
Barium	6000	U 4.1	5.0	11.5	U 4.1	5.0	11.0	U 4.1	5.0	5.0	U 4.1	5.0
Beryllium	1	U 0.72	1.0	1.0	U 0.72	1.0	1.0	U 0.72	1.0	1.0	U 0.72	1.0
Cadmium	4	U 2.0	2.5	2.5	U 2.0	2.5	2.5	U 2.0	2.5	2.5	U 2.0	2.5
Calcium	NA	212	250	13400	212	250	17400	212	250	250	U 212	250
Chromium	70	U 3.7	5.0	5.0	U 3.7	5.0	5.0	U 3.7	5.0	5.0	U 3.7	5.0
Cobalt	NA	U 4.1	5.0	5.0	U 4.1	5.0	5.0	U 4.1	5.0	5.0	U 4.1	5.0
Copper	1300	U 4.1	5.0	16.6	U 4.1	5.0	5.0	U 4.1	5.0	5.0	U 4.1	5.0
Iron	300	126	150	<b>18100</b>	126	150	<b>1500</b>	126	150	150	U 126	150
Lead	5	U 1.2	1.5	1.5	U 1.2	1.5	1.5	U 1.2	1.5	1.5	U 1.2	1.5
Magnesium	NA	203	250	2540	203	250	3070	203	250	250	U 203	250
Manganese	50	U 8.5	10.0	<b>2470</b>	U 8.5	10.0	23.8	U 8.5	10.0	10.0	U 8.5	10.0
Mercury	2	U 0.18	0.20	0.20	U 0.18	0.20	0.20	U 0.18	0.20	0.20	U 0.18	0.20
Nickel	100	U 4.3	5.0	5.0	U 4.3	5.0	5.0	U 4.3	5.0	5.0	U 4.3	5.0
Potassium	NA	201	250	836	201	250	474	201	250	250	U 201	250
Selenium	40	U 1.9	2.5	2.5	U 1.9	2.5	2.5	U 1.9	2.5	2.5	U 1.9	2.5
Silver	40	U 4.0	5.0	5.0	U 4.0	5.0	5.0	U 4.0	5.0	5.0	U 4.0	5.0
Sodium	50000	224	250	12000	224	250	17000	224	250	250	U 224	250
Thallium	2	U 0.78	1.0	1.0	U 0.78	1.0	1.0	U 0.78	1.0	1.0	U 0.78	1.0
Vanadium	60	U 4.3	5.0	4.7	U 4.3	5.0	5.0	U 4.3	5.0	5.0	U 4.3	5.0
Zinc	2000	U 16.4	20.0	19.8	U 16.4	20.0	20.0	U 16.4	20.0	20.0	U 16.4	20.0

Notes:

ug/l - micrograms per liter

MDL - Method Detection Limit

PQL - Practicable Quantitation Limit

U - Analyte was analyzed for but not detected

J - Analyte was detected below the PQL (estimated concentration)

ND - None Detected

- Concentration detected in excess of NJDEP GW

## **APPENDIX A**

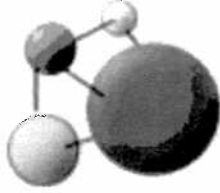
Soil and Groundwater Analytical Data Packages



**Appendix A – Soil and Groundwater Analytical Data Packages  
can be found on the compact disc located in Appendix A of the  
hardcopy version of this report.**

## **APPENDIX B**

Third-Party Data Validation Reports



## **Mid-Atlantic**

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## Data Validation Report

**Client Job ID:** 12150

Prepared by:

Sharon D. O'Toole

August 16, 2010

August 16, 2010

**Client Project Name:** 12150-1 55 Schoon Ave.

**Date Sampled:** 04/13/2010

**Date Received at Lab:** 04/13/2010

### GENERAL

Samples were a mix of non-aqueous matrix and aqueous matrix; 15 samples were soil, one field blank and one trip blank. Samples were acceptably received into the laboratory, prepared for analysis within USEPA/method holding time limits and analyzed within USEPA/method holding time limits.

No Quality Assurance Project Plan (QAPP) was available for this project.

Parameters requested for analysis were TPH-DRO to be held for the NJ contingency analysis if required for samples 1 – 5, TCL/TAL+30 for samples 6 – 15, TCL/TAL +30 for sample 16 (field blank) and TCL VO+10 for sample 17 (trip blank). Regulatory compliance is unknown, although page 2 of the Chain of Custody listed EPA CLP as the regulatory program.

~~Internal Chains of Custody, detailing when and by whom samples were placed into refrigerated storage, removed for sample preparation or when sample extractions, digestates or distillates were distributed among laboratory personnel were not included in this data package, as required by N.J.A.C. 7:26E, Appendix A, IV, Reduced Laboratory Data Deliverables-Non-USEPA/CLP Methods, Section 1C.~~

### VOLATILE ORGANIC COMPOUNDS (VOCs)

Samples were analyzed by GC/MS by SW-846 Method 5035/8260. No specific methodology was requested on the Chain of Custody. ~~Not all TCL Volatile Organic Compounds were analyzed/reported for this job.~~

The GC/MS instrument was calibrated on 04/15/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports and all RSDs were within laboratory acceptable limits.

Samples were analyzed within the required holding time and the entire analytical run was completed within the 12-hour window as required.

~~Only 3 of the 4 recommended surrogates were included in the analysis. Two of the analytical samples had toluene-d8 surrogate recoveries outside acceptable limits; the surrogate recoveries in the field and trip blanks were within acceptable limits. No samples from this project were used for batch QC samples. All other laboratory QC acceptance criteria for SW-846 Method 8260 were met.~~

### SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs)

Samples were prepped by SW-846 Method 3541 and analyzed by GC/MS by SW-846 Method 8270. No specific methodology was requested on the Chain of Custody. ~~Not all TCL Semivolatile Organic~~

Compounds were analyzed/reported for this job

The GC/MS instrument was calibrated on 04/15/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports and all RSDs were within laboratory acceptable limits.

Samples were prepped and analyzed within the required holding times and the entire analytical run was completed within the 12-hour window as required.

No samples from this project were used for batch QC samples. All other laboratory QC acceptance criteria for SW-846 Method 8270 were met.

### **PESTICIDES**

Samples were prepped by SW-846 Method 3541 and analyzed by GC/ECD containing two columns (the second column used for confirmation of positive results > the MDL) by SW-846 Method 8081. No specific methodology was requested on the Chain of Custody.

The Pesticides Performance Evaluation Mixture breakdown was within acceptable limits.

The GC/ECD instrument was calibrated on 04/14/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports and all RSDs were within laboratory acceptable limits.

Samples were prepped and analyzed within the required holding times

Samples from this project, as well as samples not from this project, were used for batch QC samples. All other laboratory QC acceptance criteria for SW-846 Method 8270 were met.

### **POLYCHLORINATED BIPHENYLS (PCBs)**

Samples were prepped by SW-846 Method 3541 and analyzed by GC/ECD by SW-846 Method 8082. No specific methodology was requested on the Chain of Custody.

The GC/ECD instrument was calibrated on 03/31/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports and all RSDs were within laboratory acceptable limits.

Samples were prepped and analyzed within the required holding times

No samples from this project were used for batch QC samples. All other laboratory QC acceptance criteria for SW-846 Method 8270 were met.

### **METALS by ICP**

Samples were prepped by SW-846 Method 3050 and analyzed by ICP by SW-846 Method 6010. No specific methodology was requested on the Chain of Custody.

The ICP instrument was calibrated at the beginning of the analytical run immediately preceding the

batch QC and analytical samples. All target analyte linear regression correlation coefficients ( $r^2$ ) were  $\geq 0.998$  as specified by SW-846 Method 6010.

Samples were prepped and analyzed within the required holding times

Samples from this project were used for batch QC samples. ~~No Matrix Spike Duplicate was prepped/analyzed, as required by SW-846 Method 6010.~~ All other laboratory QC acceptance criteria for SW-846 Method 6010 were met.

### **MERCURY by CVAA**

Samples were prepped and analyzed by CVAA by SW-846 Method 7471. No specific methodology was requested on the Chain of Custody.

The CVAA instrument was calibrated at the beginning of the analytical run immediately preceding the batch QC and analytical samples. The target analyte linear regression correlation coefficients ( $r^2$ ) were  $\geq 0.995$  as specified by N.J.A.C. 7:18.

Samples were prepped and analyzed within the required holding times

No samples from this project were used for batch QC samples. ~~No Matrix Spike Duplicate was prepped/analyzed, as required by SW-846 Method 7471.~~ All other laboratory QC acceptance criteria for SW-846 Method 7471 were met.

### **DIESEL RANGE ORGANICS**

Samples were prepped by SW-846 Method 3546 and analyzed by GC/FID by SW-846 Method 8015. No specific methodology was requested on the Chain of Custody.

The GC/FID instrument was calibrated on 03/23/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports and all RSDs were within laboratory acceptable limits.

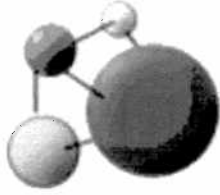
Samples were prepped and analyzed within the required holding times

Samples from this project were used for batch QC samples. All other laboratory QC acceptance criteria for SW-846 Method 8015 were met.

Reviewed by



Quality Assurance Manager



## **Mid-Atlantic**

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**Environmental Laboratories, Inc.**

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## Data Validation Report

**Client Job ID:** 12202

Prepared by:

Sharon D. O'Toole

August 16, 2010

August 16, 2010

**Client Project Name:** 12202-1 55 Schoon Ave.

**Date Sampled:** 04/14/2010

**Date Received at Lab:** 04/14/2010

### GENERAL

Samples were a mix of non-aqueous matrix and aqueous matrix; 17 samples were soil, one field blank and one trip blank. Samples were acceptably received into the laboratory, prepared for analysis within USEPA/method holding time limits and analyzed within USEPA/method holding time limits.

No Quality Assurance Project Plan (QAPP) was available for this project.

Parameters requested for analysis were TCL/TAL+30 for samples 1 through 17 (soil) and sample 18 (field blank) and TCL VO+10 for sample 19 (trip blank). EPA CLP is listed as the regulatory program.

~~Internal Chains of Custody, detailing when and by whom samples were placed into refrigerated storage, removed for sample preparation or when sample extractions, digestates or distillates were distributed among laboratory personnel were not included in this data package, as required by N.J.A.C. 7-26E, Appendix A, IV, Reduced Laboratory Data Deliverables-Non-USEPA/CLP Methods, Section 1C.~~

### VOLATILE ORGANIC COMPOUNDS (VOCs)

Samples were analyzed by GC/MS by SW-846 Method 5035/8260. No specific methodology was requested on the Chain of Custody. ~~Not all TCL Volatile Organic Compounds were analyzed/reported for this job.~~

The GC/MS instrument was calibrated on 04/15/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports and all RSDs were within laboratory acceptable limits.

