SITE CHARACTERIZATION REPORT
ROBINSON TERMINAL SOUTH
DUKE STREET AND SOUTH UNION STREET
ALEXANDRIA, VIRGINIA

ECS PROJECT NO. 21983-E

FOR

EYA

JUNE 3, 2015

June 3, 2015

Mr. Adam D. Hayes
Sr. Director of Engineering
EYA
4800 Hampden Lane, Suite 300
Bethesda, Maryland 20814

ECS Project No. 21983-E

Reference: Site Characterization Report, Robinson Terminal-South, Duke Street and South Union Street, Alexandria, Virginia.

Dear Mr. Hayes:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide EYA with this Site Characterization Report for the above-referenced property. If you have any questions or comments regarding this report, or any other aspect of the project, please contact us at (703) 471-8400.

Respectfully submitted,

ECS MID-ATLANTIC, LLC

Michael J. Johnson
Senior Project Manager

David J. Bookbinder, C.P.G.
Senior Project Manager

I:\Environmental\RPT\21000\21983-E\Site Characterization Report\Site Characterization Report.doc

SITE CHARACTERIZATION REPORT
ROBINSON TERMINAL SOUTH
DUKE STREET AND SOUTH UNION STREET
ALEXANDRIA, VIRGINIA

ECS PROJECT NO. 21983-E

TABLE OF CONTENTS

SECTION			PAGE
1.0	**BACKGROUND**		
	1.1	Property Location and Current Use	1
	1.2	Historical Use	1
	1.3	Future Use	3
	1.4	Site Utilities	3
2.0	**AREA GEOLOGY, HYDROGEOLOGY, AND STRATIGRAPHY**		
	2.1	Area Geology and Hydrogeology	4
	2.2	Surface Water and Property Drainage	4
	2.3	Site Stratigraphy	4
	2.4	Groundwater Occurrence	6
3.0	**INVESTIGATION METHODOLOGY**		
	3.1	April 2013 Sampling	7
	3.2	September 2013 Sampling	8
4.0	**SAMPLING RESULTS**		
	4.1	April 2013 Results	9
	4.2	September 2013 Results	10
5.0	**SUMMARY CONCLUSIONS**		
	5.1	Summary	15
	5.2	Conclusions	15

LIST OF FIGURES

Figure 1 – Site Location Map

Figure 2 – Sample Locations (Robinson Terminal South)

Figure 3 – Sample Locations (Alexandria Marine)

LIST OF APPENDICES

APPENDIX I – PHASE II ESA, APRIL 2013, WSP

APPENDIX II – PHASE II ESA, SEPTEMBER 2013, ECS

SITE CHARACTERIZATION REPORT
ROBINSON TERMINAL SOUTH
DUKE STREET AND SOUTH UNION STREET
ALEXANDRIA, VIRGINIA

ECS PROJECT NO. 21983-E

1.0 BACKGROUND

1.1 Property Location and Current Use

The subject site is located at 2 Duke Street (Robinson Terminal South) and 226 Strand Street (Alexandria Marine) in Alexandria, VA. The site is identified as City of Alexandria Tax Assessment Map Numbers 075.03-04-01 (2 Duke Street) and 075.03-03-14 (226 Strand Street). The 3.35-acre subject site currently has three warehouses on two parcels of land. At the time of our site reconnaissance, the warehouse encompassed two parcels: Robinson Terminal South, which had multiple warehouses (#1, 2, 3, 4, 6, 7 and 8) and an office building; and Alexandria Marine, a free-standing building to the adjacent north of Robinson Terminal South.

The site is located in mixed residential and small commercial business area of Alexandria, VA. The site is bounded on the north by Duke Street and Alexandria Yacht with a vacant warehouse and a parking lot beyond; on the east by the Potomac River, with areas farther east including interstate 495, District of Columbia, and Maryland; on the south by Wolfe Street with single-family townhomes beyond; and on the west by S. Union Street and Strand Street. Areas farther west include single-family townhomes.

1.2 Historical Use

In an effort to identify past uses of the Site, ECS reviewed Historic Sanborn Fire Insurance Maps (Sanborns) provided by Environmental Data Resources (EDR) for information regarding the Site and surrounding area. Sanborns dated 1885, 1891, 1896, 1902, 1907, 1912, 1921, 1941, 1959, 1989, 1993 and 1996 provide coverage of the area.

Based on the records search, site reconnaissance, and interviews, it appears the western portion of the site was originally residential until approximately 1891, when it became utilized as a lumber yard and a freight house until approximately 1939. The northeastern portion of the site appears to have been used as a warehouse since at least 1885. Bryant Fertilizer Co. is shown on the site from 1902 to 1921. From 1941 through the present, the site is shown as Robinson Terminal Warehouse Co. The building now used by Alexandria Marine has been present since at least 1885. Historical records prior to 1885 were not reasonably ascertainable for the site. The following provides a detailed description of relevant information from the Sanborns.

Warehouse #1
From the 1885 to 1891 Sanborn Maps, the area where the current warehouse is located appears to be vacant. From 1896 to 1907, the area is shown as B&O R.R. Freight Depot, a rail spur from S. Union Street. From 1912 to 1921, the area is shown as The Texas Oil Co., an oil warehouse with three petroleum tanks, rail spur from S. Union Street; Herfurth Bros (artificial stone) is shown on the southernmost portion of this area. From the 1941 to 1996 Sanborn Maps, Robinson Terminal Warehouse is shown in this area.

Warehouse #2 and 3
In the 1885 Sanborn Map, the area where the current warehouse is located appears to be vacant. In 1891, the area is used as lumber storage. From 1896 to 1907, the area is shown as B&O R.R. Freight Depot, a rail spur from S. Union Street. From 1912 to 1921, the area is shown as The Texas Oil Co., a rail spur from S. Union Street. From the 1941 to 1996 Sanborn Maps, Robinson Terminal Warehouse is shown in this area.

Warehouse #4
In the 1885 and 1891 Sanborn Maps, the area where the current warehouse is located is shown as Old Pioneer Flour Mill, a grain warehouse. In 1896, the building is shown as vacant. From 1902 to 1907, the building is shown as a fertilizer warehouse. In 1912, the building is shown as Emerson Engine Co. Marine Engines, a machine shop. In 1921, the building is shown as Safety First Mfg Co., a machine shop and foundry. In 1941, the building appears to be vacant. From 1959 to 1996, the building is shown as Robinson Terminal Warehouse.

Warehouse #6, 7, and 8
From the 1885 to 1891 Sanborn Maps, the area where the current warehouse is located appears to be used as a plumber shop. In 1896, the area appears to be vacant. From 1902 to 1921, the area appears to be utilized as Bryant Fertilizer Co. (fertilizer warehouse) and lumber storage. In 1941, the area is shown as Southern Iron Works. From 1959 to 1996, Robinson Terminal Warehouse is shown.

Office (historic art building)
In the 1885 and 1891 Sanborn Maps, the building is shown as a vacant. In 1896, it is shown as a warehouse. From the 1902 to 1907 maps, the building is shown as W.S. Moor Sons Machine Shop. In 1912, the building appears to be Emerson Engine Co. Marine Engines and a machine shop. In 1921, the building is shown as Herfurth Engine & Machine Co., with a repair shop on the southwestern corner of the building. In 1941, the building appears to be part of Southern Iron Works. From 1959 to 1996, the building appears to be an office for Robinson Terminal Warehouse Corporation.

Alexandria Marine Building
From 1885 to 1891, the structure appears to be a part of E. Rosenthal Sumac Mill. In 1896, the building appears to be utilized as A. Bryant's Bone Mict. From 1902 to 1907, the building appears to be used as an acid house that is connected to The Bryant Fertilizer Co. on the western adjacent property. In 1912, the building is shown as vacant.

From 1921 to 1941, the building is shown as general storage. From the 1959 to 1996 Sanborn Maps, the structure is shown as marine equipment, which is the main function of the building today.

1.3 Future Use

We understand that the project consists of the construction of a mixed-use development which will consist of both commercial/retail facilities as well as multi-family residential structures. There will be a total of nine proposed above-grade structures, one proposed below-grade parking garage and one structure that will remain on site from the existing Robinson Terminal facility. The above-grade structures over the below-grade parking area will have a finished floor elevation of approximately EL. +11.75 feet, and the below grade parking garage slab will be at an elevation of approximately EL. 0 feet with bottom of footings bearing at EL. -2 feet or EL. -4 feet depending on final foundation option selected. The three proposed 5-story commercial/retail buildings and two of the six proposed 4-story residential buildings are expected to be founded on a shared one level below-grade parking garage. The proposed 4 story townhouses located in the northwest portion of the site will be constructed near existing grade with a finished floor elevation of approximately EL. +12.25 feet. The existing one-story structure to remain onsite located within the northern portion of the site is understood to be founded at-grade.

1.4 Site Utilities

The Site area is served by municipal water, sewer, and electric utilities. Water and sewer services are provided by the City of Alexandria and electrical services are provided by Dominion Power Virginia. No sumps or underground vaults are known to exist on the Site.

2.0 AREA GEOLOGY, HYDROGEOLOGY, AND STRATIGRAPHY

2.1 Area Geology and Hydrogeology

As determined from the USGS topographical map quadrangle, Alexandria, VA, 2013, the subject site is situated approximately 10 feet above mean sea level with topography sloping to the east towards the Potomac River. No water bodies are designated on the site. Based on a review of the topographic map and observations of general area and site topography, surface run-off would be expected to flow towards the site from the west.

The subject site is located within the Coastal Plain Physiographic Province. The soils encountered in this area are the residual product of in-place chemical weathering of rock presently underlying the site and/or historic depositional events. In general, shallow unconfined groundwater movement within the overlying soils is controlled largely by topographic gradients. However, as the ground water percolates downward, it becomes controlled by the subsurface geologic conditions. Thus, the direction of groundwater movement in the deeper aquifers may not be consistent with the reflecting topography.

2.2 Surface Water and Property Drainage

Surface waters primarily recharge shallow aquifers by infiltration along higher elevations. Once in the shallow aquifer, the groundwater typically discharges into streams or other surface water bodies at lower elevations. The depth of the shallow water table is transient and can vary greatly with seasonal fluctuations in precipitation. Groundwater movement in the shallow aquifer is generally from higher to lower elevations. As such, shallow groundwater is expected to flow generally to the east towards the Potomac River. Based on the presumed groundwater flow direction, properties located to the west appear to be upgradient relative to the site.

2.3 Site Stratigraphy

Ground cover at the project site at the time of the geotechnical exploration consisted of concrete slabs on grade up to approximately 6 inches thick (where encountered) due to the developed nature of the property. The subsurface profile for underlying materials can be subdivided into three different and distinct strata: Stratum I – Fill, Stratum II – Alluvial Soils, and Stratum III- Potomac Group Clays and Sands. The following sections describe each soil stratum in more detail.

Stratum I – Fill (EL. +10.5 feet to EL. -5 feet)

Beneath the surficial concrete slabs and pavement areas, fill soils were encountered in each boring, ranging from depths of 2 feet to 12 feet below existing ground surface. Encountered fill depths correspond with elevations ranging from approximately EL. +8.5 feet to EL. -5 feet. The fill soils varied greatly in type, moisture, and relative density/consistency. The fill materials

included sand, silt, clay, bricks, asphalt, organics, and gravel in addition to other debris. These materials are anticipated to have been placed in an uncontrolled manner. It should be noted that the deeper fill sections were observed in the borings closest to the Potomac River while the borings located in the northwest portion of the site for the proposed townhouse developments observed fill on the order of 2 feet to 7.5 feet below grade; corresponding to EL. +8.5 to EL. +2.5 feet, respectively.

Stratum II – Alluvial Soils

Beneath the fill soils, natural alluvial soils were encountered in the borings. This stratum was generally encountered below the Stratum I Fill soils and extended to EL. -45 feet to EL. -63.5 feet. It should be noted that some borings were not extended through this stratum and were terminated in the alluvial soils. Generally, each boring encountered interblended layers with varying thicknesses of SAND, poorly graded to well graded with varying amounts of silt or clay (SP, SW, SM, SC) as well as layers of CLAY (CL) with varying amounts of sand and mica present. In general, the soils ranged from very loose to dense and very soft to stiff in relative density and consistency, respectively. The Stratum II soils varied widely in relative density and/or consistency as well as in soil type over short horizontal distances; a characteristic common for sites bordering large rivers such as the Potomac. It is likely that the ancient Potomac River eroded and replaced soils of differing type and density over long periods of time; the result of which is a highly variable soil layer extending from approximately EL. -5 feet to EL. -50 feet. Multiple samples from the borings conducted as part of our preliminary investigation had increments where the weight of hammer (WOH) alone was sufficient to advance the SPT sampler 6 to 18 inches (full depth of the split spoon sampler). In some cases, there was no recovery of soil at these depths as the material was too soft/loose to enter the split spoon sampler. SPT resistances within this stratum typically ranged from WOH to 12 blows per foot (bpf); however, resistances of 5 bpf or less were common. Denser alluvial deposits of Sand and Gravel were observed in pockets across the site, most notably within ECS-3 in which densities ranged from medium dense to dense.

Stratum III – Potomac Soils

The Potomac soils encountered typically consisted of CLAY (CL/CH) and SAND, (SP, SW, SC) and extended from approximately EL. -45 feet to the maximum boring termination depths of EL. -91.5 feet. The SPT resistances increased markedly from the alluvial soils of Stratum II; ranging from 25 to 71 bpf corresponding to medium dense to very dense and very stiff to very hard relative density and consistency, respectively. Stratum III did not appear to have been encountered within Borings B-5, ECS-10, ECS-11 or ECS-12 due to shallower termination depths.

2.4 Groundwater Occurrence

During the geotechnical exploration, when observed, groundwater was encountered in the borings at depths ranging from 3 feet to 13.4 feet below existing site grades corresponding roughly to levels between elevation EL. +7 feet and EL. -2 feet. Due to the proximity of the site to the Potomac River (which is considered to be tidal along this stretch of river), the groundwater table is expected to fluctuate between elevation EL. +5 feet and EL. -5 feet.

3.0 INVESTIGATION METHODOLOGY

Environmental sampling at the property was conducted by WSP in April 2013 and by ECS in September 2013. Each of the field sampling events are summarized in subsequent sections below.

3.1 April 2013 Sampling

On April 18, 2013, WSP advanced five borings (SB-1 through SB-5) at the Site using Geoprobe® direct-push drilling methods. Reportedly, the purpose of the WSP borings was to determine if contaminants related to historical industrial activities or the existing truck shop were present in the soil at the Site. The boring locations were selected to investigate the following potential sources.

The locations of the WSP borings are depicted on Figure 2. The WSP Phase II Environmental Site Assessment (ESA) that contains their figure, boring logs, data tables and laboratory reports is included in Appendix I.

- SB-1 to investigate historic fill material and potential releases and groundwater quality impacts from the existing truck shop and historic machine shop operations.
- SB-2 to investigate potential releases and groundwater quality impacts from historic engine repair and machine shop operations.
- SB-3 to investigate soil impacts from historic petroleum storage and transfer operations (Texas Oil Co.)
- SB-4 to investigate soil impacts from historic petroleum storage activity, rail line and freight depot.3
- SB-5 to investigate historic fill material and groundwater quality impacts from upgradient activity.

The borings were advanced to depths ranging from 10 to 20 feet below ground surface (bgs) and continuous soil samples were collected using dual-tube sampling techniques. Soil samples were collected in one-foot intervals and placed into an air tight container. After allowing ample time for volatilization of compounds, the headspace of each container was screened for the presence of volatile organic compounds (VOCs) using a photoionization detector (PID) equipped with an 11.7 electron volt (eV) lamp and each sample was also screened using a flame ionization detector (FID) for the presence of petroleum hydrocarbons.

Based on the results of the field screening, two soil samples from each boring were submitted for laboratory analysis for total petroleum hydrocarbons (TPH) diesel range organics (DRO) by EPA Method 8015 and Resource Conservation and Recovery Act (RCRA) metals by EPA method 6010/7470. One soil sample from each boring was analyzed for target compound list (TCL) VOCs by EPA Method 8260 B. Soil samples from borings SB-4 and SB-5 were analyzed for polychlorinated biphenyls (PCBs) due to

the historical use of the adjacent property for electrical generation and transmission. Three soil samples where visual staining was observed were also analyzed for semi-volatile organic compounds (SVOCs) by EPA Method 8270.

In addition to the soil samples collected, "grab" groundwater samples were collected from borings SB-1, SB-2 and SB-5. The groundwater samples were collected from within direct-push rods with a screened tip using a peristaltic pump. The groundwater samples were analyzed for TCL VOCs by EPA Method 8260B, RCRA metals by EPA Method 6010/7470 and TPH DRO/GRO by EPA method 8015.

3.2 September 2013 Sampling

On September 26 and September 27, 2013, ECS used a GeoProbe® to advance 23 borings. 20 Borings (B-1 through B-17 & FB-1 through FB-3) were advanced on the Robinson Terminal Property and 3 borings (MB-1 through MB-3) were advanced on the Alexandria Marine property. The borings were advanced to depths ranging from 5 to 15 feet below ground surface (bgs). The locations of the soil borings are depicted on Figure 2 and Figure 3 and the boring logs are included in Appendix I.