Samples were analyzed within the required holding time and the entire analytical run was completed within the 12-hour window as required.

~~Only 3 of the 4 recommended surrogates were included in the analysis.~~ All of the analytical samples had surrogate recoveries within acceptable limits; the surrogate recoveries in the field and trip blanks were within acceptable limits. No samples from this project were used for batch QC samples. All other laboratory QC acceptance criteria for SW-846 Method 8260 were met.

### SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs)

Samples were prepped by SW-846 Method 3541 and analyzed by GC/MS by SW-846 Method 8270. No specific methodology was requested on the Chain of Custody. ~~Not all TCL SemiVolatile Organic Compounds were analyzed/reported for this job.~~



The GC/MS instrument was calibrated on 04/15/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports and all RSDs were within laboratory acceptable limits.

Samples were prepped and analyzed within the required holding times and the entire analytical runs were completed within the 12-hour window as required.

Both samples from this project and samples from outside this project were used for batch QC samples. All other laboratory QC acceptance criteria for SW-846 Method 8270 were met.

### **PESTICIDES**

Samples were prepped by SW-846 Method 3541 and analyzed by GC/ECD containing two columns (the second column used for confirmation of positive results > the MDL) by SW-846 Method 8081. No specific methodology was requested on the Chain of Custody.

The Pesticides Performance Evaluation Mixture breakdown was within acceptable limits.

The GC/ECD instrument was calibrated on 04/14/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports and all RSDs were within laboratory acceptable limits.

Samples were prepped and analyzed within the required holding times

Samples from this project, as well as samples from outside this project, were used for batch QC samples. ~~TCX and DGB surrogates for the MS and MSD from outside this job exceeding the acceptance limits. These same samples had an RSD > 20% between the initial and confirmatory columns results for surrogates on these same samples.~~ All other laboratory QC acceptance criteria for SW-846 Method 8270 were met.

### **POLYCHLORINATED BIPHENYLS (PCBs)**

Samples were prepped by SW-846 Method 3541 and analyzed by GC/ECD by SW-846 Method 8082. No specific methodology was requested on the Chain of Custody.

The GC/ECD instrument was calibrated on 03/29/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports and all RSDs were within laboratory acceptable limits.

Samples were prepped and analyzed within the required holding times

Samples from this project were used for batch QC samples. All other laboratory QC acceptance criteria for SW-846 Method 8270 were met.

### **METALS by ICP**

Samples were prepped by SW-846 Method 3050 and analyzed by ICP by SW-846 Method 6010. No specific methodology was requested on the Chain of Custody.

The ICP instrument was calibrated at the beginning of the analytical run immediately preceding the batch QC and analytical samples. All target analyte linear regression correlation coefficients ( $r^2$ ) were  $\geq 0.998$  as specified by SW-846 Method 6010.

Samples were prepped and analyzed within the required holding times

Samples from this project were used for batch QC samples. ~~No Matrix Spike Duplicate was prepped / analyzed, as required by SW-846 Method 6010. All other laboratory QC acceptance criteria for SW-846 Method 6010 were met.~~

### **MERCURY by CVAA**

Samples were prepped and analyzed by CVAA by SW-846 Method 7471. No specific methodology was requested on the Chain of Custody.

The CVAA instrument was calibrated at the beginning of the analytical run immediately preceding the batch QC and analytical samples. The target analyte linear regression correlation coefficients ( $r^2$ ) were  $\geq 0.995$  as specified by N.J.A.C. 7:18.

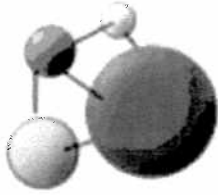
Samples were prepped and analyzed within the required holding times

Samples from this project were used for batch QC samples. ~~No Matrix Spike Duplicate was prepped / analyzed, as required by SW-846 Method 7471. All other laboratory QC acceptance criteria for SW-846 Method 7471 were met.~~

Reviewed by



Quality Assurance Manager



## **Mid-Atlantic**

**Environmental Laboratories, Inc.**

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# Data Validation Report

**Client Job ID: 12258**

Prepared by:  
Sharon D. O'Toole

August 16, 2010

August 16, 2010

**Client Project Name:** 12258-1 55 Schoon Ave.

**Date Sampled:** 04/15/2010

**Date Received at Lab:** 04/15/2010

### GENERAL

Samples were a mix of non-aqueous matrix and aqueous matrix; 4 samples were soil and one trip blank. Samples were acceptably received into the laboratory, prepared for analysis within USEPA/method holding time limits and analyzed within USEPA/method holding time limits.

No Quality Assurance Project Plan (QAPP) was available for this project.

Parameters requested for analysis were TCL/TAL+30 for samples 1 through 17 (soil) and sample 18 (field blank) and TCL VO+10 for sample 19 (trip blank). EPA CLP is listed as the regulatory program.

~~Internal Chains of Custody, detailing when and by whom samples were placed into refrigerated storage, removed for sample preparation or when sample extractions, digestates or distillates were distributed among laboratory personnel were not included in this data package, as required by N.J.A.C. 7:26E, Appendix A, IV, Reduced Laboratory Data Deliverables-Non-USEPA/CLP Methods, Section IC.~~

### VOLATILE ORGANIC COMPOUNDS (VOCs)

Samples were analyzed by GC/MS by SW-846 Method 5035/8260. No specific methodology was requested on the Chain of Custody. Not all TCL Volatile Organic Compounds were analyzed/reported for this job.

The GC/MS instrument was calibrated on 04/15/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports and all RSDs were within laboratory acceptable limits.

Samples were analyzed within the required holding time and the entire analytical run was completed within the 12-hour window as required.

~~Only 3 of the 4 recommended surrogates were included in the analysis.~~ All of the analytical samples had surrogate recoveries within acceptable limits; the surrogate recoveries in the field and trip blanks were within acceptable limits. No samples from this project were used for batch QC samples. All other laboratory QC acceptance criteria for SW-846 Method 8260 were met.

### SEMIVOLATILE ORGANIC COMPOUNDS (SVOCs)

Samples were prepped by SW-846 Method 3541 and analyzed by GC/MS by SW-846 Method 8270. No specific methodology was requested on the Chain of Custody. ~~Not all TCL SemiVolatile Organic Compounds were analyzed/reported for this job~~

The GC/MS instrument was calibrated on 04/15/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports and all RSDs were within laboratory acceptable limits.

Samples were prepped and analyzed within the required holding times and the entire analytical runs were completed within the 12-hour window as required.

Samples from this project were used for batch QC samples. All other laboratory QC acceptance criteria for SW-846 Method 8270 were met.

### **PESTICIDES**

Samples were prepped by SW-846 Method 3541 and analyzed by GC/ECD containing two columns (the second column used for confirmation of positive results > the MDL) by SW-846 Method 8081. No specific methodology was requested on the Chain of Custody.

The Pesticides Performance Evaluation Mixture breakdown was within acceptable limits.

The GC/ECD instrument was calibrated on 04/16/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports and all RSDs were within laboratory acceptable limits.

Samples were prepped and analyzed within the required holding times

Samples from this project were used for batch QC samples. ~~TCX and DCB surrogates for the MS and MSD exceeded the acceptance limits.~~ All other laboratory QC acceptance criteria for SW-846 Method 8270 were met.

### **POLYCHLORINATED BIPHENYLS (PCBs)**

Samples were prepped by SW-846 Method 3541 and analyzed by GC/ECD by SW-846 Method 8082. No specific methodology was requested on the Chain of Custody.

The GC/ECD instrument was calibrated on 03/29/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports and all RSDs were within laboratory acceptable limits.

Samples were prepped and analyzed within the required holding times

No samples from this project were used for batch QC samples. All other laboratory QC acceptance criteria for SW-846 Method 8270 were met.

### **METALS by ICP**

Samples were prepped by SW-846 Method 3050 and analyzed by ICP by SW-846 Method 6010. No specific methodology was requested on the Chain of Custody.

The ICP instrument was calibrated at the beginning of the analytical run immediately preceding the batch QC and analytical samples. All target analyte linear regression correlation coefficients ( $r^2$ ) were

$\geq 0.998$  as specified by SW-846 Method 6010.

Samples were prepped and analyzed within the required holding times

No samples from this project were used for batch QC samples. ~~No Matrix Spike Duplicate was prepped / analyzed, as required by SW-846 Method 6010. Iron MS failed as the sample concentration was greater than 4 times the spike concentration, the aluminum MS failed as it exceeded the acceptance limits.~~ All other laboratory QC acceptance criteria for SW-846 Method 6010 were met.

### **MERCURY by CVAA**

Samples were prepped and analyzed by CVAA by SW-846 Method 7471. No specific methodology was requested on the Chain of Custody.

The CVAA instrument was calibrated at the beginning of the analytical run immediately preceding the batch QC and analytical samples. The target analyte linear regression correlation coefficients ( $r^2$ ) were  $\geq 0.995$  as specified by N.J.A.C. 7:18.

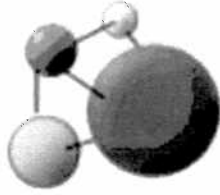
Samples were prepped and analyzed within the required holding times

Samples from both within this project, as well as outside this project, were used for batch QC samples. ~~No Matrix Spike Duplicate was prepped/analyzed, as required by SW-846 Method 7471.~~ All other laboratory QC acceptance criteria for SW-846 Method 7471 were met.

Reviewed by



Quality Assurance Manager



## **Mid-Atlantic**

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## Data Validation Report

**Client Job ID:** 12716

Prepared by:  
Sharon D. O'Toole

August 16, 2010

Data Validation 12716

**Date Collected:** 04/29/2010

**Date Received:** 04/29/2010

August 16, 2010

## GENERAL

All samples were aqueous matrix; five (5) were groundwater and one (1) was a trip blank. Samples were acceptably received into the laboratory, prepared for analysis within EPA/method holding time limits and analyzed within USEPA/method holding time limits.

Parameters requested for analysis were TCL VOC+10, TCL BNA+20, TCL Pesticides, TCL PCBs and TAL Metals. No specific methodology was requested.