Soil samples collected during drilling operations were screened in the field with a photoionization detector (PID) with a 10.6 electron volt (eV) lamp for the presence of volatile organic compounds (VOCs) by head space analysis. One to two samples from each boring were retained and submitted to an independent laboratory for analysis. Soil samples collected from borings B-1 through B-10 and MB-1 through MB-3 were analyzed for total petroleum hydrocarbons diesel- and gasoline range organics (TPH-DRO & TPH GRO), VOCs, polyaromatic hydrocarbons (PAHs), and RCRA metals. Soil samples collected from borings B-11 through B-17 were analyzed for TPH DRO, TPH GRO and VOCs and soil samples collected from FB-1 through FB-3 were only analyzed for pesticides and herbicides.

In addition to the soil samples, groundwater samples were collected from borings B-1 though B10 and MB-1. To collect the groundwater samples, 1-inch diameter slotted PVC pipe was placed in the open bore holes creating temporary piezometers. No filter sand or bentonite was placed in the borehole, as would be used when constructing a permanent groundwater monitoring well. New PVC pipe was used in each borehole to prevent cross-contamination. Groundwater was collected using an inertial valve in combination with small diameter polyethylene tubing to draw a sample up from the subsurface. The inertial valve was decontaminated with phosphate-free detergent and clean water prior to each use. The groundwater samples were analyzed for TPH DRO, TPH GRO, VOCs, PAHs, and RCRA Metals.

4.0 SAMPLING RESULTS

The results of the April 2013 and September 2013 soil and groundwater sampling events as well as a comparison to the appropriate VDEQ Voluntary Remediation Program (VRP) Screening Levels are discussed separately below.

4.1 April 2013 Results

The soil and groundwater results from the April 2013 Phase II ESA are summarized below. The data tables and laboratory reports are included in the April 2013 Phase II ESA, which is included as Appendix I.

Soil Results

Total Petroleum Hydrocarbons

TPH DRO was detected in the soil samples collected from SB-1, SB-3 and SB-5. The concentrations detected in SB-1 and SB-5 were less than 100 milligrams per kilogram (mg/kg). However, the concentrations of TPH DRO detected in SB-3 were greater than 1,000 mg/kg.

VOCs

Acetone, methylcyclohexane and naphthalene were detected but at concentrations below their respective VDEQ VRP Tier III Screening Level. No other VOCs were detected.

SVOCs

SVOCs were not detected in any of the samples analyzed during the April 2013 Phase II ESA.

PCBs

PCBs were not detected in any of the samples analyzed during the April 2013 Phase II ESA.

RCRA Metals

WSP reported that arsenic was detected above the VDEQ VRP Tier III screening value in most soil samples, but indicated that the detected concentrations are typical of background concentrations in Virginia and the Mid-Atlantic region. Total chromium was detected at concentrations that exceeded the VDEQ VRP Tier III. However, the report noted that screening value is based on hexavalent chromium concentrations and that the concentrations of chromium detected are typical of background chromium

concentrations in the region. Barium, lead and mercury were also detected but at concentrations that were below their respective VRP Tier III screening levels.

Groundwater Results

Total Petroleum Hydrocarbons

TPH DRO was detected in SB-1, which is located near the truck shop, at 0.22 milligrams per liter (mg/L). TPH was not detected in any other groundwater samples collected during the April 2013 Phase II ESA.

Volatile Organic Compounds

VOCs were not detected in any of the groundwater samples collected during the April 2013 Phase II ESA.

RCRA Metals

Arsenic was detected in SB-2 and SB-5, and the concentration of Arsenic detected in SB-5 exceeded its VRP Tier II Screening Level. Barium, chromium and lead were also detected, but at concentrations below their respective VRP Tier II Screening Levels.

4.2 September 2013 Results

Soil Results

A total of 36 soil samples were collected and analyzed during this investigation. The soil results are summarized below and are presented in Table 1. The data tables and laboratory reports are included in the September 2013 Phase II ESA, which is included in Appendix II.

Total Petroleum Hydrocarbons

A total of 33 soil samples were collected and analyzed for TPH DRO and TPH GRO from the Robinson Terminal property and the Alexandria Marine property. The results are summarized below, as well as a comparison to the Virginia Department of Environmental Quality (VDEQ) “Clean Fill” requirements as defined in 9VAC20-81-660D.

- TPH DRO was detected in 23 of the 33 soil samples at concentrations ranging from 9.6 milligrams per kilogram (mg/kg) to 4,600 mg/kg. The concentrations of TPH DRO in B1 10’, B2 9’, B5 5’, B5 8’, B6 5’, B6 8’, B10 4’, B11 8’, B12 4’, B13 5’, B14 7’, B15 8’, B16 8’, MB1 8’, MB2 4’, MB2 8’ and MB3 8’ exceeded the 50 mg/kg “clean fill” requirement.

- TPH GRO was detected in 15 of the 33 samples at concentrations ranging from 0.2 mg/kg to 3,300 mg/kg. The concentrations of TPH GRO in B5 8', B6 8', B11 8', B14 7', and B15 8' exceeded the 50 mg/kg "clean fill" requirement.

Volatile Organic Compounds

A total of 33 soil samples were collected and analyzed for VOCs from the Robinson Terminal property and the Alexandria Marine property. Acetone, 2-butanone, carbon disulfide, 2-hexanone, methylene chloride and xylenes were detected in one or more samples at concentrations below their established VDEQ Voluntary Remediation Program (VRP) Tier II Screening Levels for Unrestricted (i.e. Residential) Soil. No other VOCs were detected at or above the laboratory reporting limit.

Polyaromatic Hydrocarbons

A total of 26 soil samples were collected and analyzed for PAHs from the Robinson Terminal property and the Alexandria Marine property. The results are summarized below, as well as a comparison to the VDEQ VRP Tier II Screening Levels.

- Benzo(a)anthracene was detected in 23 of the 26 soil samples at concentrations ranging from 0.005 mg/kg to 23 mg/kg. The concentrations of benzo(a)anthracene in B2 4', B4 10', B5 5', B5 8', MB1 4', MB2 4', MB2 8', MB3 5' and MB3 8' exceeded the established VRP Tier II Screening Level.
- Benzo(a)pyrene was detected in 24 of the 26 soil samples at concentrations ranging from 0.005 mg/kg to 22 mg/kg. The concentrations of benzo(a)pyrene in B1 5', B2 10', B2 4', B3 9', B4 10', B5 5', B5 8' B9 4', B10 4', B10 8' MB1 4', MB2 4', MB2 8', MB3 5' and MB3 8' exceeded the established VRP Tier II Screening Level.
- Benzo(a)fluoranthene was detected in 23 of the 26 samples at concentrations ranging from 0.005 mg/kg to 25 mg/kg. The concentrations of benzo(a)fluoranthene in MB1 4', MB2 4', MB2 8', MB3 5' and MB3 8' exceeded the established VRP Tier II Screening Level.
- Chrysene was detected in 23 of 26 samples at concentrations ranging from 0.005 mg/kg to 22 mg/kg. The concentration of chrysene at MB1 4' exceeded the established VRP Tier II Screening Level.
- Dibenz(a,h)anthracene was detected in 18 of the 23 samples at concentrations ranging from 0.004 mg/ kg to 2.7 mg/kg. The concentration of dibenz(a, h)anthracene in MB1 4', MB2 8', MB2 4', MB2 8', M3 5' and MB3 8' exceeded the established VRP Tier II Screening Level.
- Indeno(1,2,3-cd)pyrene was detected in 21 of 23 samples at concentrations ranging from 0.007 mg/kg to 13 mg/kg. The concentrations of indeno(1,2,3-cd)pyrene in B5 5', MB1 4', MB2 8', MB3 5' and MB3 8' exceeded the established VRP Tier II Screening Level.
- Naphthalene was detected in 15 of the 23 samples at concentrations ranging from 0.005 mg/kg to 10 mg/kg. The concentrations of naphthalene at B2 4', B4

10', B5 4', MB1 8', MB2 4', MB2 8', MB3 5' and MB3 8' exceeded the established VRP Tier II Screening Level.

Several other PAHs were detected, but at concentrations below their established VRP Tier II Screening Levels, and therefore, would not be expected to pose a risk to human health or the environment.

RCRA Metals

A total of 26 soil samples were collected and analyzed for RCRA Metals from the Robinson Terminal property and the Alexandria Marine property. The results are summarized below, as well as a comparison to the VDEQ VRP Tier II Screening Levels.

- Arsenic was detected in each of the 26 samples at concentrations ranging from 2.49 mg/kg to 48.1 mg/kg. The concentrations of arsenic in each of the 26 samples exceeded the established VRP Tier II Screening Level of 0.39 mg/kg.
- Cadmium was detected in 16 of the 26 samples at concentrations ranging from 0.188 mg/kg to 9.14 mg/kg. The concentrations of cadmium in B2 9', B5 5' and B8 5' exceeded the established VRP Tier II Screening Level.
- Total chromium was detected in each of the 26 samples at concentrations ranging from 5.49 mg/kg to 76.9 mg/kg. The concentrations of total chromium in B2 9', B5 5', B5 8', B8 5', B9 4', B10 4', B10 8', MB1 4', MB1 8', MB2 4', MB2 8', MB3 5' and MB3 8' exceeded the established VRP Tier II Screening Level. However, the chromium screening level is based on hexavalent chromium. The total chromium concentrations detected are consistent with background total chromium concentrations detected in this region.
- Lead was detected in each of the 26 samples at concentrations ranging from 2.59 mg/kg to 1,180 mg/kg. The concentrations of lead in B4 14', MB1 8', MB2 4' and MB2 8' exceeded the established VRP Tier II Screening Level. Additionally, the concentrations of lead in 11 of the 26 samples exceeded the "20 times rule" with concentrations 20 times the TCLP limit of 5 mg/L. Consequently, these samples have the potential to be a characteristic hazardous waste.
- Mercury was detected in 25 of the 26 samples at concentrations ranging from 0.0138 mg/kg to 2.40 mg/kg. The concentrations of mercury in B4 10', B5 5', and MB3 10' exceeded the established VRP Tier II Screening Level.
- Silver was detected in 16 of the 26 samples at concentrations ranging from 0.0154 mg/kg to 7.91 mg/kg. The concentrations of silver in MB2 4' and MB2 8' exceeded the established VRP Tier II Screening Level.

Pesticides and Herbicides

A total of 3 soil samples were collected and analyzed for pesticides and herbicides from within the approximate footprint of the building that was previously occupied by a fertilizer company. The laboratory reported that methoxychlor was detected in FB2 3' at

an estimated concentration of 0.0034 mg/kg, which is below the VRP Tier II Screening Level of 31.0 mg/kg. No other pesticides or herbicides were detected.

Groundwater Results

A total of 11 groundwater samples were collected and analyzed during this investigation. The groundwater results are summarized below and are presented in Table 2. The laboratory reports are included in Appendix II.

Total Petroleum Hydrocarbons

A total of 11 groundwater samples were collected and analyzed for TPH DRO and TPH GRO from the Robinson Terminal property and the Alexandria Marine property. The results are summarized below, as well as a comparison to the VDEQ reporting limits for TPH in groundwater.

- TPH DRO was detected each of the 11 groundwater samples at concentrations ranging from 59 micrograms per liter (ug/L) to 28,000 ug/L.
- TPH GRO was detected in 4 of the 11 groundwater samples at concentrations ranging from 45 ug/L to 410 ug/L.

Volatile Organic Compounds

A total of 11 groundwater samples were collected and analyzed for VOCs from the Robinson Terminal property and the Alexandria Marine property. Total xylenes was detected at 1.0 ug/L in BW-4, which is below the 10,000 ug/L VRP Tier II Screening Level for Unrestricted (i.e. residential) Groundwater. No other VOCs were detected in any of the groundwater samples analyzed.

Polyaromatic Hydrocarbons

A total of 11 groundwater samples were collected and analyzed for PAHs from the Robinson Terminal property and the Alexandria Marine property. The results are summarized below, as well as a comparison to the VRP Tier II Screening Levels.

- Acenaphthylene was detected in 4 of 11 samples at concentrations ranging from 0.3 ug/L to 11 ug/L. The concentration of acenaphthylene in BW4 exceeded the established VRP Tier II Screening Level.
- Benzo(a)anthracene was detected in BW1, BW2, BW3, BW4, BW-5 and MBW1 at concentrations ranging from 0.1 ug/L to 53 ug/L. The concentrations of benzo(a)anthrace detected exceeded the established VRP Tier II Screening Level.
- Benzo(a)pyrene was detected in 5 of the 11 samples at concentrations ranging from 0.2 ug/L to 47 ug/L. The concentrations of benzo(a)pyrene detected exceeded the established VRP Tier II Screening Level.

- Benzo(a)fluoranthene was detected in 6 of the 11 samples at concentrations ranging from 0.2 ug/L to 66 ug/L. The concentrations of benzo(a)fluoranthene detected exceeded the established VRP Tier II Screening Level.
- Benzo(g, h, i)perylene was detected in 4 of the 11 samples at concentrations ranging from 0.2 ug/L to 34 ug/L. The concentrations of benzo(g, h, i)perylene detected in BW1, BW3 and MBW1 exceeded the established VRP Tier II Screening Level.
- Benzo(k)fluoranthene was detected in 3 of the 11 samples at concentrations ranging from 8 ug/L to 25 ug/L. The concentrations of benzo(k)fluoranthene detected exceeded the established VRP Tier II Screening Level.
- Chrysene was detected in 6 of the 11 samples at concentrations ranging from 0.2 ug/L to 52 ug/L. The concentrations of chrysene in BW1, BW3, BW4 and MBW1 exceeded the established VRP Tier II Screening Level.
- Dibenz(a,h)anthracene was detected in 3 of the 11 samples at concentrations ranging from 3 ug/L to 9 ug/L. The concentrations of dibenz (a, h) anthracene exceeded the VRP Tier II Screening Level.
- Fluoranthene was detected in 6 of the 11 samples at concentrations ranging from 0.1 ug/L to 120 ug/L. The concentration of fluoranthene detected in MBW1 exceeded the established VRP Tier II Screening Level.
- Indeno(1,2,3-cd)pyrene was detected in 5 of the 11 samples at concentrations ranging from 0.1 ug/L to 31 ug/L. The concentrations of indeno(1, 2, 3-cd)pyrene detected exceeded the established VRP Tier II Screening Level.
- Naphthalene was detected in 4 of the 11 samples at concentrations ranging from 0.1 ug/L to 14 ug/L. The concentrations of naphthalene detected in BW3, BW4 and MBW1 exceeded the established VRP Tier II Screening Level.

Several other PAHs were detected, but at concentrations below their established VRP Tier II Screening Levels.

RCRA Metals

A total of 11 groundwater samples were collected and analyzed for RCRA Metals from the Robinson Terminal property and the Alexandria Marine property. Arsenic, barium, cadmium, total chromium, lead and mercury were detected in the groundwater samples at concentrations below their established VRP Tier II Screening Levels.

5.0 SUMMARY AND CONCLUSIONS

5.1 Summary

Based on the information provided to ECS, the property will be redeveloped with a mixed-use development which will consist of both commercial/retail facilities as well as multi-family residential structures. In order to determine if the past use of the property has impacted the subsurface soil and/or groundwater, environmental sampling was conducted at the site. This report contains information from the WSP Phase II ESA, dated July 9, 2013, which was provided to ECS prior to conducting the Phase I ESA, the ECS Phase I ESA, dated October 7, 2013 and the ECS Phase II ESA, dated October 17, 2013.

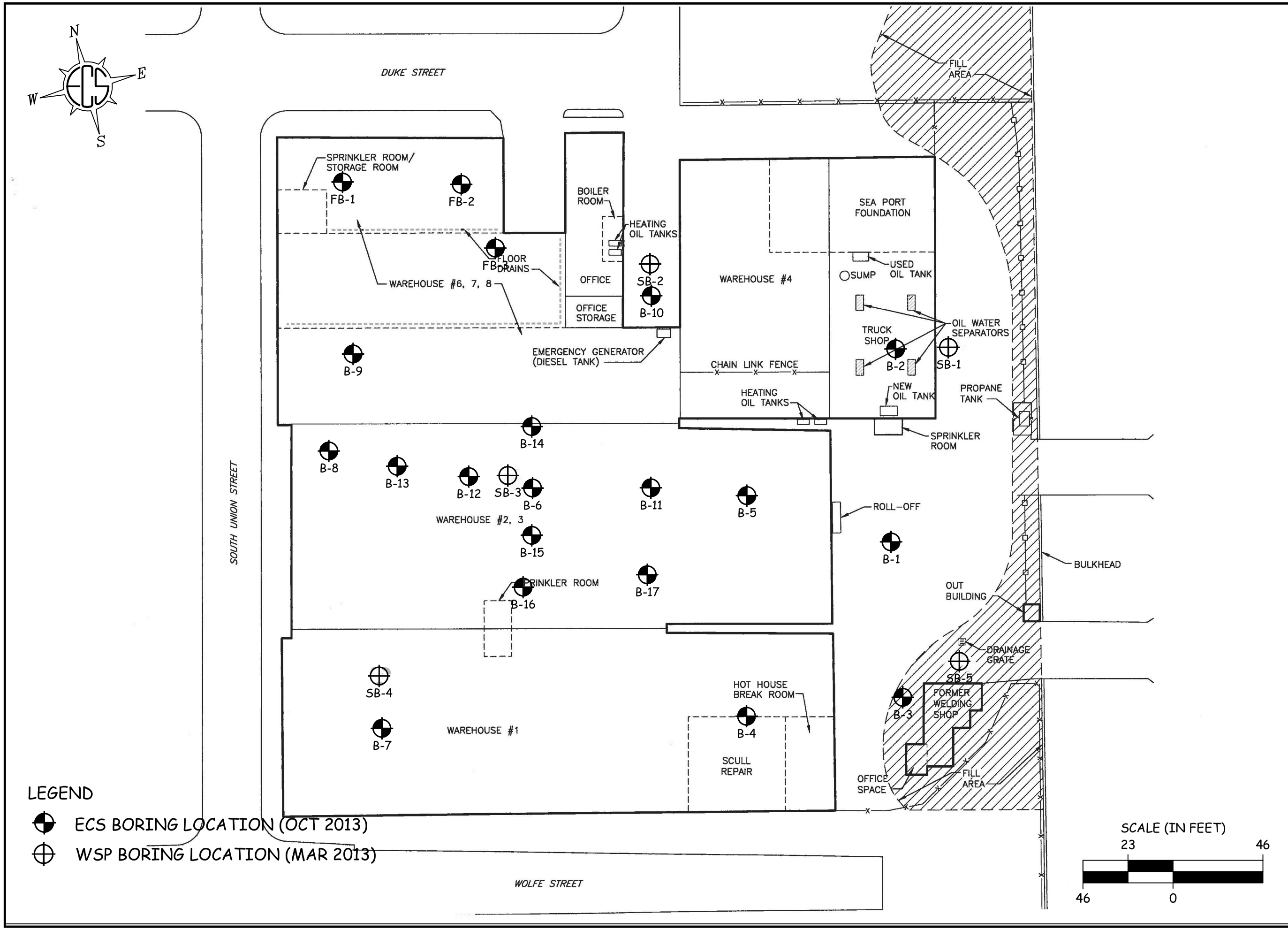
The collective results of the environmental investigations indicate that concentrations of petroleum hydrocarbons, SVOCs and metals are present in the soil at concentrations that exceed their respective screening criteria. Additionally, concentrations of petroleum hydrocarbons and PAHs were detected in the groundwater at concentrations that exceeded their respective screening criteria.

5.2 Conclusions

Based on the results of the environmental investigations at the Site, special handling and disposal of the soil and groundwater will be required during site redevelopment. As a result of the contamination detected in the soil and groundwater, a Soil and Water Management Plan has been prepared for the property to address the handling and disposal of contaminated soil and groundwater. Additionally, a Health and Safety Plan is being developed for use during redevelopment activities to limit worker exposure to the contaminants detected that may pose an unacceptable risk according to the risk assessment which is provided under separate cover. In areas of the site not covered by buildings or hardscape, ECS recommends that a two-foot clean cap be placed at the surface protect future occupants from potentially coming into contact with residual contamination that may remain following the completion of redevelopment activities.

FIGURES

Site Characterization Report **Robinson Terminal South Duke Street and Union Street Alexandria, VA 22314**	ECS Mid-Atlantic, LLC 14026 Thunderbolt Place, Suite 100 Chantilly, VA 20151 ECS LLC MID-ATLANTIC	**Figure 1** **Site Location Map** **ECS Project No. 21983-E** **not to scale**



LEGEND

ECS BORING LOCATION (OCT 2013)

WSP BORING LOCATION (MAR 2013)

ROBINSON TERMINAL SOUTH

CITY OF ALEXANDRIA

BORING LOCATION DIAGRAM FIGURE 2

ECS REVISIONS

ENGINEER	DRAFTING
DJB	MJJ

SCALE 1" = 46'

PROJECT NO. 21389-E

SHEET 1 OF 2

DATE 6/1/15

BORING LOCATION DIAGRAM	ECS	**ROBINSON TERMINAL SOUTH**	ENGINEER DJB	SCALE NOT TO SCALE
			DRAFTSMAN MJJ	PROJECT NO. 21983-E
			REVISIONS	SHEET 2 OF 2
FIGURE 3		**CITY OF ALEXANDRIA**		DATE 6/1/15

APPENDIX I

APRIL 2013 PHASE II ESA

11190 Sunrise Valley Drive
Suite 300
Reston, VA 20191
Main: 703 709 6500
www.wspgroup.com/usa

VIA ELECTRONIC MAIL

Privileged and Confidential

July 9, 2013

Robinson Terminal Warehouse LLC
c/o David Miller, Esq.
Pillsbury Winthrop Shaw Pittman LLP
2300 N Street, NW
Washington, DC 20037-1122

Re: Phase II Environmental Site Assessment Results
Robinson Terminals South Property, 2 Duke Street, Alexandria VA

Dear Mr. Miller:

WSP USA Corp. (WSP) conducted a Phase II environmental site assessment of the Robinson Terminal South facility located at 2 Duke Street, Alexandria, Virginia (Figure 1) on April 18, 2013. The scope of the Phase II was designed to evaluate recognized environmental conditions (RECs) identified in the Phase I report for the site prepared by WSP on March 21, 2013. This letter presents a summary of the scope of work and results of the Phase II investigation.

Background

In March 2013, WSP conducted a Phase I environmental site assessment (Phase I) of the property in accordance with the U.S. Environmental Protection Agency (EPA) Standards and Practices for All Appropriate Inquiries (AAI) as required under Section 101(35)(B) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the ASTM International Standard E 1527-05, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM E 1527-05). Based on the Phase I, the following recognized environmental conditions were identified:

- Fill material was used in the past to raise the elevation of the subject property. The presence of fill material on the subject property was confirmed by field observations during a limited geotechnical evaluation of the subject property in February 2013. There are no records of the source of the fill material placed on the subject property before 1980.

- Historical industrial activities onsite included machine shops and engine repair, a foundry, petroleum storage and handling, rail spur, freight depot, and fertilizer storage.

In order to meet the requirements of the AAI regulation (40 CFR 312) for a prospective purchaser, WSP recommended completion of a Phase II investigation before the sale of the property. The scope of work was designed to evaluate the recognized environmental conditions noted above.

Scope of Work

This section describes the scope of work completed for the Phase II investigation. Figure 1 illustrates the locations of the environmental samples collected.

Soil Investigation

Surface and subsurface soil samples were collected from five borings (SB-1 through SB-5) spaced across the property to evaluate the presence of contaminants resulting from historical industrial activities at the site and the existing truck shop (Figure 1). The boring locations were selected to investigate the following potential sources:

- SB-1 to investigate historic fill material and potential releases and groundwater quality impacts from the existing truck shop and historic machine shop operations
- SB-2 to investigate potential releases and groundwater quality impacts from historic engine repair and machine shop operations
- SB-3 to investigate soil impacts from historic petroleum storage and transfer operations (Texas Oil Co.)
- SB-4 to investigate soil impacts from historic petroleum storage activity, rail line, and freight depot
- SB-5 to investigate historic fill material and groundwater quality impacts from upgradient activity

All proposed soil borings were advanced using Geoprobe® direct-push equipment. Each boring was advanced from the ground surface to the top of the water-bearing zone, which varied between 3 to 6 feet below ground surface (bgs). Borings SB-1, SB-2, and SB-5 were advanced into the water-bearing zone and groundwater samples were collected. Final depths of the borings varied between 10 and 20 feet bgs based on subsurface conditions. Boring locations selected to investigate impacts from the historic petroleum storage operations (SB-3 and SB-4) were advanced to 20 feet bgs to collect additional data on conditions below the top of the water-bearing zone. Borings SB-1 and SB-2 were advanced to 10 feet bgs as proposed. Boring SB-5 was advance to 10 feet bgs as proposed, although recovery was poor below 7 feet bgs due to moisture content and loosely packed soil.

Continuous soil samples were collected using dual-tube or dual-sleeve techniques to minimize cross-contamination of the sample zones and minimize sample loss during retrieval. Samples were collected using a 4- or 5-foot long, 2.25-inch diameter soil sampler equipped with a single-use acetate liner. On retrieval of the soil sampler, soil was collected at 1 foot intervals and placed in an air-tight container. After allowing ample time for volatilization of compounds in the headspace of the container, each sample interval was screened with a photoionization detector (PID) equipped with an 11.7 electron-volt lamp for organic vapors and a flame-ionization detector (FID) for longer chain petroleum compounds. All soil samples were logged in the field for color, texture, and moisture content using the unified soil classification system. The results of the headspace analysis and the lithologic descriptions are presented on the boring logs in Enclosure A.

Two soil samples were collected from each boring and submitted for laboratory analysis. The soil samples were collected from the intervals exhibiting the highest field screening levels (PID/FID readings) and visual indications of soil impacts (staining, odor, or fill material).

All soil samples were analyzed for total petroleum hydrocarbons (TPH) diesel range organics (DRO) by EPA Method SW846 8015, and Resource Conversation and Recovery Act (RCRA) metals by EPA Method SW846 6010/7470. One soil sample from each boring was analyzed for target compound list (TCL) volatile

organic compounds (VOCs) by EPA Method SW846 8260B including methyl-tert-butyl-ether (MTBE) and naphthalene. Soil samples from borings SB-4 and SB-5 were analyzed for PCBs due to historical use of the adjacent property for electrical generation and transmission. Three soil samples that contained visible staining were analyzed for semi-volatile organic compounds (SVOCs) by EPA Method SW846 8270. The laboratory reports are provided in Enclosure B.

The soil sample results were compared to the Virginia Department of Environmental Quality (DEQ) Voluntary Remediation Program (VRP) Tier III screening values for commercial/industrial soils contained in the Voluntary Remediation Regulations section, 9 VAC 20-160-70(A)(1)(a) of the Virginia Administrative Code. A summary of laboratory results and VRP Tier III screening values is presented in Table 1.

Groundwater Investigation

WSP collected groundwater samples from three of the five borings as shown on Figure 1. Three borings (SB-1, SB-2, and SB-5) were extended into the water-bearing zone to collect groundwater samples. Groundwater samples were collected from within direct-push rods with a screened tip using a peristaltic pump.

Groundwater samples collected from the selected borings were placed in pre-preserved laboratory provided glass containers. The groundwater sample for metals analysis was passed through a 0.45-micron filter before being placed in the appropriate glass container. The groundwater samples were packed on ice and delivered under strict chain-of-custody protocol to Phase Separation Science Laboratories in Baltimore, Maryland. The samples were analyzed for TCL VOCs using EPA Method SW846 8260B including MTBE and naphthalene, RCRA metals using EPA Method SW846 6010/7470, and TPH DRO/GRO using EPA Method SW846 8015. The laboratory reports are provided in Enclosure B.

The groundwater sample results are summarized in Table 2 and compared to the VDEQ Tier II screening levels for unrestricted use (drinking water standards) and Tier III screening values for commercial/industrial and construction worker receptors. VOCs were not detected in the groundwater samples, and therefore the results were not compared to the VDEQ Tier III screening values for vapor intrusion.

Quality assurance/quality control (QA/QC) samples consisting of a blind duplicate, matrix spike and trip blanks were collected in accordance with WSP's standard operating procedures (SOPs). Analytical results for QA/QC samples indicate that data quality is acceptable.

Results

Geologic and Hydrogeologic Conditions

The site geology is characterized by recent fill to varying depths overlying native silty sand. The fill used in the eastern portion of the facility is loosely laid sand and gravel with some debris. In SB-1 and SB-5, the fill extended from just below the concrete to approximately 9 feet bgs. The fill was shallower at SB-2, extending only to 5 feet bgs. The fill used in the western portion of the facility consisted of medium sand with gravel. In SB-3, the fill extended from below the concrete to 6 feet bgs. In SB-4, the fill extended only to 1.2 feet bgs. Below the fill, the native soil consisted of layers of silt and sand, and mixtures of the two. These types of soil are typical for low-energy, fluvial depositional environments. Groundwater was encountered between 3' and 5' bgs across the site. Groundwater is generally expected to flow west to east toward the Potomac River, but tidal influence is expected to cause regular fluctuations in groundwater flow

direction. A zone of low permeability found at 17 feet bgs in SB-4 indicated that downward mobility is limited in some areas of the site.

Soil and Groundwater Quality

Laboratory results for soil samples are summarized in Table 1. Sample results greater than Virginia DEQ screening levels are highlighted in the table. Arsenic was detected above the Virginia DEQ VRP Tier III screening value in most soil samples, but these concentrations are typical of background arsenic concentrations in Virginia and the mid-Atlantic region. Total chromium was detected above the Virginia DEQ VRP Tier III screening value in all soil samples, but the screening value is based on hexavalent chromium concentrations. The chromium concentrations detected are also typical of background chromium concentrations in this region.

Elevated concentrations of organic compounds were only detected in one sample. The samples taken from location SB-3 contained detectable concentrations of TPH-DRO, naphthalene, methylcyclohexane, and mercury. These detections are believed to be related to historical petroleum storage and transfer operations in this area of the property. The concentrations detected were less than Virginia DEQ VRP Tier III screening levels. The impacts were detected in samples collected between 5 and 7 feet below finished floor. There was a strong odor in the soil at the B-3 location from under the building slab to a depth of 10-feet bgs (see boring log in Enclosure A). At depths greater than 10 feet bgs, the soil did not have a noticeable odor.

TPH-DRO was also detected in the soil samples from borings SB-1 and SB-5. The concentrations detected were less than the 100 milligrams per kilogram concentration that the Virginia DEQ considers to be an indicator of an underground storage tank release. Potential sources of the TPH detected in SB-1 and SB-5 are the historic fill material placed in this area, and vehicle maintenance operations west of SB-1. Acetone was detected in the 4-5 foot sample from SB-5, but the concentration detected was several orders of magnitude less than screening levels.

PCBs and SVOCs were not detected in the soil samples analyzed for those compounds.

Laboratory results for groundwater samples are summarized in Table 2. Sample results greater than drinking water standards or screening levels are highlighted in Table 2. The arsenic concentration in one groundwater sample (SB-5) was greater than drinking water standards. However, the groundwater on site is not used as a drinking water source. Public water supply is available in this area, and future groundwater use is not anticipated. In addition, this was a direct push groundwater sample, which typically contains more sediment and sediment-associated metals than a monitoring well sample.

Petroleum hydrocarbons were detected in the groundwater sample collected next to the truck shop (SB-1). The petroleum may be related to historical activities on site, or it may be related to petroleum management and the oil water separators in the truck shop. The concentration of TPH-DRO in the SB-1 groundwater sample (0.2 milligrams per liter, mg/l) is less than the 1 mg/l TPH criteria that the Virginia DEQ considers to be an indicator of an underground storage tank release.

The groundwater samples collected on the property did not contain detectable concentrations of VOCs. Therefore, there is no potential vapor intrusion concern for the subject property based on the sample results. The concentrations of metals detected are less than screening levels based on potential exposure by construction workers.

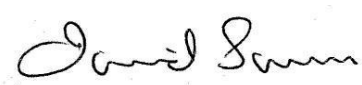
Conclusions and Recommendations

This investigation detected petroleum-contaminated soil in areas of the site with historical petroleum storage and transfer operations. The investigation did not identify impacts from other historical operations on site. The petroleum-contaminated is not associated with any existing underground storage tanks, and Virginia regulations do not require reporting the presence of the petroleum-contaminated soil or remediating it. However, the presence of the petroleum-contaminated soil should be considered in any future redevelopment of the property. If this soil is excavated, it must be characterized, managed, and disposed of in accordance with Virginia and federal regulations.

The investigation did not detect evidence of impacted groundwater on the property. While one groundwater sample did contain a detectable concentration of petroleum hydrocarbons, the concentration is less than the 1 mg/l TPH criteria that the Virginia DEQ considers to be an indicator of an underground storage tank release. If construction dewatering is conducted on the site in the future, additional groundwater testing should be conducted to confirm that the groundwater meets discharge requirements.

We appreciate the opportunity to work with you on this project. Please contact us if you have any questions.