~~Internal Chains of Custody, detailing when and by whom samples were placed into refrigerated storage, removed for sample preparation or when sample extractions, digestates or distillates were distributed among laboratory personnel were not included in this data package, as required by N.J.A.C. 7:26E, Appendix A, IV, Reduced Laboratory Data Deliverables Non-USEPA/CLP Methods, Section 1C.~~

## VOLATILE ORGANIC COMPOUNDS

Samples were analyzed by GC/MS by EPA Method 624 within EPA/method holding time limits. No specific methodology was requested on the Chain of Custody, however it is unclear why EPA Method 624 was chosen for analysis as it is for the analysis of industrial and municipal discharges (EPA Method 624 1.3).

The GC/MS instrument was calibrated on 03/03/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports. As per Method 624, all % RSDs were within acceptable limits. ~~Not all volatile organic compounds on the Target Compound List were reported.~~ Samples used for batch QC were not from this project. Neither 1,2-Dibromoethane (EDB) nor 1,2-Dibromo-3-chloropropane (DBCP) was analyzed, either by GC/MS or separately by GC-ECD, following USEPA SW-846 Method 8011.

While all surrogates analyzed were within laboratory acceptance limits, only three of four recommended surrogates were used. The analytical run was completed within the 12-hour limit. All other QC acceptance criteria for Method 624 were met.

## SEMIVOLATILE ORGANIC COMPOUNDS

Prior to analysis samples were extracted on 05/03/2010 and 05/05/2010 in accordance with EPA Method 625 within EPA/method holding time limits. Samples were then analyzed by GC/MS by EPA Method 625 within EPA/holding time limits. No specific methodology was requested on the Chain of Custody, however it is unclear why EPA Method 625 was chosen for analysis as it is for the analysis of industrial and municipal discharges (EPA Method 625 1.3).

The GC/MS instrument was calibrated on 04/28/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports. As per Method 625, all % RSDs were within acceptable limits. ~~Not all semivolatile organic compounds on the Target Compound List were reported.~~ Samples used for batch QC were not from



this project although the Laboratory Control Sample and the Laboratory Control Sample duplicate were from this project prep batch.

All surrogates analyzed were within laboratory acceptance limits. The analytical run was completed within the 12-hour limit.

~~The laboratory control sample and the laboratory control sample duplicate for prep batch 460-36427 were outside acceptance limits for the following analytes: 2-Methylphenol, 4-Methylphenol and Hexachlorocyclopentadiene. The laboratory control sample duplicate for prep batch 460-36427 was outside acceptance limits for the following analytes: 2-Methylnaphthalene, 3-Nitroaniline and 4-Chloroaniline. The laboratory control sample and the laboratory control sample duplicate for prep batch 460-36657 were outside acceptance limits for the following analytes: 4-Methylphenol, Hexachlorocyclopentadiene and 2-Methylphenol. All other QC acceptance criteria for Method 625 were met.~~

### **POLYCYCLIC AROMATIC HYDROCARBONS / SIM**

Prior to analysis, samples were prepared on 05/03/2010 and 05/05/2010 in accordance with SW-846 Method 3510 within EPA/method holding time limits and analyzed on 05/04/2010 and 05/06/2010 for polycyclic aromatic hydrocarbons (PAHs) in accordance with EPA SW-846 Method 8270C SIM within EPA/method holding time limits.

The GC/MS instrument was calibrated on 04/20/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports. As per Method 8270, all % RSDs were within acceptable limits.

All QC acceptance criteria for Method 8270 were met.

### **PESTICIDES & POLYCHLORINATED BIPHENYLS**

Prior to analysis samples were extracted on 05/03/2010 in accordance with EPA Method 608 within EPA/method holding time limits. Samples were then analyzed by GC by EPA Method 608 within EPA/holding time limits. No specific methodology was requested on the Chain of Custody, however it is unclear why EPA Method 608 was chosen for analysis as it is for the analysis of industrial and municipal discharges (EPA Method 608 1.2).

The GC instrument was calibrated on 04/14/2010, prior to analysis of the project samples. As per Method 608, all compound RTs for each project sample were within method acceptance limits.

Samples used for batch QC were not from this project although the Laboratory Control Sample and the Laboratory Control Sample duplicate were from this project prep batch.

All QC acceptance criteria for Method 608 were met.

### **METALS by ICP/MS**

Prior to analysis samples were prepped for Total Recoverable Metals on 05/03/2010 in accordance with EPA Method 200.8 within EPA/method holding time limits. Samples were then analyzed by ICP/MS by EPA Method 200.8 on 05/04/2010 and 05/07/2010 within EPA/holding time limits. No specific methodology was requested on the Chain of Custody.

Samples for Batch QC, except for the sample duplicate, were for samples from this project.

All QC acceptance criteria for Method 200.8 were met.

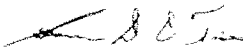
**MERCURY by CVAA**

Prior to analysis samples were prepped and analyzed by Cold Vapor Atomic Absorption on 04/30/2010 in accordance with EPA Method 245.1 within EPA/method holding time limits. No specific methodology was requested on the Chain of Custody.

Samples for Batch QC were for samples from this project.

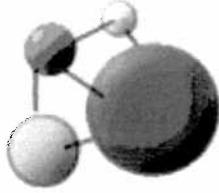
All QC acceptance criteria for Method 245.1 were met.

Reviewed by



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Quality Assurance Manager



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## Data Validation Report

**Client Job ID:** 12759

Prepared by:  
Sharon D. O'Toole

August 16, 2010

*MDBE Certification  
DE NJ PAUCP (SEPTA)  
City of Philadelphia*

NJ DE 003



PA 68-00566

*DE Certification - C07DE02804B  
MD Certification - 292*

Data Validation 12759

**Date Collected:** 04/30/2010

**Date Received:** 04/30/2010

August 16, 2010

## GENERAL

All seven (7) samples were aqueous matrix; five (5) were groundwater including one (1) duplicate, one (1) field blank and one (1) trip blank. Samples were acceptably received into the laboratory, prepared for analysis within EPA/method holding time limits and analyzed within USEPA/method holding time limits.

Parameters requested for analysis were TCL VOC+10, TCL BNA+20, TCL Pesticides, TCL PCBs and TAL Metals. No specific methodology was requested.

~~Internal Chains of Custody, detailing when and by whom samples were placed into refrigerated storage, removed for sample preparation or when sample extractions, digestates or distillates were distributed among laboratory personnel were not included in this data package, as required by N.J.A.C. 7:26E, Appendix A, IV, Reduced Laboratory Data Deliverables - Non-USEPA/CLP Methods, Section 1C.~~

## VOLATILE ORGANIC COMPOUNDS

Samples were analyzed by GC/MS by EPA Method 624 on 05/06/2010 within EPA/method holding time limits. No specific methodology was requested on the Chain of Custody, however it is unclear why EPA Method 624 was chosen for analysis as it is for the analysis of industrial and municipal discharges (EPA Method 624 1.3).

The GC/MS instrument was calibrated on 04/16/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports. As per Method 624, all % RSDs were within acceptable limits. ~~Not all volatile organic compounds on the Target Compound List were reported.~~ Samples used for the matrix spike and the matrix spike duplicate were not from this project but all other batch QC samples were. The matrix spike for 2-Butanone was outside laboratory acceptance limits but the matrix spike duplicate and LCS were within laboratory acceptable limits.

While all surrogates analyzed were within laboratory acceptance limits, ~~only three of four recommended surrogates were used.~~ The analytical run was completed within the 12-hour limit. All other QC acceptance criteria for Method 624 were met.

~~Neither 1,2-Dibromoethane (EDB) nor 1,2-Dibromo-3-chloropropane (DBCP) was analyzed, either by GC/MS or separately by GC-ECD, following USEPA SW-846 Method 8011.~~

## SEMIVOLATILE ORGANIC COMPOUNDS

Prior to analysis samples were extracted on 05/04/2010 in accordance with EPA Method 625 within EPA/method holding time limits. Samples were then analyzed on 05/05/2010 by GC/MS by EPA Method 625 within EPA/holding time limits. No specific methodology was requested on the Chain of Custody, however it is unclear why EPA Method 625 was chosen for analysis as it is for the analysis of industrial and municipal discharges (EPA Method 625 1.3).

The GC/MS instrument was calibrated on 04/28/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports. As per Method 625, all % RSDs were within acceptable limits. ~~Not all semivolatile organic compounds on the Target Compound List were reported.~~ Samples used for batch QC were not from this project although the Laboratory Control Sample and the Laboratory Control Sample duplicate were from this project prep batch.

All surrogates analyzed were within laboratory acceptance limits. The analytical run was completed within the 12-hour limit.

~~The laboratory control sample and the laboratory control sample duplicate for prep batch 460-36427 were outside acceptance limits for the following analytes: 2-Methylphenol and 4-Methylphenol. All other QC acceptance criteria for Method 625 were met.~~

### **POLYCYCLIC AROMATIC HYDROCARBONS / SIM**

Prior to analysis, samples were prepared on 05/04/2010 in accordance with SW-846 Method 3510 within EPA/method holding time limits and analyzed on 05/05/2010 for polycyclic aromatic hydrocarbons (PAHs) in accordance with EPA SW-846 Method 8270C SIM within EPA/method holding time limits.

The GC/MS instrument was calibrated on 04/28/2010, prior to analysis of the project samples. Response factors (RFs) and average RFs were correctly calculated and transcribed to the summary reports. As per Method 8270, all % RSDs were within acceptable limits.

All QC acceptance criteria for Method 8270 were met.

### **PESTICIDES & POLYCHLORINATED BIPHENYLS**

Prior to analysis samples were extracted on 05/05/2010 in accordance with EPA Method 608 within EPA/method holding time limits. Samples were then analyzed on 05/05/2010 by GC by EPA Method 608 within EPA/holding time limits. No specific methodology was requested on the Chain of Custody, however it is unclear why EPA Method 608 was chosen for analysis as it is for the analysis of industrial and municipal discharges (EPA Method 608 1.2).

The GC instrument was calibrated on 04/14/2010, prior to analysis of the project samples. As per Method 608, all compound RTs for each project sample were within method acceptance limits.

Samples used for batch QC were not from this project although the Laboratory Control Sample and the Laboratory Control Sample duplicate were from this project prep batch.

All QC acceptance criteria for Method 608 were met.

### **METALS by ICP/MS**

Prior to analysis samples were prepped for Total Recoverable Metals on 05/04/2010 in accordance with EPA Method 200.8 within EPA/method holding time limits. Samples were then analyzed by ICP/MS by EPA Method 200.8 on 05/05/2010 within EPA/holding time limits. No specific methodology was requested on the Chain of Custody.

Samples for Batch QC were from this project.

All QC acceptance criteria for Method 200.8 were met.