Sincerely yours,



Lisa K. Bryda, P.G.
General Manager

David Sarr
Senior Technical Director

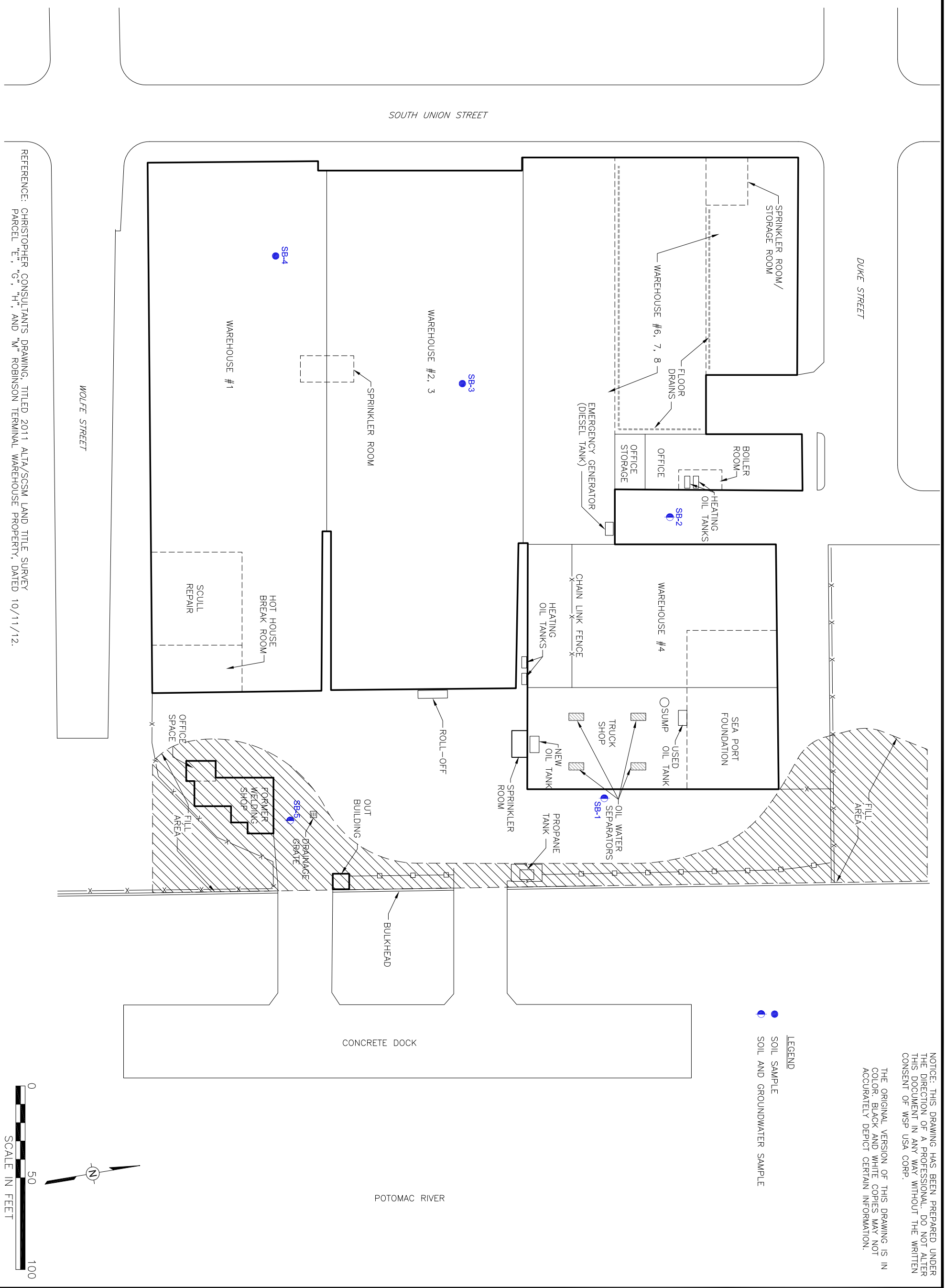
LKB:dhs:paw
\\ser03res1us.us.wspgroup.com\es\Clients\PillsburyWinthrop\Alexandria VA\Task#5_Phase II Investigation\Task#_Phase_2_Environmental_Assessment\6_Reporting\Reports\Report_Phase II_RT South_061013.docx

Enclosures

Figure

R:\ACAD\CADD\00036454-RobinsonTerminal\CAD\00036454-006.dwg 4/25/2013 8:53 AM USEC01012

B



REFERENCE: CHRISTOPHER CONSULTANTS DRAWING, TITLED 2011 ALTA/SCSM LAND TITLE SURVEY PARCEL "E", "G", "H", AND "M" ROBINSON TERMINAL WAREHOUSE PROPERTY, DATED 10/11/12.

NOTICE: THIS DRAWING HAS BEEN PREPARED UNDER THE DIRECTION OF A PROFESSIONAL. DO NOT ALTER THIS DOCUMENT IN ANY WAY WITHOUT THE WRITTEN CONSENT OF WSP USA CORP.

THE ORIGINAL VERSION OF THIS DRAWING IS IN COLOR. BLACK AND WHITE COPIES MAY NOT ACCURATELY DEPICT CERTAIN INFORMATION.

WSP

WSP USA Corp.
11190 Sunrise Valley Drive, Suite 300
Reston, Virginia 20191
(703) 709-6500
www.wspenvironmental.com/usa

Figure 1

PHASE II BORING LOCATIONS

ROBINSON TERMINAL SOUTH
ALEXANDRIA, VIRGINIA

PREPARED FOR
PILLSBURY WINTHROP SHAW PITTMAN
WASHINGTON, D.C.

Drawn By:	EGC
Checked:	RJW 4/25/2013
Approved:	JS 4/25/2013
DWG Name:	00036454-006

Table

Table 1

Soil Sample Results - Detected Compounds (a)
Robinson Terminal South
Alexandria, VA

Boring Location		**SB-1**	**SB-1**	**SB-2**	**SB-2**	**SB-3**	**SB-3**	**SB-4**	**SB-4**	**SB-5**	**SB-5**
Sample ID (b)		SB-1 (7-8)	SB-1 (8-9)	SB-2 (8-9)	SB-2 (9-10)	SB-3 (5-6)	SB-3 (6-7)	SB-4 (7-8)	SB-4 (17-18)	SB-5 (4-5)	SB-5 (5-6)
Depth of Sample (fbg)		7-8	8-9	8-9	9-10	5-6	6-7	7-8	17-18	4-5	5-6
TCL Volatile Organic Compounds (ug/kg)	**VRP TIER III Screening Concentration(c)**										
Acetone	63,000,000	ND	NS	ND	NS	ND	NS	ND	ND	27	NS
Methylcyclohexane	-	ND	NS	ND	NS	8,000	NS	ND	ND	ND	NS
Naphthalene	18,000	ND	NS	ND	NS	520	NS	ND	ND	ND	NS
TPH-DRO (Diesel Range Organics) (mg/kg)	-	6.2	6.5	ND	ND	1,100	1,400	ND	ND	6.3	38
Polychlorinated Biphenyls	-	NA	NA	NA	NA	NA	NA	ND	NA	ND	ND
Semivolatile Organic Compounds	-	ND	NA	NA	NA	ND	NA	NA	NA	NA	ND
RCRA Metals (mg/kg)											
Arsenic	1.6	2.6	3.2	3.9	1.4	2.7	4.6	3	4.4	3.7	6.5
Barium	19,000	130	70	28	11	48	82	46	88	54	56
Chromium (d)	5.6	5.6	12	9.8	5.6	9	14	8.6	20	10	8.6
Lead	800	18	9.6	9.6	3.2	8.5	18	5	9.6	35	80
Mercury	4.3	ND	ND	ND	ND	0.16	0.22	ND	ND	ND	0.17

a\ fbg = feet below ground surface
mg/kg = milligrams per kilogram
ug/kg = micrograms per kilogram
NA = Not Analyzed
NS = Not Sampled
ND = Non-Detect
VRP = VDEQ Voluntary Remediation Program
b\ Sample ID on the Chain-of-Custody form and analytical laboratory report.
c\ Screening levels from VDEQ VRP Table 2.9 Soil Restricted
d\ Screening level based on hexavalent chromium

Table 2

Groundwater Sample Results - Detected Compounds (a)
Robinson Terminal South
Alexandria, VA

Boring Location			SB-1	SB-2	SB-5
Sample ID (b)			SB-1	SB-2	SB-5
	VRP TIER II Screening Level/MCL (c)	VRP TIER III Screening Level- Construction Worker Exposure (d)			
TPH-DRO (Diesel Range Organics) (mg/l)	-	-	0.22	ND	ND
RCRA Metals (ug/l)					
Arsenic	10	185	ND	1.3	13
Barium	2,000	19,600	27	98	220
Chromium (e)	100	26.6	ND	1.1	ND
Lead	15	-	ND	ND	14

a\ mg/L = milligrams per liter
ug/l = micrograms per liter
NS = Not Sampled
MCL = Maximum Contaminant Level
ND = Non-Detect
VRP = VDEQ Voluntary Remediation Program

b\ Sample ID on the Chain-of-Custody form and analytical laboratory report

c\ Screening levels from VDEQ VRP Table 2.6 Selection of Contaminants of Concern Groundwater:Unrestricted (Residential)

d\ Screening levels from VDEQ VRP Table 2.13 Selection of Contaminants of Concern Groundwater:Construction Worker in a Trench

e\ Screening level based on hexavalent chromium

Enclosure A

Boring Log: SB-1

Project: Robinson Terminal South

Project No.: 36454/05

Location: Alexandria, VA

Completion Date: April 18, 2013

Surface Elevation (feet AMSL*): Not Determined

Total Depth (feet): 10

Borehole Diameter (inches): 2

**AMSL = Above mean sea level*

Sample Data					Subsurface Profile	
Depth	**Sample/Interval**	**PID/FID (ppm)**	**Blow Count**	**% Recovery**	**Lithology**	**Description**
						Ground Surface
		0.0/0.0		55		***Concrete***
		0.2/0.0				***Silty Sand (SM)*** Reddish brown (5 YR 4/4) silty sand, no odor, dry, stiff
2		0.0/0.0				
		0.0/0.1				
4		0.0/0.3				***Well-Graded Sand with Gravel (SW)*** Black (5 Y 2.5/1) medium sand with fine gravel fill, well-graded, ash and brick debris, moist to 5', wet to 9.5', loose
		0.0/0.4		70		
6		0.0/0.6				
	SB-1 (7-8)	0.0/113.8				
8		0.2/127.1				
	SB-1 (8-9)	0.6/20.1				
10						***Sandy Silt with Gravel (ML)*** Very pale brown (10 YR 8/4) sandy silt with gravel, faint odor, visible staining, moist, stiff
12						Bottom of Boring at 10 feet
14						
16						
18						
20						

Geologist(s): Robert Wallace

Subcontractor: Green Services

Driller/Operator: Don Marchez

Method: Direct Push

WSP Environment & Energy

Boring Log: SB-2

Project: Robinson Terminal South

Project No.: 36454/05

Location: Alexandria, VA

Completion Date: April 18, 2013

Surface Elevation (feet AMSL*): Not Determined

Total Depth (feet): 10

Borehole Diameter (inches): 2

**AMSL = Above mean sea level*

Sample Data					Subsurface Profile	
Depth	**Sample/Interval**	**PID/FID (ppm)**	**Blow Count**	**% Recovery**	**Lithology**	**Description**
						Ground Surface
		3.8/0.0		60		***Concrete***
		0.3/0.0				***Wood*** Thin layer of wood below concrete, loose, no odor
2		0.2/0.0				***Silty Sand with Gravel (SM)*** Reddish yellow (7.5 YR 5/8) silty sand with gravel, no odor, moist, soft
		0.3/0.0				
4		0.1/0.0				***Well-Graded Sand with Gravel (SW)*** Reddish black (5 R 2.5/1) sand with gravel fill, no odor, ash and brick debris, moist to 4.5', wet to 5', loose
		0.0/0.0		65		
6		0.2/0.0				***Silt with Sand (ML)*** Dark grayish brown (10 YR 4/2) silt with sand, no odor, wet, soft
	SB-2 (8-9)	0.2/0.0				***Poorly-Graded Sand with Silt (SP-SM)*** Grayish brown (2.5 Y 5/2) fine sand with silt, faint odor, some staining, wet, loose
8		0.3/40.7				
	SB-2 (9-10)	0.3/13.1				
10						Bottom of Boring at 10 feet
12						
14						
16						
18						
20						

Geologist(s): Robert Wallace

Subcontractor: Green Services

Driller/Operator: Don Marchez

Method: Direct Push

WSP Environment & Energy

Boring Log: SB-3

Project: Robinson Terminal South

Project No.: 36454/05

Location: Alexandria, VA

Completion Date: April 18, 2013

Surface Elevation (feet AMSL*): Not Determined

Total Depth (feet): 20

Borehole Diameter (inches): 2

**AMSL = Above mean sea level*

Depth	Sample/Interval	PID/FID (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
		0.0/0.0		55		***Concrete***
		0.1/0.0				***Well-Graded Sand with Gravel (SW)*** Interbedded black (7.5 YR2/1) and yellowish brown (10 YR 5/4) medium sand with gravel, well graded, strong odor, staining below 4.5', wet below 4.5', loose
2		0.4/0.0				
		0.8/0.0				
4		148.1/232.0				
	SB-3 (5-6)	121.9/362.4		70		
6		82.9/285.4				***Sandy Silt (ML)*** Dark grayish brown (10 YR 4/2) silty sand, strong odor, wet, soft
	SB-3 (6-7)	144.6/281.3				
8		149.7/242.0				***Poorly-Graded Sand with Silt (SP-SM)*** Light olive brown (2.5 Y 5/3) fine sand with silt, strong odor, wet, loose
		65.7/243.5				
10		2.9/7.0		100		***Silty Sand (SM)*** Black (10 YR 2.5/1) silty sand, strong odor, wet, loose
		0.7/0.4				***Poorly-Graded Sand with Silt (SP-SM)*** Dark grayish brown (10 YR 4/2) fine sand with silt,
12		0.6/0.0				***Poorly-Graded Sand with Silt (SP-SM)*** Light olive brown (2.5 YR 5/3) fine sand with silt, no odor, wet, dense
		0.6/1.4				
14		0.4/0.0				***Well-Graded Sand with Gravel (SW)*** Light reddish brown (5 YR 6/3) medium sand with gravel, no odor, wet, dense
		0.4/0.0		100		***Well-Graded Sand with Gravel (SW)*** Yellowish red (5 YR 5/6) medium sand with gravel, no odor, wet, loose
16		0.6/0.0				
		0.6/1.9				
18		0.6/0.4				
		0.4/0.8				
20						

Bottom of Boring at 20 feet

Geologist(s): Robert Wallace

Subcontractor: Green Services

Driller/Operator: Don Marchez

Method: Direct Push

WSP Environment & Energy

Boring Log: SB-4

Project: Robinson Terminal South

Project No.: 36454/05

Location: Alexandria, VA

Completion Date: April 18, 2013

Surface Elevation (feet AMSL*): Not Determined

Total Depth (feet): 20

Borehole Diameter (inches): 2

**AMSL = Above mean sea level*

Depth	Sample/Interval	PID/FID (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
		0.2/0.0				***Concrete***
		0.3/0.0				***Well-Graded Sand with Gravel (SW)*** Black (7.5 YR 2.5/1) fine sand with gravel, no odor, dry, dense
2		0.3/0.0				
		0.3/0.0				***Sandy Silt (ML)*** Reddish brown (5 YR 4/4) sandy silt, no odor, moist, stiff
4		0.5/0.0				***Poorly-Graded Sand with Silt (SP-SM)*** Gray (5 YR 5/1) fine sand with silt, no odor, moist, dense, groundwater at 4.5'
		0.4/0.0				
6		0.3/5.4				
	SB-4 (7-8)	0.3/113.5				***Poorly-Graded Sand with Silt (SP-SM)*** Light gray (10 YR 7/1) medium sand with silt, no odor, wet, dense, capped by thin layer of black (10 YR 2/1) silt
8		0.3/152.3				***Well-Graded Sand (SW)*** Light reddish brown (5 YR 6/4) medium sand, no odor, wet, dense, contains some shell fragments
		0.3/62.3				
10		0.1/0.0				
		0.1/0.0				
12		0.1/0.0				
		0.0/0.0				
14		0.1/0.0				
		0.4/3.8				***Silt with Sand (ML)*** Gray (5 Y 5/1) silt with sand, no odor, moist, dense
16		0.4/8.0				***Poorly-Graded Sand with Silt (SP-SM)*** Gray (5 Y 5/1) medium sand with silt, no odor, moist, dense
	SB-4 (17-18)	0.3/111.3				***Silt (ML)*** Olive brown (2.5 Y 4/4) silt, no odor, dry, stiff
18		0.3/100.4				
		0.3/81.5				
20						

Bottom of Boring at 20 feet

Geologist(s): Robert Wallace

Subcontractor: Green Services

Driller/Operator: Don Marchez

Method: Direct Push

WSP Environment & Energy

Boring Log: SB-5

Project: Robinson Terminal South

Project No.: 36454/05

Location: Alexandria, VA

Completion Date: April 18, 2013

Surface Elevation (feet AMSL*): Not Determined

Total Depth (feet): 10

Borehole Diameter (inches): 2

**AMSL = Above mean sea level*

Depth	Sample/Interval	PID/FID (ppm)	Blow Count	% Recovery	Lithology	Description
						Ground Surface
		0.0/NA				***Concrete***
		0.0/NA				***Silty Sand (SM)*** Reddish yellow (7.5 YR 6/6) silty sand, no odor, dry, dense
2		0.2/NA				***Silty Sand (SM)*** Dark brown (7.5 YR 3/3) silty sand, no odor, dry, dense
		0.2/NA				
4	SB-5 (4-5)	0.0/NA				***Well-Graded Sand with Silt (SW-SM)*** Reddish yellow (7.5 YR 6/8) medium sand with silt, slight odor, moist, wet below 3', staining below 3', groundwater at 3'
		0.0/NA				
6	SB-5 (5-6)	0.7/NA				***Well-Graded Sand with Gravel (SW)*** Black (2.5 YR 2.5/1) gravelly sand, strong odor, wet, loose
		NR				***No Recovery***
8		NR				
		NR				
10						Bottom of Boring at 10 feet Lost sample below 7'
12						
14						
16						
18						
20						

Geologist(s): Robert Wallace

Subcontractor: Green Services

Driller/Operator: Don Marchez

Method: Direct Push

WSP Environment & Energy

Enclosure B

Analytical Report for

WSP Environment & Energy - Reston

Certificate of Analysis No.: 13041921

Project Manager: David Sarr
Project Name : Robinson Terminal
Project Location: Alexandria, VA
Project ID : 36454

May 3, 2013

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228
Phone: (410) 747-8770
Fax: (410) 788-8723

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

May 3, 2013

David Sarr
WSP Environment & Energy - Reston
11190 Sunrise Valley Dr., Ste. 300
Reston, VA 20191

Reference: PSS Work Order(s) No: **13041921**
Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID.: 36454

Dear David Sarr :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **13041921**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on May 24, 2013. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt , the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or info@phaseonline.com.

Sincerely,

Dan Prucnal
Laboratory Manager

Sample Summary

Client Name: WSP Environment & Energy - Reston

Project Name: Robinson Terminal

Work Order Number(s): 13041921

Project ID: 36454

The following samples were received under chain of custody by Phase Separation Science (PSS) on 04/19/2013 at 06:35 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
13041921-001	SB-4 (7-8)	SOIL	04/18/13 09:22
13041921-002	SB-4 (17-18)	SOIL	04/18/13 09:50
13041921-003	SB-041813 (7-8)	SOIL	04/18/13 09:30
13041921-004	SB-3 (5-6)	SOIL	04/18/13 11:17
13041921-005	SB-3 (6-7)	SOIL	04/18/13 11:19
13041921-006	SB-2 (8-9)	SOIL	04/18/13 12:09
13041921-007	SB-2 (9-10)	SOIL	04/18/13 12:12
13041921-008	SB-2 (GW)	GROUND WATER	04/18/13 12:30
13041921-009	SB-1 (8-9)	SOIL	04/18/13 14:06
13041921-010	SB-1 (7-8)	SOIL	04/18/13 14:09
13041921-011	SB-1 (GW)	GROUND WATER	04/18/13 14:30
13041921-012	SB-041813 (GW)	GROUND WATER	04/18/13 14:00
13041921-013	SB-5 (4-5)	SOIL	04/18/13 15:12
13041921-014	SB-5 (5-6)	SOIL	04/18/13 15:14
13041921-015	SB-5 (GW)	GROUND WATER	04/18/13 15:25
13041921-016	Trip Blank #1	WATER	04/18/13 17:55
13041921-017	Trip Blank #2	WATER	04/18/13 17:55
13041921-018	Trip Blank #3	WATER	04/18/13 17:55

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminates, and part 141.3, for the secondary drinking water contaminates.
5. The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for non-potable water samples tested for compliance for Virginia Pollution Discharge Elimination System (VDPES) permits and Virginia Pollutant Abatement (VPA) permits, have a maximum holding time of 15 minutes established by 40CFR136.3.

Sample Summary

Client Name: WSP Environment & Energy - Reston

Project Name: Robinson Terminal

Work Order Number(s): 13041921

Project ID: 36454

Standard Flags/Abbreviations:

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
C Results Pending Final Confirmation.
E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
J The target analyte was positively identified below the reporting limit but greater than the LOD.
LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte and matrix specific.
ND Not Detected at or above the reporting limit.
RL PSS Reporting Limit.
U Not detected.

Case Narrative Summary

Client Name: WSP Environment & Energy - Reston

Project Name: Robinson Terminal

Work Order Number(s): 13041921
Project ID: 36454

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

Sample Receipt:

Per client email, SVOCs added to SB-3 (5-6), SB-1 (7-8) and SB-5 (5-6). Also VOCs added to SB-4(17-18).
Trip Blank #1 received with SB-1 (GW) and SB-041813 (GW), vials and amber and ambers from SB-2 (GW) and SB-5 (GW). Trip Blank #2 was received with all 4oz soil jars, all water metals containers and the vials for sample SB-5 (GW) and SB-2 (GW). Trip Blank #3 was received with all of the terra core kits.

NELAP accreditation was held for all analyses performed unless noted below. See www.phaseonline.com for complete PSS scope of accreditation.

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-4 (7-8) **Date/Time Sampled: 04/18/2013 09:22** **PSS Sample ID: 13041921-001**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 72**

RCRA Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3050B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Arsenic	**3.0**	mg/kg	0.58		1	04/24/13	04/25/13 16:28	1033
Barium	**46**	mg/kg	2.9		1	04/24/13	04/26/13 13:45	1033
Cadmium	ND	mg/kg	2.9		1	04/24/13	04/25/13 16:28	1033
Chromium	**8.6**	mg/kg	2.9		1	04/24/13	04/25/13 16:28	1033
Lead	**5.0**	mg/kg	2.9		1	04/24/13	04/25/13 16:28	1033
Mercury	ND	mg/kg	0.12		1	04/24/13	04/25/13 16:28	1033
Selenium	ND	mg/kg	2.9		1	04/24/13	04/25/13 16:28	1033
Silver	ND	mg/kg	2.9		1	04/24/13	04/25/13 16:28	1033

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3550

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/kg	5.5		1	04/26/13	04/26/13 15:57	1040

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: 3550
Clean up Method: SW846 3665A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
PCB-1016	ND	mg/kg	0.15		1	04/23/13	04/23/13 16:48	1029
PCB-1221	ND	mg/kg	0.15		1	04/23/13	04/23/13 16:48	1029
PCB-1232	ND	mg/kg	0.15		1	04/23/13	04/23/13 16:48	1029
PCB-1242	ND	mg/kg	0.15		1	04/23/13	04/23/13 16:48	1029
PCB-1248	ND	mg/kg	0.15		1	04/23/13	04/23/13 16:48	1029
PCB-1254	ND	mg/kg	0.15		1	04/23/13	04/23/13 16:48	1029
PCB-1260	ND	mg/kg	0.15		1	04/23/13	04/23/13 16:48	1029

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-4 (7-8) **Date/Time Sampled: 04/18/2013 09:22** **PSS Sample ID: 13041921-001**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 72**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Chloromethane	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Vinyl Chloride	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Bromomethane	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Chloroethane	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Acetone	ND	ug/kg	52		1	04/23/13	04/23/13 16:33	1011
Cyclohexane	ND	ug/kg	52		1	04/23/13	04/23/13 16:33	1011
Trichlorofluoromethane	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
1,1-Dichloroethene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Methylene Chloride	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
trans-1,2-Dichloroethene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Methyl-t-butyl ether	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
1,1-Dichloroethane	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
2-Butanone (MEK)	ND	ug/kg	52		1	04/23/13	04/23/13 16:33	1011
cis-1,2-Dichloroethene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Bromochloromethane	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Chloroform	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
1,1,1-Trichloroethane	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
1,2-Dichloroethane	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Carbon Tetrachloride	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Benzene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
1,2-Dichloropropane	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Carbon Disulfide	ND	ug/kg	26		1	04/23/13	04/23/13 16:33	1011
Methylcyclohexane	ND	ug/kg	52		1	04/23/13	04/23/13 16:33	1011
Trichloroethene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Methyl Acetate	ND	ug/kg	52		1	04/23/13	04/23/13 16:33	1011
Bromodichloromethane	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
cis-1,3-Dichloropropene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
4-Methyl-2-Pentanone	ND	ug/kg	52		1	04/23/13	04/23/13 16:33	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-4 (7-8) **Date/Time Sampled: 04/18/2013 09:22** **PSS Sample ID: 13041921-001**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 72**

TCL Volatile Organic Compounds Analytical Method: SW-846 8260 B Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,3-Dichloropropene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
1,1,2-Trichloroethane	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Toluene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
2-Hexanone	ND	ug/kg	52		1	04/23/13	04/23/13 16:33	1011
1,2-Dibromoethane (EDB)	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Dibromochloromethane	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Bromoform	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Tetrachloroethene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Chlorobenzene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Ethylbenzene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
m,p-Xylenes	ND	ug/kg	26		1	04/23/13	04/23/13 16:33	1011
Styrene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
o-Xylene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Isopropylbenzene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
1,3-Dichlorobenzene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
1,4-Dichlorobenzene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
1,2-Dichlorobenzene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
1,2-Dibromo-3-Chloropropane	ND	ug/kg	100		1	04/23/13	04/23/13 16:33	1011
1,2,4-Trichlorobenzene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
Naphthalene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011
1,2,3-Trichlorobenzene	ND	ug/kg	13		1	04/23/13	04/23/13 16:33	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-4 (17-18) **Date/Time Sampled: 04/18/2013 09:50** **PSS Sample ID: 13041921-002**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 72**

RCRA Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3050B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Arsenic	**4.4**	mg/kg	0.67		1	04/24/13	04/25/13 15:58	1033
Barium	**88**	mg/kg	3.3		1	04/24/13	04/26/13 13:51	1033
Cadmium	ND	mg/kg	3.3		1	04/24/13	04/25/13 15:58	1033
Chromium	**20**	mg/kg	3.3		1	04/24/13	04/25/13 15:58	1033
Lead	**9.6**	mg/kg	3.3		1	04/24/13	04/25/13 15:58	1033
Mercury	ND	mg/kg	0.13		1	04/24/13	04/25/13 15:58	1033
Selenium	ND	mg/kg	3.3		1	04/24/13	04/25/13 15:58	1033
Silver	ND	mg/kg	3.3		1	04/24/13	04/25/13 15:58	1033

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3550

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/kg	5.5		1	04/26/13	04/26/13 15:57	1040

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: 3550
Clean up Method: SW846 3665A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
PCB-1016	ND	mg/kg	0.12		1	04/23/13	04/23/13 17:17	1029
PCB-1221	ND	mg/kg	0.12		1	04/23/13	04/23/13 17:17	1029
PCB-1232	ND	mg/kg	0.12		1	04/23/13	04/23/13 17:17	1029
PCB-1242	ND	mg/kg	0.12		1	04/23/13	04/23/13 17:17	1029
PCB-1248	ND	mg/kg	0.12		1	04/23/13	04/23/13 17:17	1029
PCB-1254	ND	mg/kg	0.12		1	04/23/13	04/23/13 17:17	1029
PCB-1260	ND	mg/kg	0.12		1	04/23/13	04/23/13 17:17	1029

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-4 (17-18) **Date/Time Sampled: 04/18/2013 09:50** **PSS Sample ID: 13041921-002**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 72**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Chloromethane	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Vinyl Chloride	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Bromomethane	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Chloroethane	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Acetone	ND	ug/kg	26		1	04/23/13	04/23/13 15:10	1011
Cyclohexane	ND	ug/kg	26		1	04/23/13	04/23/13 15:10	1011
Trichlorofluoromethane	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
1,1-Dichloroethene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Methylene Chloride	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
trans-1,2-Dichloroethene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Methyl-t-butyl ether	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
1,1-Dichloroethane	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
2-Butanone (MEK)	ND	ug/kg	26		1	04/23/13	04/23/13 15:10	1011
cis-1,2-Dichloroethene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Bromochloromethane	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Chloroform	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
1,1,1-Trichloroethane	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
1,2-Dichloroethane	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Carbon Tetrachloride	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Benzene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
1,2-Dichloropropane	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Carbon Disulfide	ND	ug/kg	13		1	04/23/13	04/23/13 15:10	1011
Methylcyclohexane	ND	ug/kg	26		1	04/23/13	04/23/13 15:10	1011
Trichloroethene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Methyl Acetate	ND	ug/kg	26		1	04/23/13	04/23/13 15:10	1011
Bromodichloromethane	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
cis-1,3-Dichloropropene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
4-Methyl-2-Pentanone	ND	ug/kg	26		1	04/23/13	04/23/13 15:10	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-4 (17-18) **Date/Time Sampled: 04/18/2013 09:50** **PSS Sample ID: 13041921-002**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 72**

TCL Volatile Organic Compounds Analytical Method: SW-846 8260 B Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,3-Dichloropropene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
1,1,2-Trichloroethane	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Toluene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
2-Hexanone	ND	ug/kg	26		1	04/23/13	04/23/13 15:10	1011
1,2-Dibromoethane (EDB)	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Dibromochloromethane	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Bromoform	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Tetrachloroethene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Chlorobenzene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Ethylbenzene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
m,p-Xylenes	ND	ug/kg	13		1	04/23/13	04/23/13 15:10	1011
Styrene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
o-Xylene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Isopropylbenzene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
1,3-Dichlorobenzene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
1,4-Dichlorobenzene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
1,2-Dichlorobenzene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
1,2-Dibromo-3-Chloropropane	ND	ug/kg	52		1	04/23/13	04/23/13 15:10	1011
1,2,4-Trichlorobenzene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
Naphthalene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011
1,2,3-Trichlorobenzene	ND	ug/kg	6.5		1	04/23/13	04/23/13 15:10	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-041813 (7-8) **Date/Time Sampled: 04/18/2013 09:30** **PSS Sample ID: 13041921-003**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 73**

RCRA Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3050B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Arsenic	**1.9**	mg/kg	0.59		1	04/24/13	04/25/13 16:34	1033
Barium	**17**	mg/kg	2.9		1	04/24/13	04/26/13 13:57	1033
Cadmium	ND	mg/kg	2.9		1	04/24/13	04/25/13 16:34	1033
Chromium	**5.7**	mg/kg	2.9		1	04/24/13	04/25/13 16:34	1033
Lead	**3.0**	mg/kg	2.9		1	04/24/13	04/25/13 16:34	1033
Mercury	ND	mg/kg	0.12		1	04/24/13	04/25/13 16:34	1033
Selenium	ND	mg/kg	2.9		1	04/24/13	04/25/13 16:34	1033
Silver	ND	mg/kg	2.9		1	04/24/13	04/25/13 16:34	1033

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3550

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/kg	5.4		1	04/26/13	04/26/13 16:19	1040

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: 3550
Clean up Method: SW846 3665A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
PCB-1016	ND	mg/kg	0.15		1	04/23/13	04/23/13 17:46	1029
PCB-1221	ND	mg/kg	0.15		1	04/23/13	04/23/13 17:46	1029
PCB-1232	ND	mg/kg	0.15		1	04/23/13	04/23/13 17:46	1029
PCB-1242	ND	mg/kg	0.15		1	04/23/13	04/23/13 17:46	1029
PCB-1248	ND	mg/kg	0.15		1	04/23/13	04/23/13 17:46	1029
PCB-1254	ND	mg/kg	0.15		1	04/23/13	04/23/13 17:46	1029
PCB-1260	ND	mg/kg	0.15		1	04/23/13	04/23/13 17:46	1029

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-041813 (7-8) **Date/Time Sampled: 04/18/2013 09:30** **PSS Sample ID: 13041921-003**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 73**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Chloromethane	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Vinyl Chloride	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Bromomethane	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Chloroethane	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Acetone	ND	ug/kg	31		1	04/23/13	04/23/13 17:00	1011
Cyclohexane	ND	ug/kg	31		1	04/23/13	04/23/13 17:00	1011
Trichlorofluoromethane	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
1,1-Dichloroethene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Methylene Chloride	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
trans-1,2-Dichloroethene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Methyl-t-butyl ether	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
1,1-Dichloroethane	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
2-Butanone (MEK)	ND	ug/kg	31		1	04/23/13	04/23/13 17:00	1011
cis-1,2-Dichloroethene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Bromochloromethane	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Chloroform	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
1,1,1-Trichloroethane	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
1,2-Dichloroethane	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Carbon Tetrachloride	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Benzene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
1,2-Dichloropropane	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Carbon Disulfide	ND	ug/kg	15		1	04/23/13	04/23/13 17:00	1011
Methylcyclohexane	ND	ug/kg	31		1	04/23/13	04/23/13 17:00	1011
Trichloroethene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Methyl Acetate	ND	ug/kg	31		1	04/23/13	04/23/13 17:00	1011
Bromodichloromethane	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
cis-1,3-Dichloropropene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
4-Methyl-2-Pentanone	ND	ug/kg	31		1	04/23/13	04/23/13 17:00	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-041813 (7-8) **Date/Time Sampled: 04/18/2013 09:30** **PSS Sample ID: 13041921-003**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 73**

TCL Volatile Organic Compounds Analytical Method: SW-846 8260 B Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,3-Dichloropropene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
1,1,2-Trichloroethane	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Toluene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
2-Hexanone	ND	ug/kg	31		1	04/23/13	04/23/13 17:00	1011
1,2-Dibromoethane (EDB)	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Dibromochloromethane	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Bromoform	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Tetrachloroethene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Chlorobenzene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Ethylbenzene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
m,p-Xylenes	ND	ug/kg	15		1	04/23/13	04/23/13 17:00	1011
Styrene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
o-Xylene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Isopropylbenzene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
1,3-Dichlorobenzene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
1,4-Dichlorobenzene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
1,2-Dichlorobenzene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
1,2-Dibromo-3-Chloropropane	ND	ug/kg	61		1	04/23/13	04/23/13 17:00	1011
1,2,4-Trichlorobenzene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
Naphthalene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011
1,2,3-Trichlorobenzene	ND	ug/kg	7.7		1	04/23/13	04/23/13 17:00	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-3 (5-6) **Date/Time Sampled: 04/18/2013 11:17** **PSS Sample ID: 13041921-004**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 84**

RCRA Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3050B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Arsenic	**2.7**	mg/kg	0.45		1	04/24/13	04/25/13 17:04	1033
Barium	**48**	mg/kg	2.2		1	04/24/13	04/26/13 16:00	1033
Cadmium	ND	mg/kg	2.2		1	04/24/13	04/25/13 17:04	1033
Chromium	**9.0**	mg/kg	2.2		1	04/24/13	04/25/13 17:04	1033
Lead	**8.5**	mg/kg	2.2		1	04/24/13	04/25/13 17:04	1033
Mercury	**0.16**	mg/kg	0.089		1	04/24/13	04/26/13 16:00	1033
Selenium	ND	mg/kg	2.2		1	04/24/13	04/25/13 17:04	1033
Silver	ND	mg/kg	2.2		1	04/24/13	04/25/13 17:04	1033