### **MERCURY by CVAA**

Prior to analysis samples were prepped and analyzed by Cold Vapor Atomic Absorption on 05/03/2010 in accordance with EPA Method 245.1 within EPA/method holding time limits. No specific methodology was requested on the Chain of Custody.

Samples for Batch QC were not from this project but the LCS and LCSD were from this project prep batch.

All QC acceptance criteria for Method 245.1 were met.

Reviewed by



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Quality Assurance Manager

## **APPENDIX C**

Geophysical Survey Report



## **GEOPHYSICAL INVESTIGATION REPORT**

PERFORMED AT:

**55 Schoon Ave.  
Hawthorne, NJ 07506**

PREPARED FOR:

**Tom Cumello  
Dewberry  
600 Parsippany Rd  
Parsippany, NJ**

PREPARED BY:

**Ken Lindes  
Geophysical Technician  
Enviroprobe Service, Inc.  
908 N Lenola Road  
Moorestown, NJ 08057  
(856) 858-8584  
(800) 596-7472**

**May 3, 2010**



## 1.0 INTRODUCTION

Enviroprobe Service, Inc. (Enviroprobe) is an environmental investigation services firm which provides monitoring well installation (HSA), Geoprobe (DPT) drilling services and Environmental & Engineering Geophysics (EEG) services to the environmental consulting and engineering community.

Enviroprobe conducted a subsurface geophysical investigation at the subject property within client-specified areas of concern. Due to conditions and objectives, the investigation utilized a Sensors and Software N250Plus cart-mounted Ground Penetrating Radar (GPR) unit with a 250 MHz antenna, a Radiodetection 4000T3 multi-frequency transmitter and receiver, and a Fisher TW-6 metallic locator.

Ground penetrating radar (commonly called GPR) is a geophysical method that has been developed over the past thirty years for shallow, high-resolution, subsurface investigations of the earth. GPR uses high frequency pulsed electromagnetic waves (generally 10 MHz to 2,000 MHz) to acquire subsurface information. An EM wave is propagated downward into the ground by a transmitting antenna. Where abrupt changes in electrical properties occur in the subsurface, a portion of the energy is reflected back to the surface. This reflected wave is detected by a receiver antenna and transmitted to a control unit for real time processing and display. The penetration depth of the N250Plus unit varies from several inches to tens of feet according to site-specific conditions. The penetration depth decreases with increased soil conductivity. The penetration depth is the greatest in ice, dry sands, and fine gravels. Clayey, highly saline or saturated soils, areas covered by concrete, foundry slag, or other highly conductive materials greatly reduce GPR penetration. GPR is a method that is commonly used for environmental, engineering, archaeological, and other shallow investigations.

The Radiodetection (RD) transmitter and receiver are commonly used for pipe and cable locating. The multi-frequency transmitter can be directly connected, clamped, or used to induce a signal in a target line while the multi-frequency receiver is used to measure the signal from energized lines.

The Fisher TW-6 metallic locator is designed to find pipes, cables and other metallic objects such as underground storage tanks (USTs). The TW-6 transmitter generates an electromagnetic field that induces electrical currents in the subsurface. These currents produce a secondary electromagnetic field that is measured by the TW-6 receiver. One surveyor can carry both the transmitter and receiver together, making it ideal for “blindly” searching for bulk metals.

## **2.0 SCOPE OF WORK**

On April 12, 2010, a geophysical technician from Enviroprobe Service Inc. was mobilized to the subject property to perform a geophysical investigation. The purpose of this investigation was to investigate proposed boring locations, designate underground conduits/utilities, and detect possible USTs within client-specified portions of the property. The ground surface of the survey area consisted of paved, concrete, soil, and grass-covered areas.

## **3.0 SURVEY RESULTS**

The survey was conducted using a cart-mounted GPR unit, a Fisher TW-6 metallic locator, and a RD unit. The RD unit was used to trace common utilities from sources in and around the survey area. When possible, the locations of utilities were confirmed with the GPR. A GPR survey was also performed in a grid pattern in at least two orthogonal directions to search for underground utilities. Designated utilities were marked on-site with spray paint using the following colors; red – electric, green – storm drain, blue – water, and pink – vent lines.

The GPR and TW-6 were used in a grid pattern over all client-specified areas of the property. Based on the results of the GPR and TW-6 surveys, several anomalies consistent with USTs were identified. The locations of these anomalies were shown on the utility print and their extents were marked on-site with pink and orange paint. An area of approximately 15 ft by 15 ft surrounding each proposed boring locations was also investigated with the GPR. The corners of the investigated areas were marked with white paint.

## **4.0 LIMITATIONS**

The client-selected areas of the property had multiple obstructions, including dry cleaning equipment and parked cars. These objects prevented a thorough investigation of the spaces beneath and immediately adjacent to them.

Due to surface conditions and subsurface content, the GPR signal penetration was estimated at 3 feet in the majority of the survey area. This penetration was reduced in areas of concrete cover.

The TW-6 survey was kept up to 6 feet away from above ground objects containing metals depending on the sizes, shapes and positions of the metal objects. The TW-6 survey was not effective in areas with reinforced concrete.

Due to the dielectric properties of the subsurface, plastic polymer and fiberglass utilities may not have been detected.

All field services were conducted in compliance with the industry standard of care guidelines found in ASCE 38-02 (Level B).

## **5.0 WARRANTIES**

The field observations and measurements reported herein are considered sufficient in detail and scope for this project. Enviroprobe Service, Inc. warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted environmental engineering methods. There is a possibility that conditions may exist which could not be identified within the scope of this project and were not apparent during the site activities performed for this project.

Enviroprobe represents that the services were performed in a manner consistent with that level of care and skill ordinarily exercised by environmental consultants under similar circumstances. No other representations to Client, express or implied, and no warranty or guarantee is included or intended in this agreement, or in any report, document, or otherwise.

Enviroprobe Service, Inc. believes that the information provided in this report is reliable. However, Enviroprobe cannot warrant or guarantee that the information provided by others is complete or accurate. No other warranties or guarantees are implied or expressed.

GPR data is subject to signal anomalies and operator interpretation. The GPR data is intended to provide the locations of areas of concern requiring additional investigation or the approximate location of underground structures and utilities. Great care must be utilized when excavating and/or drilling around underground structures and utilities since GPR data can only be used for estimation purposes and GPR data is subject to misinterpretation.

This report was prepared pursuant to the contract Enviroprobe has with the Client. That contractual relationship included an exchange of information about the property that was unique and between Enviroprobe and its client and serves as the basis upon which this report was prepared. Because of the importance of the communication between Enviroprobe and its client, reliance or any use of this report by anyone other than the Client, for whom it was prepared, is prohibited and therefore not foreseeable to Enviroprobe.

Reliance or use by any such third party without explicit authorization in the report does not make said third party a third party beneficiary to Enviroprobe contract with the Client. Any such unauthorized reliance on or use of this report, including any of its information or conclusions, will be at the third party's risk. For the same reasons, no warranties or representations, expressed or implied in this report, are made to any such third party.

## **APPENDIX D**

### Soil Boring Logs

**Borehole Number: GP-1**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

**Dewberry-Goodkind**  
 600 Parsippany Road  
 Suite 301  
 Parsippany, NJ 07054-3715

SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
1	Fill (Brown m.-f. SAND, some silt, some f. subangular gravel, pieces of roots and organic debris). Collected soil sample GP-1A from 0'-0.5' below grade.	1	1				3.6	0	Groundwater table at 4.5' below grade.
2		2							
3		3							
4	Brown f. SAND, some silt, wet to saturated. Collected soil sample GP-1B from 4'-4.5' below grade.	4	2				3.7	0	
5		5							
6		6							
7		7							
8	Brown f. SAND, little silt, saturated.	8	3				3.7	0	
9		9							
10		10							
11	Brown SILT, wet.	11							
12	End of Borehole	12							
13		13							
14		14							

Drilled By: **Enviroprobe Service**  
 Drill Method: **Geoprobe**  
 Drill Date: **4-13-10**  
 Hole Size: **2 in.**

Datum: **NA**  
 Well Permit No.: **NA**  
 Sheet: **1 of 1**

**Borehole Number: GP-2**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

**Dewberry-Goodkind**  
 600 Parsippany Road  
 Suite 301  
 Parsippany, NJ 07054-3715

SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
0	(0'-0.5') Fill (Brown m.-f. SAND, some silt, f. subangular gravel, trace roots). Collected soil sample GP-2A from 0'-0.5' below grade).	0	1				3.6	0	Groundwater table at 4.5' below grade.
1		1							
2		2							
2	(0.5'-4') Light brown f. SAND, some silt, varving at 3'-4' below grade.	3							
3		3							
4	Light brown f. SAND, little silt, silty at 7'-8', saturated. Collected soil sample from 4'-4.5' below grade.	4	2				3.7	0	
4		4							
5		5							
6		6							
7	Brown SILT, some m.-f. sand, little clay @ 11'-12' below grade.	7							
8		8	3				3.7	0	
8	End of Borehole	9							
9		9							
10		10							
11		11							
12		12							
13		13							
14		14							

Drilled By: **Enviroprobe Service**  
 Drill Method: **Geoprobe**  
 Drill Date: **4-13-10**  
 Hole Size: **2 in.**

Datum: **NA**  
 Well Permit No.: **NA**  
 Sheet: **1 of 1**

**Borehole Number: GP-3**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

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 600 Parsippany Road  
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 Parsippany, NJ 07054-3715

SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
1	Fill (Dark brown f. SAND, little silt, pieces of f. angular gravel). Collected soil sample GP-3A from 0'-0.5' below grade.	1	1				3.4	0	Groundwater table at 8' below grade.
2		2							
3	Fill (Light brown f. SAND, some silt, pieces of concrete).	3							
4	Brown f. SAND, little silt, saturated at 8'.	4	2				3.6	0	
5		5							
6		6							
7		7							
8	Brown f. SAND, little silt, saturated. Collected soil sample GP-3B from 10.5'-11' below grade.	8	3				3.8	0	
9		9							
10		10							
11	Gray SILT, little clay, saturated.	11							
12		12							
13	End of Borehole	13							
14		14							

Drilled By: **Enviroprobe Service**  
 Drill Method: **Geoprobe**  
 Drill Date: **4-14-10**  
 Hole Size: **2 in.**

Datum: **NA**  
 Well Permit No.: **NA**  
 Sheet: **1 of 1**

**Borehole Number: GP-4**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

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 600 Parsippany Road  
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SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
0	(0'-0.2') Weathered asphalt.	0	1				3.7	0	Groundwater table at 5.5' below grade.
1	(0.2'-4') Black to brown m.-f. SAND, some angular gravel, little silt). Collected soil sample GP-4A from 0'-0.5' below grade.	1							
2		2							
3		3							
4	Brown f. SAND, little silt, wet at 6'. Collected soil sample GP-4B from 5'-5.5' below grade.	4	2				3.6	0	
5		5							
6	Brown to dark gray SILT, some clay and little f. sand, saturated	6							
7		7							
8	Dark gray SILT, some clay, wet to saturated.	8	3				3.7	0	
9		9							
10		10							
11		11							
12	End of Borehole	12							
13		13							
14		14							

Drilled By: **Enviroprobe Service**  
 Drill Method: **Geoprobe**  
 Drill Date: **4-14-10**  
 Hole Size: 2 in.