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3550

DF/HF - No. 2/diesel fuel and heavier fuel/oil patterns observed in sample.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**1,100**	mg/kg	93	DF	20	04/26/13	04/29/13 10:09	1040

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-3 (5-6) **Date/Time Sampled: 04/18/2013 11:17** **PSS Sample ID: 13041921-004**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 84**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Chloromethane	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Vinyl Chloride	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Bromomethane	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Chloroethane	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Acetone	ND	ug/kg	2,000		100	04/24/13	04/24/13 17:50	1011
Cyclohexane	ND	ug/kg	2,000		100	04/24/13	04/24/13 17:50	1011
Trichlorofluoromethane	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
1,1-Dichloroethene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Methylene Chloride	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
trans-1,2-Dichloroethene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Methyl-t-butyl ether	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
1,1-Dichloroethane	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
2-Butanone (MEK)	ND	ug/kg	2,000		100	04/24/13	04/24/13 17:50	1011
cis-1,2-Dichloroethene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Bromochloromethane	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Chloroform	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
1,1,1-Trichloroethane	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
1,2-Dichloroethane	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Carbon Tetrachloride	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Benzene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
1,2-Dichloropropane	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Carbon Disulfide	ND	ug/kg	990		100	04/24/13	04/24/13 17:50	1011
Methylcyclohexane	**8,000**	ug/kg	2,000		100	04/24/13	04/24/13 17:50	1011
Trichloroethene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Methyl Acetate	ND	ug/kg	2,000		100	04/24/13	04/24/13 17:50	1011
Bromodichloromethane	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
cis-1,3-Dichloropropene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
4-Methyl-2-Pentanone	ND	ug/kg	2,000		100	04/24/13	04/24/13 17:50	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-3 (5-6) **Date/Time Sampled: 04/18/2013 11:17** **PSS Sample ID: 13041921-004**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 84**

TCL Volatile Organic Compounds Analytical Method: SW-846 8260 B Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,3-Dichloropropene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
1,1,2-Trichloroethane	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Toluene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
2-Hexanone	ND	ug/kg	2,000		100	04/24/13	04/24/13 17:50	1011
1,2-Dibromoethane (EDB)	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Dibromochloromethane	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Bromoform	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Tetrachloroethene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Chlorobenzene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Ethylbenzene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
m,p-Xylenes	ND	ug/kg	990		100	04/24/13	04/24/13 17:50	1011
Styrene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
o-Xylene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Isopropylbenzene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
1,3-Dichlorobenzene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
1,4-Dichlorobenzene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
1,2-Dichlorobenzene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
1,2-Dibromo-3-Chloropropane	ND	ug/kg	4,000		100	04/24/13	04/24/13 17:50	1011
1,2,4-Trichlorobenzene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
Naphthalene	**520**	ug/kg	500		100	04/24/13	04/24/13 17:50	1011
1,2,3-Trichlorobenzene	ND	ug/kg	500		100	04/24/13	04/24/13 17:50	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-3 (5-6) **Date/Time Sampled: 04/18/2013 11:17** **PSS Sample ID: 13041921-004**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 84**

TCL Semivolatile Organic Compounds Analytical Method: SW-846 8270 C Preparation Method: 3550

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Acenaphthylene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Acetophenone	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Anthracene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Benzo(a)anthracene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Benzo(a)pyrene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Benzo(b)fluoranthene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Benzo(g,h,i)perylene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Benzo(k)fluoranthene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Biphenyl (Diphenyl)	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Butyl benzyl phthalate	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
bis(2-chloroethoxy) methane	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
bis(2-chloroethyl) ether	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
bis(2-chloroisopropyl) ether	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
bis(2-ethylhexyl) phthalate	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
4-Bromophenylphenyl ether	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Di-n-butyl phthalate	ND	ug/kg	4,000		10	04/24/13	04/25/13 14:26	1014
Carbazole	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
4-Chloro-3-methyl phenol	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
4-Chloroaniline	ND	ug/kg	4,000		10	04/24/13	04/25/13 14:26	1014
2-Chloronaphthalene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
2-Chlorophenol	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
4-Chlorophenyl Phenyl ether	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Chrysene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Dibenz(a,h)Anthracene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Dibenzofuran	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
3,3-Dichlorobenzidine	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
2,4-Dichlorophenol	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Diethyl phthalate	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Dimethyl phthalate	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-3 (5-6) **Date/Time Sampled: 04/18/2013 11:17** **PSS Sample ID: 13041921-004**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 84**

TCL Semivolatile Organic Compounds Analytical Method: SW-846 8270 C Preparation Method: 3550

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2,4-Dimethylphenol	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
4,6-Dinitro-2-methyl phenol	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
2,4-Dinitrophenol	ND	ug/kg	4,000		10	04/24/13	04/25/13 14:26	1014
2,4-Dinitrotoluene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
2,6-Dinitrotoluene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Fluoranthene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Fluorene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Hexachlorobenzene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Hexachlorobutadiene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Hexachlorocyclopentadiene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Hexachloroethane	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Indeno(1,2,3-c,d)Pyrene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Isophorone	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
2-Methylnaphthalene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
2-Methyl phenol	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
3&4-Methylphenol	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Naphthalene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
4-Nitroaniline	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
3-Nitroaniline	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
2-Nitroaniline	ND	ug/kg	4,000		10	04/24/13	04/25/13 14:26	1014
Nitrobenzene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
2-Nitrophenol	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
4-Nitrophenol	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
N-Nitrosodi-n-propyl amine	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
N-Nitrosodiphenylamine	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Di-n-octyl phthalate	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Pentachlorophenol	ND	ug/kg	4,000		10	04/24/13	04/25/13 14:26	1014
Phenanthrene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Phenol	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Atrazine	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-3 (5-6) **Date/Time Sampled: 04/18/2013 11:17** **PSS Sample ID: 13041921-004**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 84**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3550

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Pyrene	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Pyridine	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
Caprolactam	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
2,4,6-Trichlorophenol	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014
2,4,5-Trichlorophenol	ND	ug/kg	2,000		10	04/24/13	04/25/13 14:26	1014

Sample ID: SB-3 (6-7) **Date/Time Sampled: 04/18/2013 11:19** **PSS Sample ID: 13041921-005**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 66**

RCRA Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3050B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Arsenic	**4.6**	mg/kg	0.65		1	04/24/13	04/25/13 17:10	1033
Barium	**82**	mg/kg	3.3		1	04/24/13	04/26/13 16:06	1033
Cadmium	ND	mg/kg	3.3		1	04/24/13	04/25/13 17:10	1033
Chromium	**14**	mg/kg	3.3		1	04/24/13	04/25/13 17:10	1033
Lead	**18**	mg/kg	3.3		1	04/24/13	04/25/13 17:10	1033
Mercury	**0.22**	mg/kg	0.13		1	04/24/13	04/26/13 16:06	1033
Selenium	ND	mg/kg	3.3		1	04/24/13	04/25/13 17:10	1033
Silver	ND	mg/kg	3.3		1	04/24/13	04/25/13 17:10	1033

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3550

DF/HF - No. 2/diesel fuel and heavier fuel/oil patterns observed in sample.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**1,400**	mg/kg	120	DF	20	04/26/13	04/29/13 10:32	1040

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-2 (8-9) **Date/Time Sampled: 04/18/2013 12:09** **PSS Sample ID: 13041921-006**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 78**

RCRA Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3050B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Arsenic	**3.9**	mg/kg	0.54		1	04/24/13	04/25/13 17:16	1033
Barium	**28**	mg/kg	2.7		1	04/24/13	04/26/13 16:12	1033
Cadmium	ND	mg/kg	2.7		1	04/24/13	04/25/13 17:16	1033
Chromium	**9.8**	mg/kg	2.7		1	04/24/13	04/25/13 17:16	1033
Lead	**9.6**	mg/kg	2.7		1	04/24/13	04/25/13 17:16	1033
Mercury	ND	mg/kg	0.11		1	04/24/13	04/25/13 17:16	1033
Selenium	ND	mg/kg	2.7		1	04/24/13	04/25/13 17:16	1033
Silver	ND	mg/kg	2.7		1	04/24/13	04/25/13 17:16	1033

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3550

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/kg	5.1		1	04/26/13	04/26/13 17:49	1040

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-2 (8-9) **Date/Time Sampled: 04/18/2013 12:09** **PSS Sample ID: 13041921-006**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 78**

TCL Volatile Organic Compounds Analytical Method: SW-846 8260 B Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Chloromethane	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Vinyl Chloride	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Bromomethane	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Chloroethane	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Acetone	ND	ug/kg	20		1	04/23/13	04/23/13 17:28	1011
Cyclohexane	ND	ug/kg	20		1	04/23/13	04/23/13 17:28	1011
Trichlorofluoromethane	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
1,1-Dichloroethene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Methylene Chloride	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
trans-1,2-Dichloroethene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Methyl-t-butyl ether	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
1,1-Dichloroethane	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
2-Butanone (MEK)	ND	ug/kg	20		1	04/23/13	04/23/13 17:28	1011
cis-1,2-Dichloroethene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Bromochloromethane	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Chloroform	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
1,1,1-Trichloroethane	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
1,2-Dichloroethane	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Carbon Tetrachloride	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Benzene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
1,2-Dichloropropane	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Carbon Disulfide	ND	ug/kg	10		1	04/23/13	04/23/13 17:28	1011
Methylcyclohexane	ND	ug/kg	20		1	04/23/13	04/23/13 17:28	1011
Trichloroethene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Methyl Acetate	ND	ug/kg	20		1	04/23/13	04/23/13 17:28	1011
Bromodichloromethane	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
cis-1,3-Dichloropropene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
4-Methyl-2-Pentanone	ND	ug/kg	20		1	04/23/13	04/23/13 17:28	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-2 (8-9) **Date/Time Sampled: 04/18/2013 12:09** **PSS Sample ID: 13041921-006**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 78**

TCL Volatile Organic Compounds Analytical Method: SW-846 8260 B Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,3-Dichloropropene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
1,1,2-Trichloroethane	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Toluene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
2-Hexanone	ND	ug/kg	20		1	04/23/13	04/23/13 17:28	1011
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Dibromochloromethane	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Bromoform	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Tetrachloroethene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Chlorobenzene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Ethylbenzene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
m,p-Xylenes	ND	ug/kg	10		1	04/23/13	04/23/13 17:28	1011
Styrene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
o-Xylene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Isopropylbenzene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
1,3-Dichlorobenzene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
1,4-Dichlorobenzene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
1,2-Dichlorobenzene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
1,2-Dibromo-3-Chloropropane	ND	ug/kg	40		1	04/23/13	04/23/13 17:28	1011
1,2,4-Trichlorobenzene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
Naphthalene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011
1,2,3-Trichlorobenzene	ND	ug/kg	5.0		1	04/23/13	04/23/13 17:28	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-2 (9-10) **Date/Time Sampled: 04/18/2013 12:12** **PSS Sample ID: 13041921-007**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 83**

RCRA Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3050B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Arsenic	**1.4**	mg/kg	0.53		1	04/24/13	04/25/13 17:22	1033
Barium	**11**	mg/kg	2.7		1	04/24/13	04/26/13 16:18	1033
Cadmium	ND	mg/kg	2.7		1	04/24/13	04/25/13 17:22	1033
Chromium	**5.6**	mg/kg	2.7		1	04/24/13	04/25/13 17:22	1033
Lead	**3.2**	mg/kg	2.7		1	04/24/13	04/25/13 17:22	1033
Mercury	ND	mg/kg	0.11		1	04/24/13	04/25/13 17:22	1033
Selenium	ND	mg/kg	2.7		1	04/24/13	04/25/13 17:22	1033
Silver	ND	mg/kg	2.7		1	04/24/13	04/25/13 17:22	1033

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3550

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/kg	4.8		1	04/26/13	04/26/13 18:12	1040

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-2 (GW) **Date/Time Sampled: 04/18/2013 12:30** **PSS Sample ID: 13041921-008**
Matrix: GROUND WATER **Date/Time Received: 04/19/2013 18:35**

RCRA Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3010A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Arsenic	**1.3**	ug/L	1.0		1	04/24/13	04/24/13 19:18	1033
Barium	**98**	ug/L	1.0		1	04/24/13	04/24/13 19:18	1033
Cadmium	ND	ug/L	1.0		1	04/24/13	04/24/13 19:18	1033
Chromium	**1.1**	ug/L	1.0		1	04/24/13	04/24/13 19:18	1033
Lead	ND	ug/L	1.0		1	04/24/13	04/24/13 19:18	1033
Mercury	ND	ug/L	0.20		1	04/24/13	04/24/13 19:18	1033
Selenium	ND	ug/L	1.0		1	04/24/13	04/26/13 15:12	1033
Silver	ND	ug/L	1.0		1	04/24/13	04/24/13 19:18	1033

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/L	0.12		1	04/24/13	04/24/13 18:23	1040

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100		1	04/22/13	04/22/13 16:14	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-2 (GW) **Date/Time Sampled: 04/18/2013 12:30** **PSS Sample ID: 13041921-008**
Matrix: GROUND WATER **Date/Time Received: 04/19/2013 18:35**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

pH=3

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Chloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Vinyl Chloride	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Bromomethane	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Chloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Acetone	ND	ug/L	10		1	04/23/13	04/23/13 16:35	1011
Cyclohexane	ND	ug/L	10		1	04/23/13	04/23/13 16:35	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	04/23/13	04/23/13 16:35	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Methylene Chloride	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Methyl-t-butyl ether	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
2-Butanone (MEK)	ND	ug/L	10		1	04/23/13	04/23/13 16:35	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Bromochloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Chloroform	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Carbon Tetrachloride	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Benzene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Methyl Acetate	ND	ug/L	10		1	04/23/13	04/23/13 16:35	1011
Methylcyclohexane	ND	ug/L	10		1	04/23/13	04/23/13 16:35	1011
Trichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Carbon Disulfide	ND	ug/L	10		1	04/23/13	04/23/13 16:35	1011
Bromodichloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
4-Methyl-2-Pentanone	ND	ug/L	5.0		1	04/23/13	04/23/13 16:35	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-2 (GW) **Date/Time Sampled: 04/18/2013 12:30** **PSS Sample ID: 13041921-008**
Matrix: GROUND WATER **Date/Time Received: 04/19/2013 18:35**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

pH=3

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Toluene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
2-Hexanone	ND	ug/L	10		1	04/23/13	04/23/13 16:35	1011
1,2-Dibromoethane (EDB)	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Dibromochloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Bromoform	ND	ug/L	5.0		1	04/23/13	04/23/13 16:35	1011
Tetrachloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Chlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Ethylbenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
m,p-Xylenes	ND	ug/L	2.0		1	04/23/13	04/23/13 16:35	1011
Styrene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
o-Xylene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Isopropylbenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
1,2-Dibromo-3-Chloropropane	ND	ug/L	10		1	04/23/13	04/23/13 16:35	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
Naphthalene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 16:35	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-1 (8-9) **Date/Time Sampled: 04/18/2013 14:06** **PSS Sample ID: 13041921-009**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 86**

RCRA Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3050B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Arsenic	**3.2**	mg/kg	0.55		1	04/24/13	04/25/13 17:28	1033
Barium	**70**	mg/kg	2.8		1	04/24/13	04/26/13 16:24	1033
Cadmium	ND	mg/kg	2.8		1	04/24/13	04/25/13 17:28	1033
Chromium	**12**	mg/kg	2.8		1	04/24/13	04/25/13 17:28	1033
Lead	**9.6**	mg/kg	2.8		1	04/24/13	04/25/13 17:28	1033
Mercury	ND	mg/kg	0.11		1	04/24/13	04/25/13 17:28	1033
Selenium	ND	mg/kg	2.8		1	04/24/13	04/25/13 17:28	1033
Silver	ND	mg/kg	2.8		1	04/24/13	04/25/13 17:28	1033

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3550

DF/HF - No. 2/diesel fuel and heavier fuel/oil patterns observed in sample.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**6.5**	mg/kg	4.6	DF	1	04/26/13	04/26/13 18:34	1040

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-1 (7-8) **Date/Time Sampled: 04/18/2013 14:09** **PSS Sample ID: 13041921-010**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 76**

RCRA Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3050B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Arsenic	**2.6**	mg/kg	0.61		1	04/24/13	04/25/13 17:34	1033
Barium	**130**	mg/kg	3.1		1	04/24/13	04/26/13 16:30	1033
Cadmium	ND	mg/kg	3.1		1	04/24/13	04/25/13 17:34	1033
Chromium	**5.6**	mg/kg	3.1		1	04/24/13	04/25/13 17:34	1033
Lead	**18**	mg/kg	3.1		1	04/24/13	04/25/13 17:34	1033
Mercury	ND	mg/kg	0.12		1	04/24/13	04/25/13 17:34	1033
Selenium	ND	mg/kg	3.1		1	04/24/13	04/25/13 17:34	1033
Silver	ND	mg/kg	3.1		1	04/24/13	04/25/13 17:34	1033

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3550

DF/HF - No. 2/diesel fuel and heavier fuel/oil patterns observed in sample.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**6.2**	mg/kg	5.2	DF	1	04/26/13	04/26/13 18:34	1040

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-1 (7-8) **Date/Time Sampled: 04/18/2013 14:09** **PSS Sample ID: 13041921-010**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 76**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Chloromethane	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Vinyl Chloride	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Bromomethane	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Chloroethane	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Acetone	ND	ug/kg	38		1	04/23/13	04/23/13 17:55	1011
Cyclohexane	ND	ug/kg	38		1	04/23/13	04/23/13 17:55	1011
Trichlorofluoromethane	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
1,1-Dichloroethene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Methylene Chloride	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
trans-1,2-Dichloroethene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Methyl-t-butyl ether	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
1,1-Dichloroethane	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
2-Butanone (MEK)	ND	ug/kg	38		1	04/23/13	04/23/13 17:55	1011
cis-1,2-Dichloroethene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Bromochloromethane	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Chloroform	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
1,1,1-Trichloroethane	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
1,2-Dichloroethane	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Carbon Tetrachloride	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Benzene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
1,2-Dichloropropane	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Carbon Disulfide	ND	ug/kg	19		1	04/23/13	04/23/13 17:55	1011
Methylcyclohexane	ND	ug/kg	38		1	04/23/13	04/23/13 17:55	1011
Trichloroethene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Methyl Acetate	ND	ug/kg	38		1	04/23/13	04/23/13 17:55	1011
Bromodichloromethane	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
cis-1,3-Dichloropropene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
4-Methyl-2-Pentanone	ND	ug/kg	38		1	04/23/13	04/23/13 17:55	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-1 (7-8) **Date/Time Sampled: 04/18/2013 14:09** **PSS Sample ID: 13041921-010**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 76**

TCL Volatile Organic Compounds Analytical Method: SW-846 8260 B Preparation Method: 5035A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,3-Dichloropropene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
1,1,2-Trichloroethane	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Toluene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
2-Hexanone	ND	ug/kg	38		1	04/23/13	04/23/13 17:55	1011
1,2-Dibromoethane (EDB)	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Dibromochloromethane	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Bromoform	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Tetrachloroethene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Chlorobenzene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Ethylbenzene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
m,p-Xylenes	ND	ug/kg	19		1	04/23/13	04/23/13 17:55	1011
Styrene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
o-Xylene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Isopropylbenzene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
1,3-Dichlorobenzene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
1,4-Dichlorobenzene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
1,2-Dichlorobenzene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
1,2-Dibromo-3-Chloropropane	ND	ug/kg	77		1	04/23/13	04/23/13 17:55	1011
1,2,4-Trichlorobenzene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
Naphthalene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011
1,2,3-Trichlorobenzene	ND	ug/kg	9.6		1	04/23/13	04/23/13 17:55	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-1 (7-8) **Date/Time Sampled: 04/18/2013 14:09** **PSS Sample ID: 13041921-010**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 76**

TCL Semivolatile Organic Compounds Analytical Method: SW-846 8270 C Preparation Method: 3550

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Acenaphthylene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Acetophenone	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Anthracene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Benzo(a)anthracene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Benzo(a)pyrene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Benzo(b)fluoranthene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Benzo(g,h,i)perylene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Benzo(k)fluoranthene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Biphenyl (Diphenyl)	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Butyl benzyl phthalate	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
bis(2-chloroethoxy) methane	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
bis(2-chloroethyl) ether	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
bis(2-chloroisopropyl) ether	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
bis(2-ethylhexyl) phthalate	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
4-Bromophenylphenyl ether	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Di-n-butyl phthalate	ND	ug/kg	440		1	04/24/13	04/25/13 03:33	1014
Carbazole	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
4-Chloro-3-methyl phenol	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
4-Chloroaniline	ND	ug/kg	440		1	04/24/13	04/25/13 03:33	1014
2-Chloronaphthalene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
2-Chlorophenol	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
4-Chlorophenyl Phenyl ether	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Chrysene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Dibenz(a,h)Anthracene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Dibenzofuran	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
3,3-Dichlorobenzidine	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
2,4-Dichlorophenol	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Diethyl phthalate	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Dimethyl phthalate	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-1 (7-8) **Date/Time Sampled: 04/18/2013 14:09** **PSS Sample ID: 13041921-010**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 76**

TCL Semivolatile Organic Compounds Analytical Method: SW-846 8270 C Preparation Method: 3550

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2,4-Dimethylphenol	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
4,6-Dinitro-2-methyl phenol	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
2,4-Dinitrophenol	ND	ug/kg	440		1	04/24/13	04/25/13 03:33	1014
2,4-Dinitrotoluene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
2,6-Dinitrotoluene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Fluoranthene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Fluorene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Hexachlorobenzene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Hexachlorobutadiene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Hexachlorocyclopentadiene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Hexachloroethane	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Indeno(1,2,3-c,d)Pyrene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Isophorone	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
2-Methylnaphthalene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
2-Methyl phenol	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
3&4-Methylphenol	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Naphthalene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
4-Nitroaniline	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
3-Nitroaniline	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
2-Nitroaniline	ND	ug/kg	440		1	04/24/13	04/25/13 03:33	1014
Nitrobenzene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
2-Nitrophenol	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
4-Nitrophenol	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
N-Nitrosodi-n-propyl amine	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
N-Nitrosodiphenylamine	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Di-n-octyl phthalate	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Pentachlorophenol	ND	ug/kg	440		1	04/24/13	04/25/13 03:33	1014
Phenanthrene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Phenol	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Atrazine	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-1 (7-8)	**Date/Time Sampled: 04/18/2013 14:09**	**PSS Sample ID: 13041921-010**
Matrix: SOIL	**Date/Time Received: 04/19/2013 18:35**	**% Solids: 76**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3550

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Pyrene	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Pyridine	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
Caprolactam	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
2,4,6-Trichlorophenol	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014
2,4,5-Trichlorophenol	ND	ug/kg	220		1	04/24/13	04/25/13 03:33	1014

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-1 (GW) **Date/Time Sampled: 04/18/2013 14:30** **PSS Sample ID: 13041921-011**
Matrix: GROUND WATER **Date/Time Received: 04/19/2013 18:35**

RCRA Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3010A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Arsenic	ND	ug/L	1.0		1	04/24/13	04/24/13 18:08	1033
Barium	**27**	ug/L	1.0		1	04/24/13	04/24/13 18:08	1033
Cadmium	ND	ug/L	1.0		1	04/24/13	04/24/13 18:08	1033
Chromium	ND	ug/L	1.0		1	04/24/13	04/24/13 18:08	1033
Lead	ND	ug/L	1.0		1	04/24/13	04/24/13 18:08	1033
Mercury	ND	ug/L	0.20		1	04/24/13	04/24/13 18:08	1033
Selenium	ND	ug/L	1.0		1	04/24/13	04/26/13 15:18	1033
Silver	ND	ug/L	1.0		1	04/24/13	04/24/13 18:08	1033

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**0.22**	mg/L	0.10		1	04/24/13	04/24/13 19:08	1040

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100		1	04/22/13	04/22/13 16:39	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-1 (GW) **Date/Time Sampled: 04/18/2013 14:30** **PSS Sample ID: 13041921-011**
Matrix: GROUND WATER **Date/Time Received: 04/19/2013 18:35**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Chloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Vinyl Chloride	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Bromomethane	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Chloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Acetone	ND	ug/L	10		1	04/23/13	04/23/13 14:09	1011
Cyclohexane	ND	ug/L	10		1	04/23/13	04/23/13 14:09	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	04/23/13	04/23/13 14:09	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Methylene Chloride	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Methyl-t-butyl ether	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
2-Butanone (MEK)	ND	ug/L	10		1	04/23/13	04/23/13 14:09	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Bromochloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Chloroform	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Carbon Tetrachloride	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Benzene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Methyl Acetate	ND	ug/L	10		1	04/23/13	04/23/13 14:09	1011
Methylcyclohexane	ND	ug/L	10		1	04/23/13	04/23/13 14:09	1011
Trichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Carbon Disulfide	ND	ug/L	10		1	04/23/13	04/23/13 14:09	1011
Bromodichloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
4-Methyl-2-Pentanone	ND	ug/L	5.0		1	04/23/13	04/23/13 14:09	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-1 (GW) **Date/Time Sampled: 04/18/2013 14:30** **PSS Sample ID: 13041921-011**
Matrix: GROUND WATER **Date/Time Received: 04/19/2013 18:35**

TCL Volatile Organic Compounds Analytical Method: SW-846 8260 B Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Toluene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
2-Hexanone	ND	ug/L	10		1	04/23/13	04/23/13 14:09	1011
1,2-Dibromoethane (EDB)	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Dibromochloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Bromoform	ND	ug/L	5.0		1	04/23/13	04/23/13 14:09	1011
Tetrachloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Chlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Ethylbenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
m,p-Xylenes	ND	ug/L	2.0		1	04/23/13	04/23/13 14:09	1011
Styrene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
o-Xylene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Isopropylbenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
1,2-Dibromo-3-Chloropropane	ND	ug/L	10		1	04/23/13	04/23/13 14:09	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
Naphthalene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 14:09	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-041813 (GW) **Date/Time Sampled: 04/18/2013 14:00** **PSS Sample ID: 13041921-012**
Matrix: GROUND WATER **Date/Time Received: 04/19/2013 18:35**

RCRA Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3010A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Arsenic	ND	ug/L	1.0		1	04/24/13	04/24/13 19:24	1033
Barium	**27**	ug/L	1.0		1	04/24/13	04/24/13 19:24	1033
Cadmium	ND	ug/L	1.0		1	04/24/13	04/24/13 19:24	1033
Chromium	ND	ug/L	1.0		1	04/24/13	04/24/13 19:24	1033
Lead	ND	ug/L	1.0		1	04/24/13	04/24/13 19:24	1033
Mercury	ND	ug/L	0.20		1	04/24/13	04/24/13 19:24	1033
Selenium	ND	ug/L	1.0		1	04/24/13	04/26/13 15:24	1033
Silver	ND	ug/L	1.0		1	04/24/13	04/24/13 19:24	1033

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**0.23**	mg/L	0.10		1	04/24/13	04/24/13 18:46	1040

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100		1	04/22/13	04/22/13 17:05	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-041813 (GW) **Date/Time Sampled: 04/18/2013 14:00** **PSS Sample ID: 13041921-012**
Matrix: GROUND WATER **Date/Time Received: 04/19/2013 18:35**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Chloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Vinyl Chloride	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Bromomethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Chloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Acetone	ND	ug/L	10		1	04/23/13	04/23/13 17:04	1011
Cyclohexane	ND	ug/L	10		1	04/23/13	04/23/13 17:04	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	04/23/13	04/23/13 17:04	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Methylene Chloride	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Methyl-t-butyl ether	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
2-Butanone (MEK)	ND	ug/L	10		1	04/23/13	04/23/13 17:04	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Bromochloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Chloroform	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Carbon Tetrachloride	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Benzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Methyl Acetate	ND	ug/L	10		1	04/23/13	04/23/13 17:04	1011
Methylcyclohexane	ND	ug/L	10		1	04/23/13	04/23/13 17:04	1011
Trichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Carbon Disulfide	ND	ug/L	10		1	04/23/13	04/23/13 17:04	1011
Bromodichloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
4-Methyl-2-Pentanone	ND	ug/L	5.0		1	04/23/13	04/23/13 17:04	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-041813 (GW) **Date/Time Sampled: 04/18/2013 14:00** **PSS Sample ID: 13041921-012**
Matrix: GROUND WATER **Date/Time Received: 04/19/2013 18:35**

TCL Volatile Organic Compounds Analytical Method: SW-846 8260 B Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Toluene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
2-Hexanone	ND	ug/L	10		1	04/23/13	04/23/13 17:04	1011
1,2-Dibromoethane (EDB)	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Dibromochloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Bromoform	ND	ug/L	5.0		1	04/23/13	04/23/13 17:04	1011
Tetrachloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Chlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Ethylbenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
m,p-Xylenes	ND	ug/L	2.0		1	04/23/13	04/23/13 17:04	1011
Styrene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
o-Xylene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Isopropylbenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
1,2-Dibromo-3-Chloropropane	ND	ug/L	10		1	04/23/13	04/23/13 17:04	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
Naphthalene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:04	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-5 (4-5) **Date/Time Sampled: 04/18/2013 15:12** **PSS Sample ID: 13041921-013**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 78**

RCRA Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3050B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Arsenic	**3.7**	mg/kg	0.48		1	04/24/13	04/25/13 17:40	1033
Barium	**54**	mg/kg	2.4		1	04/24/13	04/26/13 16:36	1033
Cadmium	ND	mg/kg	2.4		1	04/24/13	04/25/13 17:40	1033
Chromium	**10**	mg/kg	2.4		1	04/24/13	04/25/13 17:40	1033
Lead	**35**	mg/kg	2.4		1	04/24/13	04/25/13 17:40	1033
Mercury	ND	mg/kg	0.096		1	04/24/13	04/25/13 17:40	1033
Selenium	ND	mg/kg	2.4		1	04/24/13	04/25/13 17:40	1033
Silver	ND	mg/kg	2.4		1	04/24/13	04/25/13 17:40	1033

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3550

DF/HF - No. 2/diesel fuel and heavier fuel/oil patterns observed in sample.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**6.3**	mg/kg	5.0	DF	1	04/26/13	04/26/13 18:57	1040

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: 3550
Clean up Method: SW846 3665A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
PCB-1016	ND	mg/kg	0.14		1	04/23/13	04/23/13 19:14	1029
PCB-1221	ND	mg/kg	0.14		1	04/23/13	04/23/13 19:14	1029
PCB-1232	ND	mg/kg	0.14		1	04/23/13	04/23/13 19:14	1029
PCB-1242	ND	mg/kg	0.14		1	04/23/13	04/23/13 19:14	1029
PCB-1248	ND	mg/kg	0.14		1	04/23/13	04/23/13 19:14	1029
PCB-1254	ND	mg/kg	0.14		1	04/23/13	04/23/13 19:14	1029
PCB-1260	ND	mg/kg	0.14		1	04/23/13	04/23/13 19:14	1029

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-5 (4-5) **Date/Time Sampled: 04/18/2013 15:12** **PSS Sample ID: 13041921-013**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 78**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Chloromethane	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Vinyl Chloride	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Bromomethane	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Chloroethane	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Acetone	**27**	ug/kg	26		1	04/24/13	04/24/13 17:23	1011
Cyclohexane	ND	ug/kg	26		1	04/24/13	04/24/13 17:23	1011
Trichlorofluoromethane	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
1,1-Dichloroethene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Methylene Chloride	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
trans-1,2-Dichloroethene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Methyl-t-butyl ether	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
1,1-Dichloroethane	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
2-Butanone (MEK)	ND	ug/kg	26		1	04/24/13	04/24/13 17:23	1011
cis-1,2-Dichloroethene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Bromochloromethane	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Chloroform	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
1,1,1-Trichloroethane	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
1,2-Dichloroethane	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Carbon Tetrachloride	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Benzene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
1,2-Dichloropropane	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Carbon Disulfide	ND	ug/kg	13		1	04/24/13	04/24/13 17:23	1011
Methylcyclohexane	ND	ug/kg	26		1	04/24/13	04/24/13 17:23	1011
Trichloroethene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Methyl Acetate	ND	ug/kg	26		1	04/24/13	04/24/13 17:23	1011
Bromodichloromethane	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
cis-1,3-Dichloropropene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
4-Methyl-2-Pentanone	ND	ug/kg	26		1	04/24/13	04/24/13 17:23	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-5 (4-5) **Date/Time Sampled: 04/18/2013 15:12** **PSS Sample ID: 13041921-013**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 78**

TCL Volatile Organic Compounds Analytical Method: SW-846 8260 B Preparation Method: 5030

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,3-Dichloropropene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
1,1,2-Trichloroethane	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Toluene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
2-Hexanone	ND	ug/kg	26		1	04/24/13	04/24/13 17:23	1011
1,2-Dibromoethane (EDB)	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Dibromochloromethane	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Bromoform	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Tetrachloroethene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Chlorobenzene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Ethylbenzene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
m,p-Xylenes	ND	ug/kg	13		1	04/24/13	04/24/13 17:23	1011
Styrene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
o-Xylene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Isopropylbenzene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
1,3-Dichlorobenzene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
1,4-Dichlorobenzene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
1,2-Dichlorobenzene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
1,2-Dibromo-3-Chloropropane	ND	ug/kg	52		1	04/24/13	04/24/13 17:23	1011
1,2,4-Trichlorobenzene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
Naphthalene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011
1,2,3-Trichlorobenzene	ND	ug/kg	6.5		1	04/24/13	04/24/13 17:23	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-5 (5-6) **Date/Time Sampled: 04/18/2013 15:14** **PSS Sample ID: 13041921-014**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 82**

RCRA Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3050B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Arsenic	**6.5**	mg/kg	0.57		1	04/24/13	04/25/13 17:46	1033
Barium	**56**	mg/kg	2.9		1	04/24/13	04/26/13 16:42	1033
Cadmium	ND	mg/kg	2.9		1	04/24/13	04/25/13 17:46	1033
Chromium	**8.6**	mg/kg	2.9		1	04/24/13	04/25/13 17:46	1033
Lead	**80**	mg/kg	2.9		1	04/24/13	04/25/13 17:46	1033
Mercury	**0.17**	mg/kg	0.11		1	04/24/13	04/26/13 16:42	1033
Selenium	ND	mg/kg	2.9		1	04/24/13	04/25/13 17:46	1033
Silver	ND	mg/kg	2.9		1	04/24/13	04/25/13 17:46	1033

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3550

HF - Heavier fuel/oil pattern observed in sample.