Datum: NA  
 Well Permit No.: NA  
 Sheet: 1 of 1



**Borehole Number: GP-5**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



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SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
0	(0'-0.6') Fill (Black c.-f. SAND, some angular gravel, little silt).	0	1				3.7	0	Groundwater table at 5.5' below grade.
1	(0.6'-4') Brown f. SAND, little silt, wet at 3.8'). Collected soil sample GP-5A from 0'-0.5' below grade.	1							
2		2							
3		3							
4	Brown f. SAND, little silt, wet. Collected soil sample GP-5B from 5'-5.5' below grade.	4	2				3.6	0	
5		5							
6	Brown SILT, some f. sand, iron-stained varving, saturated at 5.5'.	6							
7		7							
8	Dark gray SILT, little f. sand, trace clay, saturated.	8	3				3.7	0	
9		9							
10		10							
11		11							
12	End of Borehole	12							
13		13							
14		14							

Drilled By: **Enviroprobe Service**  
 Drill Method: **Geoprobe**  
 Drill Date: **4-14-10**  
 Hole Size: **2 in.**

Datum: **NA**  
 Well Permit No.: **NA**  
 Sheet: **1 of 1**

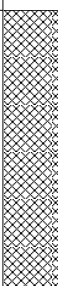
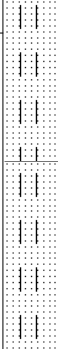
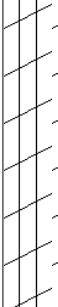
**Borehole Number: GP-6**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

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SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
0	(0'-0.4') Fill (Black m.-f. SAND, little silt.	0	1				3.4	0	Groundwater table at 5.5' below grade.
1	(0.4'-3.5') Tan f. SAND, little silt. Collected soil sample GP-6A from 0'-0.5' below grade.	1							
2		2							
3		3							
4	Brown f. SAND, little silt, wet. Collected soil sample GP-6B from 5'-5.5' below grade.	4	2				3.6	0	
5		5							
6	Brown clayey SILT, little f. sand, saturated at 5.5'.	6							
7		7							
8	Dark gray SILT, some clay, saturated.	8	3				3.8	0	
9		9							
10		10							
11		11							
12	End of Borehole	12							
13		13							
14		14							

Drilled By: **Enviroprobe Service**  
 Drill Method: **Geoprobe**  
 Drill Date: **4-14-10**  
 Hole Size: 2 in.

Datum: NA  
 Well Permit No.: NA  
 Sheet: 1 of 1

**Borehole Number: GP-7**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

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SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
1	Fill (Black to brown f. SAND, some f. subangular gravel). Collected soil sample GP-7A from 0'-0.5' below grade.	1	1				3.4	0	Groundwater table at 7' below grade.
2	Fill (Brown f. SAND, little silt, pieces of concrete at 3.5'-4' below grade).	2							
3		3							
4	Brown f. SAND, little silt, wet @ 7'.	4	2				3.6	0	
5		5							
6		6							
7	Brown f. SAND, some silt, (increased varving), saturated.	7							
8	Brown f. SAND, some silt, (1" alternating layers), saturated. Collected soil sample GP-7B from 10.5'-11' below grade.	8	3				3.7	0	
9		9							
10		10							
11	Brown CLAY (soft), some silt, Dark gray f. SAND from 11.8'-12', saturated.	11							
12	End of Borehole	12							
13		13							
14		14							

Drilled By: **Enviroprobe Service**  
 Drill Method: **Geoprobe**  
 Drill Date: **4-14-10**  
 Hole Size: **2 in.**

Datum: **NA**  
 Well Permit No.: **NA**  
 Sheet: **1 of 1**

**Borehole Number: GP-8**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



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SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
1	Fill (Dark brown to brown f.-m. SAND, some silt and subangular to subrounded gravel, concrete pieces at 1'-2' below grade, organic matter). Collected soil sample GP-8A from 0-0.5' above grade.	1	1				3.3	0	Groundwater table at 8' below grade.
2		2							
3		3							
4	Brown f. SAND, some silt, wet at 8'.	4	2				3.5	0	
5		5							
6		6							
7		7							
8	Brown f. SAND, saturated.	8	3				3.8	1,476	
9		9							
10		10							
11	Brown SILT, some f. sand (10.5'-11'), some clay at 11'-12' below grade, solvent-like odor, saturated. Collected soil sample GP-8B from 11.5'-12' below grade.	11							
12		12							
13	End of Borehole	13							
14		14							

Drilled By: **Enviroprobe Service**  
 Drill Method: **Geoprobe**  
 Drill Date: **4-14-10**  
 Hole Size: **2 in.**

Datum: **NA**  
 Well Permit No.: **NA**  
 Sheet: **1 of 1**

**Borehole Number: GP-9**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

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SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
0	(0'-0.6') Fill (Black to dark brown f. SAND, some silt and organic matter, subangular to subrounded gravel. (0.6'-4') Brown f. SAND, some iron-stained varving. Collected soil sample GP-9A from 0'-0.5' below grade.	0	1				3.2	0	Groundwater table at 8' below grade.
1		1							
2		2							
3		3							
4	Brown f. SAND, little silt, varved iron sands, wet.	4	2				3.4	0	
5		5							
6		6							
7		7							
8	Brown f. SAND, some silt, saturated.	8	3				3.8	0	
9		9							
10	Gray SILT, little f. sand, saturated.	10							
11	Gray SILT, dark gray at 11.4'-12', some silty clay, solvent-like odor, saturated. Collected soil sample GP-9B from 11.5'-12' below grade.	11							
12		12							
13	End of Borehole	13							
14		14							

Drilled By: **Enviroprobe Service**  
 Drill Method: **Geoprobe**  
 Drill Date: **4-13-10**  
 Hole Size: **2 in.**

Datum: **NA**  
 Well Permit No.: **NA**  
 Sheet: **1 of 1**














**Borehole Number: GP-10**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

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 600 Parsippany Road  
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SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
0	Fill (Brown f. SAND and SILT, trace organic matter).	0	1				3.8	0	
1	Fill (Brown f. SAND, some silt, little f. subangular gravel, trace organic matter).	1							
2		2							
3		3							
4	Fill (Brown f. SAND, some silt, little subangular to subrounded gravel, moist).	4	2				3.5	0	
5		5							
6	Brown f. SAND and SILT, little clay, trace subrounded gravel. Collected soil sample GP-10 from 7.5'-8' below grade.	6							
7		7							
8	Light brown SILT, saturated.	8	3				3.8	0	Groundwater table at 8' below grade.
9		9							
10		10							
11		11							
12	End of Borehole	12							
13		13							
14		14							

Drilled By: **Enviroprobe Service**  
 Drill Method: **Geoprobe**  
 Drill Date: **4-13-10**  
 Hole Size: 2 in.

Datum: NA  
 Well Permit No.: NA  
 Sheet: 1 of 1



**Borehole Number: GP-11**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

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SUBSURFACE PROFILE		SAMPLE PROFILE								
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments	
0	Ground Surface	0								
0	Fill (Brown f. SAND, some silt, little subrounded gravel, trace roots).	0	1				3.6	0		
1		1								
2		2								
3		3								
4	Brown f. SAND, some silt, trace f. subrounded gravel and roots, wet @ 7.8'-8' below grade). Collected soil sample GP-11 from 7.5'-8' below grade.	4	2				3.8	0		
5		5								
6		6								
7		7								
8	End of Borehole	8								Groundwater table at 8' below grade.
9		9								
10		10								

Drilled By: [Enviroprobe Service](#)  
 Drill Method: [Geoprobe](#)  
 Drill Date: 4-13-10  
 Hole Size: 2 in.

Datum: NA  
 Well Permit No.: NA  
 Sheet: 1 of 1


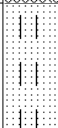
**Borehole Number: GP-12**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

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SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
1	Fill (Brown f. SAND, some silt, little subrounded gravel, trace roots and piece of concrete @ 3' below grade).	1	1				3.7	0	Groundwater table at 8' below grade.
2		2							
3		3							
4	Brown f. SAND, some silt, trace f. subrounded gravel and roots, wet @ 7.8'-8' below grade). Collected soil sample GP-12 from 7.5'-8' below grade.	4	2				3.9	0	
5		5							
6		6							
7		7							
8	End of Borehole	8							
9		9							
10		10							

Drilled By: [Enviroprobe Service](#)  
 Drill Method: [Geoprobe](#)  
 Drill Date: 4-13-10  
 Hole Size: 2 in.

Datum: NA  
 Well Permit No.: NA  
 Sheet: 1 of 1






**Borehole Number: GP-13**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

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SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
0	(0'-0.4') Topsoil and Organic Material.	0	1				3.4	0	Groundwater table at 8' below grade.
1	(0.4'-4') Fill (Brown f. SAND, some silt, little f. subrounded gravel, black coal pieces @ 3'-4' below grade).	1							
2		2							
3		3							
4	Brown f. SAND, some silt, little subrounded gravel, moist. Collected soil sample GP-13 from 7.5'-8' below grade.	4	2				3.5	0	
5		5							
6		6							
7		7							
8	Brown f. SAND, some silt, trace roots and organic matter, saturated.	8	3				3.8	0	
9		9							
10		10							
11		11							
12	End of Borehole	12							
13		13							
14		14							

Drilled By: **Enviroprobe Service**  
 Drill Method: **Geoprobe**  
 Drill Date: **4-13-10**  
 Hole Size: 2 in.

Datum: NA  
 Well Permit No.: NA  
 Sheet: 1 of 1





**Borehole Number: GP-14**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



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SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
0	(0'-1') Topsoil and Organic Material.	0	1				2.8	0	
1	(1'-4') Fill (Brown f. SAND, little silt, trace f. subrounded gravel). Collected soil sample GP-14 from 3'-3.5' below grade.	1							
2		2							
3		3							
4	End of Borehole	4							
5		5							
6		6							
7		7							
8		8							
9		9							
10		10							

Drilled By: [Enviroprobe Service](#)  
 Drill Method: [Geoprobe](#)  
 Drill Date: 4-13-10  
 Hole Size: 2 in.

Datum: NA  
 Well Permit No.: NA  
 Sheet: 1 of 1


**Borehole Number: GP-15**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

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SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0	2	SS			3.8	0	
1	(0'-1') Topsoil and Organic Material (1'-4') Fill (Brown f. SAND, little silt, trace f. subrounded gravel). Collected soil sample GP-15 from 3'-3.5' below grade.	1							
2									
3									
4									
4	End of Borehole	4							
5		5							
6		6							
7		7							
8		8							
9		9							
10		10							

Drilled By: [Enviroprobe Service](#)  
 Drill Method: [Geoprobe](#)  
 Drill Date: 4-13-10  
 Hole Size: 2 in.

Datum: NA  
 Well Permit No.: NA  
 Sheet: 1 of 1

**Borehole Number: GP-16**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

**Dewberry-Goodkind**  
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SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
1	Fill (Brown f. SAND, some silt and subangular to subrounded gravel, pieces of concrete, trace roots). Collected soil sample GP-16 from 0'-0.5' below grade.	1	1				3.4	0	Groundwater table at 8' below grade.
2		2							
3		3							
4		4	2					3.8	
5	Light brown f. SAND, little silt.	5							
6		6							
7		7							
8		8	3					3.8	
9	Brown SILT, some f. sand, saturated.	9							
10		10							
11		11							
12		12							
13	End of Borehole	13							
14		14							

Drilled By: [Enviroprobe Service](#)  
 Drill Method: [Geoprobe](#)  
 Drill Date: 4-13-10  
 Hole Size: 2 in.

Datum: NA  
 Well Permit No.: NA  
 Sheet: 1 of 1

**Borehole Number: GP-17**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

**Dewberry-Goodkind**  
 600 Parsippany Road  
 Suite 301  
 Parsippany, NJ 07054-3715

SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
1	Fill (Brown m.-f. SAND, some silt and c.-f. angular gravel). Collected soil sample GP-17 from 0'-0.5' below grade.	1	1				3.7	0	
2	Brown f. SILT, little f. sand, moist.	2							
4	Gray SILT, little clay and f. sand, wet.	4	2				3.6	0	
7	Gray CLAY, some silt, wet to saturated.	7							
8		8	3				3.7	0	
10	Gray f. SAND, some silt, saturated.	10							Groundwater table at 10' below grade.
11	Gray CLAY, soft, some silt, little f. sand, saturated.	11							
12	Brown SILT, little clay, moist.	12							
12	End of Borehole	12							
13		13							
14		14							

Drilled By: **Enviroprobe Service**  
 Drill Method: **Geoprobe**  
 Drill Date: **4-15-10**  
 Hole Size: **2 in.**

Datum: **NA**  
 Well Permit No.: **NA**  
 Sheet: **1 of 1**

**Borehole Number: GP-18**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

**Dewberry-Goodkind**  
 600 Parsippany Road  
 Suite 301  
 Parsippany, NJ 07054-3715

SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
1	Fill (Dark brown m.-f. SAND, some f. angular gravel, pieces of roots, little silt). Collected soil sample GP-18 from 0'-0.5' below grade.	1	1				3.4	0	Groundwater table at 8' below grade.
2		2							
3	Brown f. SAND, some silt, little organic matter.	3							
4	Brown f. SAND, little silt, wet to saturated.	4	2				3.6	0	
5		5							
6	Dark brown CLAY, some silt.	6							
7	Light gray CLAY, some silt with iron staining.	7							
8	Light gray SILT, some f. sand, saturated.	8	3				3.6	0	
9	Brown m.-f. SAND, some silt, gray clay lenses from 9'-9.2', saturated.	9							
10		10							
11	Brown SILT, some clay (med. hard), wet.	11							
12	End of Borehole	12							
13		13							
14		14							

Drilled By: **Enviroprobe Service**  
 Drill Method: **Geoprobe**  
 Drill Date: **4-15-10**  
 Hole Size: **2 in.**

Datum: **NA**  
 Well Permit No.: **NA**  
 Sheet: **1 of 1**

**Borehole Number: GP-19**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

**Dewberry-Goodkind**  
 600 Parsippany Road  
 Suite 301  
 Parsippany, NJ 07054-3715

SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
1	Fill (Brown m.-f. SAND, little silt and f.-m. angular gravel, pieces of roots and concrete (0'-2'). Collected soil sample GP-19 from 0'-0.5' below grade.	1	1				3.4	0	Groundwater table at 5' below grade.
2		2							
3		3							
4	Brown f. SAND, little silt, wet at 5'-8'.	4	2				3.6	0	
5		5							
6	Brown f. SAND, some silt, wet to saturated.	6							
7		7							
8	Dark gray f. SAND, some silt, saturated.	8	3				3.6	0	
9		9							
10	Dark gray SILT, some clay and f. sand, saturated.	10							
11		11							
12	End of Borehole	12							
13		13							
14		14							

Drilled By: **Enviroprobe Service**  
 Drill Method: **Geoprobe**  
 Drill Date: **4-15-10**  
 Hole Size: **2 in.**

Datum: **NA**  
 Well Permit No.: **NA**  
 Sheet: **1 of 1**

**Borehole Number: GP-20**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

**Dewberry-Goodkind**  
 600 Parsippany Road  
 Suite 301  
 Parsippany, NJ 07054-3715

SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
	Concrete Slab (4")	0	1				3.3	0	
1	Fill (Tan f. SAND, some silt, peices of subangular gravel varved iron rich sands (0.6'-4'). Collected soil sample GP-20A from 0'-0.5' below slab.	1							
2		2							
3		3							
4	Fill (Brown f. SAND, little silt).	4							
5		5							
6		6							
7		7							
8	Brown f. SAND, little silt, more silt from 6.5'-8', saturated from 6.5' below grade.	8	2				3.5	0	
9		9							
10	Brown f. SAND, some silt, saturated.	10							
11		11							
12	Brown-olive SILT, some f. sand, 1" black staining at 10'-10.2' below grade. Collected soil sample GP-20B from 10'-10.5' below grade.	12	3				3.7	0	
13		13							
14	End of Borehole	14							Groundwater table at 6.5' below grade.

Drilled By: **Enviroprobe Service**  
 Drill Method: **Geoprobe**  
 Drill Date: **4-14-10**  
 Hole Size: **2 in.**

Datum: **NA**  
 Well Permit No.: **NA**  
 Sheet: **1 of 1**



**Borehole Number: GP-21**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

**Dewberry-Goodkind**  
 600 Parsippany Road  
 Suite 301  
 Parsippany, NJ 07054-3715

SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
0	Concrete Slab (4")	0	1				3.3	0	Groundwater table at 7' below grade.
1	Fill (Tan f. SAND, some silt, pieces of subangular gravel). Collected soil sample GP-21A from 0'-0.5' below slab.	1							
2		2							
2	Fill (Tan f. SAND, little silt).	3							
3		4							
4	Tan f. SAND, little silt, varved iron-rich sand, saturated at 7' below grade.	4	2				3.5	0	
5		5							
6		6							
7		7							
8	Tan f. SAND, some silt, little clay saturated.	8	3				3.7	0	
9		9							
10		10							
11		11							
12	Dark gray f. SAND, some silt, saturated. Collected soil sample GP-21B from 11.5'-12' below grade.	12							
13		13							
13	End of Borehole	14							

Drilled By: **Enviroprobe Service**  
 Drill Method: **Geoprobe**  
 Drill Date: **4-14-10**  
 Hole Size: **2 in.**

Datum: **NA**  
 Well Permit No.: **NA**  
 Sheet: **1 of 1**

**Borehole Number: GP-22**

Geologist: Tom Cumello  
 Project No: 50015466  
 Project: 55 Schoon Avenue  
 Client: Passaic County Dept. of Economic Development  
 Site Location: Hawthorne, NJ



**Dewberry**

**Dewberry-Goodkind**  
 600 Parsippany Road  
 Suite 301  
 Parsippany, NJ 07054-3715

SUBSURFACE PROFILE		SAMPLE PROFILE							
Depth	Description	Depth	Number	Type	Blows/ft	Symbol	Recovery (ft.)	PID (ppm)	Comments
0	Ground Surface	0							
0	Concrete Slab (4")	0	1				3.3	0	
1	Fill (Tan f. SAND, some silt and pieces of f. subangular gravel). Collected soil sample GP-22A from 0'-0.5' below slab.	1							
2		2							
3		3							
3	Fill (Brown f. SAND, little silt).	3							
4	Brown f. SAND, some angular gravel (4'-4.5'), some silt, saturated at 7' below grade.	4	2				3.5	0	
5		5							
6		6							
7		7							
8	Brown f. SAND and SILT, saturated.	8	3				3.7	0	Groundwater table at 7' below grade.
9		9							
10		10							
11	Gray SILT, little clay, saturated. Collected soil sample GP-22B from 11.5'-12' below grade.	11							
12		12							
13	End of Borehole	13							
14		14							

Drilled By: **Enviroprobe Service**  
 Drill Method: **Geoprobe**  
 Drill Date: **4-14-10**  
 Hole Size: **2 in.**

Datum: **NA**  
 Well Permit No.: **NA**  
 Sheet: **1 of 1**

## **APPENDIX E**

Groundwater Elevation Contour Map Reporting Form

# Groundwater Elevation Contour Map Reporting Form April 29, 2010

## Passaic County Department of Economic Development Former Pyrolac Corporation Facility

This reporting form shall accompany each groundwater elevation contour map submittal.  
Use additional sheets as necessary.

1. Did any surveyed well casing elevations change from the previous sampling event? Yes: No:

If yes, attach new Well Certification - Form Bs and identify the reason for the elevation change  
(damage to casing, installation of recovery system in monitoring well, etc.)

2. Are there any monitoring wells in unconfined aquifers in which the water table elevation is  
higher than the top of the well screen? Yes: No:

If yes, identify these wells.

3. Are there any monitoring wells present at the site but omitted from the contour map? Yes: No:

If yes, and unless the omission of the well(s) has been previously approved by the Department,  
justify the omissions.

4. Are there any monitoring wells containing free-phase product during this measuring event? Yes: No:

Were any of the monitoring wells with free-phase product included in the contour map? Yes: No:

If yes, show the formula used to correct the water table elevation.

(Specific Gravity x Product Thickness) + Uncorrected Groundwater Elevation

5. Has the groundwater flow direction changed more than 45° from the previous contour map? Yes: No:

If yes, discuss the reason for the change.

6. Has the groundwater mounding and/or depressions been identified in the contour map? Yes: No:

If yes, and unless the groundwater mounds and/or depressions are caused by the groundwater  
remediation system, discuss the reason for this occurrence.

7. Are the wells used in the contour map screened in the same water-bearing zone? Yes:  No:

If no, justify inclusion of those wells.

8. Were the groundwater contours

Computer-generated;

Computer-aided; or

Hand-drawn?

If computer-aided or computer-generated, identify the interpolation method(s) used.

**The contours were hand-drawn and then drafted in AutoCAD.**

## **APPENDIX F**

Groundwater Sampling Data Sheets

# Low Flow Purging and Sampling Ground Water Sampling Measurements and Calculations

WELL NUMBER	WELL INFORMATION					Date: 4/30/10		
MW-1	Well Diameter (inches)	Total Depth* (ft)	Depth to Water (ft)	Depth to Product (ft)	PID (ppm)	Dewberry Personnel: T. Cunnello, S. Schutzer		
	4	12.80	9.64	—	0	Site Name: 55 Schoon Avenue		
						Site Location: 55 Schoon Avenue, Hawthorne, NJ		
						Project Number: 50015466		

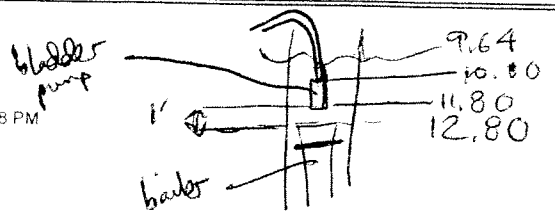
\* Use a previously determined Total Depth. Confirm the Total Depth of well after sampling.

PURGING INFORMATION						
Pump Type	Tubing Type	Pump Intake* Depth (ft)	Purge Start Time	Purge Stop Time	Flow Rate (ml/m)	Total Purge Vol. (gal)
Bladder	Teflon	11.8	10:50	11:40	200	1/4 gal

\* Pump Intake Depth is typically the midpoint of the saturated section of the well screen.

PURGING PARAMETERS (measurements are to be taken approximately every 5 minutes)										
Time	Criteria: Flow Rate (ml/m)	0.3 ft Depth to Water (ft)	-- Temp (°C)	± 0.1 su pH (su)	+ 3% Cond (mS/cm)	+ 10% D.O. (ppm)	+ 10 mv Eh (mv)	+ 10% Turbidity (NTU)	Initials	Water Conditions/Comments
11:00	200	9.64	17.20	6.22	0.064	7.00	174	2.5	SS	SS (still filling U52)
11:05	200	9.83	13.28	6.03	0.065	5.56	181	0.0	SS	
11:10	200	10.01	13.08	5.99	0.065	5.00	181	0.4	SS	
11:15	200	10.20	13.06	5.99	0.065	4.78	179	0.5	SS	
11:20	200	10.38	12.71	5.97	0.066	4.78	175	0.6	SS	
post sample		10.4								
Analytical Parameters: TLC VO+10, BNA+20, Pests., PCBs, TAN Metals										Sample Start Time: 11:20
Weather Conditions: sunny										Sample Finish Time: 11:40

Revised 05/04



Low Flow Purging and Sampling  
Ground Water Sampling Measurements and Calculations

<b>WELL NUMBER</b>	<b>WELL INFORMATION</b>					<b>Date:</b> 4/30/10
MW-2	<b>Well Diameter (inches)</b>	<b>Total Depth* (ft)</b>	<b>Depth to Water (ft)</b>	<b>Depth to Product (ft)</b>	<b>PID (ppm)</b>	<b>Dewberry Personnel:</b> T. Curvello, S. Schutt-Zel
	4	15.87	8.43	—	0	<b>Site Name:</b> 55 Schoon Avenue
						<b>Site Location:</b> 55 Schoon Avenue, Hawthorne, NJ
						<b>Project Number:</b> 50015466

\* Use a previously determined Total Depth. Confirm the Total Depth of well after sampling.

PURGING INFORMATION						
Pump Type	Tubing Type	Pump Intake* Depth (ft)	Purge Start Time	Purge Stop Time	Flow Rate (ml/m)	Total Purge Vol. (gal)
Bladder	Teflon	13	12:12	12:55	200	1/3 gal

\* Pump Intake Depth is typically the midpoint of the saturated section of the well screen.

PURGING PARAMETERS (measurements are to be taken approximately every 5 minutes)										
Criteria:		0.3 ft	-	± 0.1 su	± 3%	± 10%	± 10 mv	± 10%		
Time	Flow Rate (ml/m)	Depth to Water (ft)	Temp (°C)	pH (su)	Cond (mS/cm)	D.O. (ppm)	Eh (mv)	Turbidity (NTU)	Initials	Water Conditions/Comments
12:15	200	8.43	15.18	6.13	0.181	11.40	118	11.4	SS	
12:20	200	8.50	14.00	6.08	0.206	7.64	78	2.9	SS	
12:25	200	8.55	13.79	6.03	0.214	7.02	65	0.4	SS	
12:30	200	8.60	13.60	6.02	0.222	6.64	60	0.0	SS	
12:35	200	8.61	13.66	6.00	0.231	6.26	56	0.0	SS	
12:40	200	8.60	13.65	5.99	0.233	5.87	53	0.0	SS	
12:45	200	8.58	13.56	5.98	0.234	5.63	51	0.0	SS	

<b>Analytical Parameters:</b> noted hole in well cap (previously for bailer rope)	<b>Sample Start Time:</b> 12:45
<b>Weather Conditions:</b> Sunny      DUP43010	<b>Sample Finish Time:</b> 12:55

Revised 05/04

**Low Flow Purging and Sampling  
Ground Water Sampling Measurements and Calculations**

<b>WELL NUMBER</b>	<b>WELL INFORMATION</b>					Date: <u>4/29/10</u>	
	Well Diameter (inches)	Total Depth* (ft)	Depth to Water (ft)	Depth to Product (ft)	PID (ppm)	Dewberry Personnel: <u>T. Cumello, S. Schultzer</u>	
MW-3	4	21.09	17.84	—	0	Site Name: <u>55 Schoon Avenue</u>	
						Site Location: <u>55 Schoon Avenue, Hawthorne, NJ</u>	
						Project Number: <u>50015466</u>	

\* Use a previously determined Total Depth. Confirm the Total Depth of well after sampling.

<b>PURGING INFORMATION</b>						
Pump Type	Tubing Type	Pump Intake* Depth (ft)	Purge Start Time	Purge Stop Time	Flow Rate (ml/m)	Total Purge Vol. (gal)
Bladder	teflon	20	12:20	13:28	200	~1/4

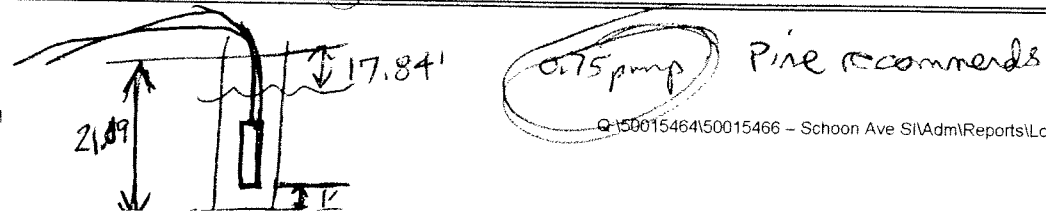
\* Pump Intake Depth is typically the midpoint of the saturated section of the well screen.

PURGING PARAMETERS (measurements are to be taken approximately every 5 minutes)										
Criteria:		0.3 ft	—	± 0.1 su	± 3%	± 10%	± 10 mv	± 10%	Initials	Water Conditions/Comments
Time	Flow Rate (ml/m)	Depth to Water (ft)	Temp (°C)	pH (su)	Cond (mS/cm)	D.O. (ppm)	Eh (mv)	Turbidity (NTU)		
12:30	200	17.84	12.74	4.82	0.299	5.00	246	8.9		
12:35	200	18.75	12.68	4.79	0.301	4.88	250	6.9		
12:38	200	18.80	12.74	4.80	0.303	5.00	255	61.2		
12:41	200	18.76	12.94	4.84	0.325	5.18	256	50.4		

Analytical Parameters: low yield. Filled 3 amber jars. Rest of PCB in same jar. Sample Start Time: 12:41  
Sample Finish Time: 13:28

Weather Conditions: Sunny, breezy

Revised 05/04





Low Flow Purging and Sampling  
Ground Water Sampling Measurements and Calculations

WELL NUMBER  <b>MW-4</b>	WELL INFORMATION	Date: <b>4/29/10</b>
Well Diameter (inches)	Total Depth* (ft)	Depth to Water (ft)
Depth to Product (ft)	PID (ppm)	Dewberry Personnel: <b>T. Cuneo, S. Schultzes</b>
		Site Name: <b>55 Schoon Avenue</b>
		Site Location: <b>55 Schoon Avenue, Hawthorne, NJ</b>
		Project Number: <b>50015466</b>

\* Use a previously determined Total Depth. Confirm the Total Depth of well after sampling.

PURGING INFORMATION						
Pump Type	Tubing Type	Pump Intake* Depth (ft)	Purge Start Time	Purge Stop Time	Flow Rate (ml/m)	Total Purge Vol. (gal)
<b>Bladder</b>	<b>Teflon</b>	<b>15</b>	<b>13:50</b>	<b>14:43</b>	<b>200</b>	<b>1/2</b>

\* Pump Intake Depth is typically the midpoint of the saturated section of the well screen.

PURGING PARAMETERS (measurements are to be taken approximately every 5 minutes)											
Criteria:		0.3 ft	--	± 0.1 su	± 3%	± 10%	+ 10 mv	+ 10%			Water Conditions/Comments
Time	Flow Rate (ml/m)	Depth to Water (ft)	Temp (°C)	pH (su)	Cond (mS/cm)	D.O. (ppm)	Eh (mv)	Turbidity (NTU)	Initials		
<b>13:55</b>	<b>200</b>	<b>9.54</b>	<b>12.28</b>	<b>6.22</b>	<b>0.094</b>	<b>8.17</b>	<del>227</del>	<b>16.2</b>	<b>SS</b>	<b>ORP 221</b>	
<b>14:00</b>	<b>200</b>	<b>9.64</b>	<b>11.86</b>	<b>6.36</b>	<b>0.089</b>	<b>6.27</b>	<b>213</b>	<b>4.4</b>	<b>SS</b>		
<b>14:05</b>	<b>200</b>	<b>9.73</b>	<b>11.74</b>	<b>6.39</b>	<b>0.092</b>	<b>6.06</b>	<b>191</b>	<b>6.2</b>	<b>SS</b>		
<b>14:10</b>	<b>200</b>	<b>9.75</b>	<b>11.71</b>	<b>6.40</b>	<b>0.095</b>	<b>5.93</b>	<b>177</b>	<b>4.0</b>	<b>SS</b>		
<b>14:15</b>	<b>200</b>	<b>9.78</b>	<b>11.60</b>	<b>6.43</b>	<b>0.098</b>	<b>5.68</b>	<b>162</b>	<b>4.9</b>	<b>SS</b>		
<b>14:20</b>	<b>200</b>	<b>9.78</b>	<b>11.60</b>	<b>6.44</b>	<b>0.097</b>	<b>5.55</b>	<b>154</b>	<b>6.1</b>	<b>SS</b>		
<b>14:25</b>	<b>200</b>	<b>9.79</b>	<b>11.43</b>	<b>6.47</b>	<b>0.098</b>	<b>5.53</b>	<b>148</b>	<b>6.3</b>	<b>SS</b>		
<b>14:30</b>	<b>200</b>	<b>9.80</b>	<b>11.42</b>	<b>6.47</b>	<b>0.098</b>	<b>5.43</b>	<b>145</b>	<b>3.5</b>	<b>SS</b>		
Analytical Parameters:									Sample Start Time: <b>14:30</b>		
Weather Conditions: <b>Sunny, breezy</b>									Sample Finish Time: <b>14:43</b>		

10

Low Flow Purging and Sampling  
Ground Water Sampling Measurements and Calculations

MW-5	WELL INFORMATION					Date: <del>4/28</del> 29/10 APR
	Well Diameter (inches)	Total Depth* (ft)	Depth to Water (ft)	Depth to Product (ft)	PID (ppm)	Dewberry Personnel: T. Cuneo, S. Schultzer
	4	23	7.72	—	0	Site Name: 55 Schoon Avenue Site Location: 55 Schoon Avenue, Hawthorne, NJ
						Project Number: 50015466

\* Use a previously determined Total Depth. Confirm the Total Depth of well after sampling.

PURGING INFORMATION						
Pump Type	Tubing Type	Pump Intake* Depth (ft)	Purge Start Time	Purge Stop Time	Flow Rate (ml/m)	Total Purge Vol. (gal)
bladders	teflon	20	10:20	11:00	200	1/2

\* Pump Intake Depth is typically the midpoint of the saturated section of the well screen.

PURGING PARAMETERS (measurements are to be taken approximately every 5 minutes)											
Time	Criteria:									Initials	Water Conditions/Comments
	Flow Rate (ml/m)	Depth to Water (ft)	Temp (°C)	pH (su)	Cond (mS/cm)	D.O. (ppm)	Eh (mv)	Turbidity (NTU)			
10:25	200	7.72	11.87	6.91	0.899	0.98	-85	8.3		SS	
10:30	200	8.47	11.88	7.03	0.897	0.73	-103	10.5		SS	
10:35	200	9.22	11.87	7.06	0.898	0.66	-108	10.6		SS	
10:40	200	9.27	11.88	7.10	0.899	0.75	-114	10.8		SS	
10:45	200	9.32	11.94	7.09	0.902	0.59	-117	11.1		SS	
10:50	200	9.38	12.02	7.09	0.901	0.55	-120	11.1		SS	
10:55	200	9.47	12.08	7.10	0.900	0.54	-121	12.8		SS	
Analytical Parameters:										Sample Start Time: 10:55	
gas @ 600 psi										Sample Finish Time: 11:00	
Weather Conditions:											
sunny, breezy 60°F											

Revised 05/04

Low Flow Purging and Sampling  
Ground Water Sampling Measurements and Calculations

WELL NUMBER  <b>MW-6</b>	WELL INFORMATION					Date: <b>4/30/10</b>
	Well Diameter (inches)	Total Depth* (ft)	Depth to Water (ft)	Depth to Product (ft)	PID (ppm)	Dewberry Personnel: <b>T. Canello, S. Schultzer</b>
	<b>4</b>	<b>24.0</b>	<b>7.98</b>	<b>—</b>	<b>67</b>	Site Name: <b>55 Schoon Avenue</b>
						Site Location: <b>55 Schoon Avenue, Hawthorne, NJ</b>
						Project Number: <b>50015466</b>

\* Use a previously determined Total Depth. Confirm the Total Depth of well after sampling.

PURGING INFORMATION						
Pump Type	Tubing Type	Pump Intake* Depth (ft)	Purge Start Time	Purge Stop Time	Flow Rate (ml/m)	Total Purge Vol. (gal)
<b>Bladder</b>	<b>Teflon</b>	<b>20</b>	<b>13:50</b>	<b>14:45</b>	<b>200</b>	<b>1/2</b>

\* Pump Intake Depth is typically the midpoint of the saturated section of the well screen.

PURGING PARAMETERS (measurements are to be taken approximately every 5 minutes)											
Time	Flow Rate (ml/m)	Criteria:		Temp (°C)	pH (su)	Cond (mS/cm)	D.O. (ppm)	Eh (mv)	Turbidity (NTU)	Initials	Water Conditions/Comments
		0.3 ft	--								
13:55	200	7.98	14.23	6.09	0.335	6.54	167	15.4	SS		
14:00	200	8.27	13.71	6.08	0.339	3.76	168	10.6	SS		
14:05	200	8.51	13.47	6.08	0.338	3.69	170	7.1	SS		
14:10	200	8.79	13.32	6.07	0.338	3.79	171	6.9	SS		
14:15	200	9.03	13.30	6.07	0.335	3.52	171	4.3	SS		
14:20	200	9.28	13.27	6.07	0.334	3.76	172	4.6	SS		
14:25	200	9.51	13.39	6.08	0.334	3.60	170	4.1	SS		
post sampling		8.84									

Analytical Parameters:

Sample Start Time: **14:25**  
Sample Finish Time: **14:45**

Weather Conditions: **Sunny**

Revised 05/04

**Low Flow Purging and Sampling  
Ground Water Sampling Measurements and Calculations**

WELL NUMBER	WELL INFORMATION					Date: 4/29/10
	Well Diameter (inches)	Total Depth* (ft)	Depth to Water (ft)	Depth to Product (ft)	PID (ppm)	Dewberry Personnel: T. Cuneo, S. Schultzer
MW-7	4	23.25	7.43	—	0	Site Name: 55 Schoon Avenue
						Site Location: 55 Schoon Avenue, Hawthorne, NJ
						Project Number: 50015466

\* Use a previously determined Total Depth. Confirm the Total Depth of well after sampling.

PURGING INFORMATION						
Pump Type	Tubing Type	Pump Intake* Depth (ft)	Purge Start Time	Purge Stop Time	Flow Rate (ml/m)	Total Purge Vol. (gal)
Bladder	Teflon	15	15:10	16:00	200	1/2

\* Pump Intake Depth is typically the midpoint of the saturated section of the well screen.

PURGING PARAMETERS (measurements are to be taken approximately every 5 minutes)										
Criteria:		0.3 ft	—	± 0.1 su	± 3%	± 10%	± 10 mv	± 10%		
Time	Flow Rate (ml/m)	Depth to Water (ft)	Temp (°C)	pH (su)	Cond (mS/cm)	D.O. (ppm)	Eh (mv)	Turbidity (NTU)	Initials	Water Conditions/Comments
15:15	200	7.43	13.42	6.55	0.479	7.13	192	20.2	SS	
15:20	200	7.54	12.85	6.56	0.460	5.13	190	22.6	SS	
15:25	200	7.65	12.83	6.52	0.440	4.90	190	4.4	SS	
15:30	200	7.76	12.74	6.52	0.452	4.85	190	3.6	SS	
15:35	200	7.77	12.76	6.53	0.469	4.72	190	2.1	SS	
15:40	200	7.78	12.74	6.53	483	4.66	189	0.6	SS	
Analytical Parameters:								Sample Start Time: 15:40		
								Sample Finish Time: 16:00		
Weather Conditions: <i>sunny, breezy</i>										

Revised 05/04

Low Flow Purging and Sampling  
Ground Water Sampling Measurements and Calculations

WELL NUMBER	WELL INFORMATION					Date: 4/30/10	
MW-8	Well Diameter (inches)	Total Depth* (ft)	Depth to Water (ft)	Depth to Product (ft)	PID (ppm)	Dewberry Personnel: T. Currello, S. Schurter	
	4	21.25	10.20	—	0	Site Name: 55 Schoon Avenue	
						Site Location: 55 Schoon Avenue, Hawthorne, NJ	
						Project Number: 50015466	

\* Use a previously determined Total Depth. Confirm the Total Depth of well after sampling.

PURGING INFORMATION						
Pump Type	Tubing Type	Pump Intake* Depth (ft)	Purge Start Time	Purge Stop Time	Flow Rate (ml/m)	Total Purge Vol. (gal)
Bladder	Teflon	17	<del>8:50</del>	9:55	200	74

\* Pump Intake Depth is typically the midpoint of the saturated section of the well screen.

PURGING PARAMETERS (measurements are to be taken approximately every 5 minutes)										
Time	Criteria:	0.3 ft	--	± 0.1 su	± 3%	+ 10%	± 10 mv	± 10%	Initials	Water Conditions/Comments
	Flow Rate (ml/m)	Depth to Water (ft)	Temp (°C)	pH (su)	Cond (mS/cm)	D.O. (ppm)	Eh (mv)	Turbidity (NTU)		
8:55	300	10.20	12.84	5.97	0.083	3.49	110	391	SS	
9:00	300	11.15	12.58	5.96	0.082	3.52	102	253	SS	
9:05	200	12.02	13.16	6.02	0.085	3.60	70	200	SS	
9:10	200	12.97	12.50	5.98	0.086	3.50	93	179	SS	
9:15	200	13.89	12.57	6.01	0.095	3.22	86	137	SS	
9:20	200	14.24	12.56	6.10	0.107	2.99	72	113	SS	
9:25	200	14.57	12.62	6.11	0.114	2.93	65	97.6	SS	
9:30	200	15.01	12.74	6.15	0.134	2.63	53	83.1	SS	
9:35	200	15.25	12.86	6.30	0.164	2.28	24	78.1	SS	
9:40	200	15.53	12.88	6.29	0.167	2.23	23	73.8	SS	
9:45	200	15.99	12.91	6.33	0.178	2.11	16	73.1	SS	

Analytical Parameters:	Sample Start Time: 9:45
purge water is turbid, tannic. slower recharge	Sample Finish Time: 9:55
Weather Conditions: Sunny	



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