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	**38**	mg/kg	4.9	HF	1	04/26/13	04/26/13 18:57	1040

Polychlorinated Biphenyls — Analytical Method: SW-846 8082 A — Preparation Method: 3550
Clean up Method: SW846 3665A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
PCB-1016	ND	mg/kg	0.11		1	04/23/13	04/23/13 19:43	1029
PCB-1221	ND	mg/kg	0.11		1	04/23/13	04/23/13 19:43	1029
PCB-1232	ND	mg/kg	0.11		1	04/23/13	04/23/13 19:43	1029
PCB-1242	ND	mg/kg	0.11		1	04/23/13	04/23/13 19:43	1029
PCB-1248	ND	mg/kg	0.11		1	04/23/13	04/23/13 19:43	1029
PCB-1254	ND	mg/kg	0.11		1	04/23/13	04/23/13 19:43	1029
PCB-1260	ND	mg/kg	0.11		1	04/23/13	04/23/13 19:43	1029

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-5 (5-6) **Date/Time Sampled: 04/18/2013 15:14** **PSS Sample ID: 13041921-014**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 82**

TCL Semivolatile Organic Compounds Analytical Method: SW-846 8270 C Preparation Method: 3550

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Acenaphthene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Acenaphthylene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Acetophenone	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Anthracene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Benzo(a)anthracene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Benzo(a)pyrene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Benzo(b)fluoranthene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Benzo(g,h,i)perylene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Benzo(k)fluoranthene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Biphenyl (Diphenyl)	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Butyl benzyl phthalate	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
bis(2-chloroethoxy) methane	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
bis(2-chloroethyl) ether	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
bis(2-chloroisopropyl) ether	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
bis(2-ethylhexyl) phthalate	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
4-Bromophenylphenyl ether	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Di-n-butyl phthalate	ND	ug/kg	410		1	04/24/13	04/25/13 04:01	1014
Carbazole	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
4-Chloro-3-methyl phenol	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
4-Chloroaniline	ND	ug/kg	410		1	04/24/13	04/25/13 04:01	1014
2-Chloronaphthalene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
2-Chlorophenol	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
4-Chlorophenyl Phenyl ether	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Chrysene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Dibenz(a,h)Anthracene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Dibenzofuran	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
3,3-Dichlorobenzidine	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
2,4-Dichlorophenol	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Diethyl phthalate	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Dimethyl phthalate	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-5 (5-6) **Date/Time Sampled: 04/18/2013 15:14** **PSS Sample ID: 13041921-014**
Matrix: SOIL **Date/Time Received: 04/19/2013 18:35** **% Solids: 82**

TCL Semivolatile Organic Compounds Analytical Method: SW-846 8270 C Preparation Method: 3550

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
2,4-Dimethylphenol	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
4,6-Dinitro-2-methyl phenol	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
2,4-Dinitrophenol	ND	ug/kg	410		1	04/24/13	04/25/13 04:01	1014
2,4-Dinitrotoluene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
2,6-Dinitrotoluene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Fluoranthene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Fluorene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Hexachlorobenzene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Hexachlorobutadiene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Hexachlorocyclopentadiene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Hexachloroethane	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Indeno(1,2,3-c,d)Pyrene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Isophorone	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
2-Methylnaphthalene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
2-Methyl phenol	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
3&4-Methylphenol	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Naphthalene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
4-Nitroaniline	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
3-Nitroaniline	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
2-Nitroaniline	ND	ug/kg	410		1	04/24/13	04/25/13 04:01	1014
Nitrobenzene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
2-Nitrophenol	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
4-Nitrophenol	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
N-Nitrosodi-n-propyl amine	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
N-Nitrosodiphenylamine	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Di-n-octyl phthalate	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Pentachlorophenol	ND	ug/kg	410		1	04/24/13	04/25/13 04:01	1014
Phenanthrene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Phenol	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Atrazine	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-5 (5-6)	**Date/Time Sampled: 04/18/2013 15:14**	**PSS Sample ID: 13041921-014**
Matrix: SOIL	**Date/Time Received: 04/19/2013 18:35**	**% Solids: 82**

TCL Semivolatile Organic Compounds — Analytical Method: SW-846 8270 C — Preparation Method: 3550

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Pyrene	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Pyridine	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
Caprolactam	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
2,4,6-Trichlorophenol	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014
2,4,5-Trichlorophenol	ND	ug/kg	200		1	04/24/13	04/25/13 04:01	1014

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-5 (GW) **Date/Time Sampled: 04/18/2013 15:25** **PSS Sample ID: 13041921-015**
Matrix: GROUND WATER **Date/Time Received: 04/19/2013 18:35**

RCRA Metals — Analytical Method: SW-846 6020 A — Preparation Method: 3010A

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Arsenic	**13**	ug/L	1.0		1	04/24/13	04/24/13 19:29	1033
Barium	**220**	ug/L	1.0		1	04/24/13	04/24/13 19:29	1033
Cadmium	ND	ug/L	1.0		1	04/24/13	04/24/13 19:29	1033
Chromium	ND	ug/L	1.0		1	04/24/13	04/24/13 19:29	1033
Lead	**14**	ug/L	1.0		1	04/24/13	04/24/13 19:29	1033
Mercury	ND	ug/L	0.20		1	04/24/13	04/24/13 19:29	1033
Selenium	ND	ug/L	1.0		1	04/24/13	04/26/13 15:30	1033
Silver	ND	ug/L	1.0		1	04/24/13	04/24/13 19:29	1033

Total Petroleum Hydrocarbons - DRO — Analytical Method: SW-846 8015 C — Preparation Method: 3510C

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-DRO (Diesel Range Organics)	ND	mg/L	0.12		1	04/24/13	04/24/13 19:08	1040

Total Petroleum Hydrocarbons-GRO — Analytical Method: SW-846 8015C — Preparation Method: 5030

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
TPH-GRO (Gasoline Range Organics)	ND	ug/L	100		1	04/22/13	04/22/13 17:30	1035

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-5 (GW) **Date/Time Sampled: 04/18/2013 15:25** **PSS Sample ID: 13041921-015**
Matrix: GROUND WATER **Date/Time Received: 04/19/2013 18:35**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

pH=5

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Chloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Vinyl Chloride	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Bromomethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Chloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Acetone	ND	ug/L	10		1	04/23/13	04/23/13 17:33	1011
Cyclohexane	ND	ug/L	10		1	04/23/13	04/23/13 17:33	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	04/23/13	04/23/13 17:33	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Methylene Chloride	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Methyl-t-butyl ether	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
2-Butanone (MEK)	ND	ug/L	10		1	04/23/13	04/23/13 17:33	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Bromochloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Chloroform	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Carbon Tetrachloride	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Benzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Methyl Acetate	ND	ug/L	10		1	04/23/13	04/23/13 17:33	1011
Methylcyclohexane	ND	ug/L	10		1	04/23/13	04/23/13 17:33	1011
Trichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Carbon Disulfide	ND	ug/L	10		1	04/23/13	04/23/13 17:33	1011
Bromodichloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
4-Methyl-2-Pentanone	ND	ug/L	5.0		1	04/23/13	04/23/13 17:33	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: SB-5 (GW) **Date/Time Sampled: 04/18/2013 15:25** **PSS Sample ID: 13041921-015**
Matrix: GROUND WATER **Date/Time Received: 04/19/2013 18:35**

TCL Volatile Organic Compounds — Analytical Method: SW-846 8260 B — Preparation Method: 5030B

pH=5

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Toluene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
2-Hexanone	ND	ug/L	10		1	04/23/13	04/23/13 17:33	1011
1,2-Dibromoethane (EDB)	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Dibromochloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Bromoform	ND	ug/L	5.0		1	04/23/13	04/23/13 17:33	1011
Tetrachloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Chlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Ethylbenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
m,p-Xylenes	ND	ug/L	2.0		1	04/23/13	04/23/13 17:33	1011
Styrene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
o-Xylene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Isopropylbenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
1,2-Dibromo-3-Chloropropane	ND	ug/L	10		1	04/23/13	04/23/13 17:33	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
Naphthalene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 17:33	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: Trip Blank #1 **Date/Time Sampled: 04/18/2013 17:55** **PSS Sample ID: 13041921-016**
Matrix: WATER **Date/Time Received: 04/19/2013 18:35**

TCL Volatile Organic Compounds Analytical Method: SW-846 8260 B Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Chloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Vinyl Chloride	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Bromomethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Chloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Acetone	ND	ug/L	10		1	04/23/13	04/23/13 18:02	1011
Cyclohexane	ND	ug/L	10		1	04/23/13	04/23/13 18:02	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	04/23/13	04/23/13 18:02	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Methylene Chloride	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Methyl-t-butyl ether	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
2-Butanone (MEK)	ND	ug/L	10		1	04/23/13	04/23/13 18:02	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Bromochloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Chloroform	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Carbon Tetrachloride	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Benzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Methyl Acetate	ND	ug/L	10		1	04/23/13	04/23/13 18:02	1011
Methylcyclohexane	ND	ug/L	10		1	04/23/13	04/23/13 18:02	1011
Trichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Carbon Disulfide	ND	ug/L	10		1	04/23/13	04/23/13 18:02	1011
Bromodichloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
4-Methyl-2-Pentanone	ND	ug/L	5.0		1	04/23/13	04/23/13 18:02	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: Trip Blank #1 **Date/Time Sampled: 04/18/2013 17:55** **PSS Sample ID: 13041921-016**
Matrix: WATER **Date/Time Received: 04/19/2013 18:35**

TCL Volatile Organic Compounds Analytical Method: SW-846 8260 B Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Toluene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
2-Hexanone	ND	ug/L	10		1	04/23/13	04/23/13 18:02	1011
1,2-Dibromoethane (EDB)	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Dibromochloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Bromoform	ND	ug/L	5.0		1	04/23/13	04/23/13 18:02	1011
Tetrachloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Chlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Ethylbenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
m,p-Xylenes	ND	ug/L	2.0		1	04/23/13	04/23/13 18:02	1011
Styrene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
o-Xylene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Isopropylbenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
1,2-Dibromo-3-Chloropropane	ND	ug/L	10		1	04/23/13	04/23/13 18:02	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
Naphthalene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:02	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: Trip Blank #2 **Date/Time Sampled: 04/18/2013 17:55** **PSS Sample ID: 13041921-017**
Matrix: WATER **Date/Time Received: 04/19/2013 18:35**

TCL Volatile Organic Compounds Analytical Method: SW-846 8260 B Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Chloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Vinyl Chloride	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Bromomethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Chloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Acetone	ND	ug/L	10		1	04/23/13	04/23/13 18:31	1011
Cyclohexane	ND	ug/L	10		1	04/23/13	04/23/13 18:31	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	04/23/13	04/23/13 18:31	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Methylene Chloride	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Methyl-t-butyl ether	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
2-Butanone (MEK)	ND	ug/L	10		1	04/23/13	04/23/13 18:31	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Bromochloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Chloroform	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Carbon Tetrachloride	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Benzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Methyl Acetate	ND	ug/L	10		1	04/23/13	04/23/13 18:31	1011
Methylcyclohexane	ND	ug/L	10		1	04/23/13	04/23/13 18:31	1011
Trichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Carbon Disulfide	ND	ug/L	10		1	04/23/13	04/23/13 18:31	1011
Bromodichloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
4-Methyl-2-Pentanone	ND	ug/L	5.0		1	04/23/13	04/23/13 18:31	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: Trip Blank #2 **Date/Time Sampled: 04/18/2013 17:55** **PSS Sample ID: 13041921-017**
Matrix: WATER **Date/Time Received: 04/19/2013 18:35**

TCL Volatile Organic Compounds Analytical Method: SW-846 8260 B Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Toluene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
2-Hexanone	ND	ug/L	10		1	04/23/13	04/23/13 18:31	1011
1,2-Dibromoethane (EDB)	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Dibromochloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Bromoform	ND	ug/L	5.0		1	04/23/13	04/23/13 18:31	1011
Tetrachloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Chlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Ethylbenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
m,p-Xylenes	ND	ug/L	2.0		1	04/23/13	04/23/13 18:31	1011
Styrene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
o-Xylene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Isopropylbenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
1,2-Dibromo-3-Chloropropane	ND	ug/L	10		1	04/23/13	04/23/13 18:31	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
Naphthalene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 18:31	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: Trip Blank #3 **Date/Time Sampled: 04/18/2013 17:55** **PSS Sample ID: 13041921-018**
Matrix: WATER **Date/Time Received: 04/19/2013 18:35**

TCL Volatile Organic Compounds Analytical Method: SW-846 8260 B Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Dichlorodifluoromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Chloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Vinyl Chloride	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Bromomethane	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Chloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Acetone	ND	ug/L	10		1	04/23/13	04/23/13 19:00	1011
Cyclohexane	ND	ug/L	10		1	04/23/13	04/23/13 19:00	1011
Trichlorofluoromethane	ND	ug/L	5.0		1	04/23/13	04/23/13 19:00	1011
1,1-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Methylene Chloride	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
trans-1,2-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Methyl-t-butyl ether	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
1,1-Dichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
2-Butanone (MEK)	ND	ug/L	10		1	04/23/13	04/23/13 19:00	1011
cis-1,2-Dichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Bromochloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Chloroform	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
1,1,1-Trichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
1,2-Dichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Carbon Tetrachloride	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Benzene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
1,2-Dichloropropane	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Methyl Acetate	ND	ug/L	10		1	04/23/13	04/23/13 19:00	1011
Methylcyclohexane	ND	ug/L	10		1	04/23/13	04/23/13 19:00	1011
Trichloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Carbon Disulfide	ND	ug/L	10		1	04/23/13	04/23/13 19:00	1011
Bromodichloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
cis-1,3-Dichloropropene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
4-Methyl-2-Pentanone	ND	ug/L	5.0		1	04/23/13	04/23/13 19:00	1011

OFFICES:
6630 BALTIMORE NATIONAL PIKE
ROUTE 40 WEST
BALTIMORE, MD 21228
410-747-8770
800-932-9047
FAX 410-788-8723

PHASE SEPARATION SCIENCE, INC.

CERTIFICATE OF ANALYSIS

No: 13041921

WSP Environment & Energy - Reston, Reston, VA

May 3, 2013

Project Name: Robinson Terminal
Project Location: Alexandria, VA
Project ID: 36454

Sample ID: Trip Blank #3 **Date/Time Sampled: 04/18/2013 17:55** **PSS Sample ID: 13041921-018**
Matrix: WATER **Date/Time Received: 04/19/2013 18:35**

TCL Volatile Organic Compounds Analytical Method: SW-846 8260 B Preparation Method: 5030B

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
trans-1,3-Dichloropropene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
1,1,2-Trichloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Toluene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
2-Hexanone	ND	ug/L	10		1	04/23/13	04/23/13 19:00	1011
1,2-Dibromoethane (EDB)	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Dibromochloromethane	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Bromoform	ND	ug/L	5.0		1	04/23/13	04/23/13 19:00	1011
Tetrachloroethene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Chlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Ethylbenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
m,p-Xylenes	ND	ug/L	2.0		1	04/23/13	04/23/13 19:00	1011
Styrene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
o-Xylene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Isopropylbenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
1,3-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
1,4-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
1,2-Dichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
1,2-Dibromo-3-Chloropropane	ND	ug/L	10		1	04/23/13	04/23/13 19:00	1011
1,2,4-Trichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
Naphthalene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011
1,2,3-Trichlorobenzene	ND	ug/L	1.0		1	04/23/13	04/23/13 19:00	1011

Analytical Data Package Information Summary

Work Order(s): 13041921
Report Prepared For: WSP Environment & Energy - Reston, Reston
Project Name: Robinson Terminal
Project Manager: David Sarr

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Received	Prepared	Analyzed
ASTM D2216 05	SB-4 (7-8)	Initial	13041921-001	1050	S	105490	105490	04/18/2013	04/19/2013	04/22/2013	04/22/2013
	SB-4 (17-18)	Initial	13041921-002	1050	S	105490	105490	04/18/2013	04/19/2013	04/22/2013	04/22/2013
	SB-041813 (7-8)	Initial	13041921-003	1050	S	105490	105490	04/18/2013	04/19/2013	04/22/2013	04/22/2013
	SB-3 (5-6)	Initial	13041921-004	1050	S	105490	105490	04/18/2013	04/19/2013	04/22/2013	04/22/2013
	SB-3 (6-7)	Initial	13041921-005	1050	S	105490	105490	04/18/2013	04/19/2013	04/22/2013	04/22/2013
	SB-2 (8-9)	Initial	13041921-006	1050	S	105490	105490	04/18/2013	04/19/2013	04/22/2013	04/22/2013
	SB-2 (9-10)	Initial	13041921-007	1050	S	105490	105490	04/18/2013	04/19/2013	04/22/2013	04/22/2013
	SB-1 (8-9)	Initial	13041921-009	1050	S	105490	105490	04/18/2013	04/19/2013	04/22/2013	04/22/2013
	SB-1 (7-8)	Initial	13041921-010	1050	S	105490	105490	04/18/2013	04/19/2013	04/22/2013	04/22/2013
	SB-5 (4-5)	Initial	13041921-013	1050	S	105490	105490	04/18/2013	04/19/2013	04/22/2013	04/22/2013
	SB-5 (5-6)	Initial	13041921-014	1050	S	105490	105490	04/18/2013	04/19/2013	04/22/2013	04/22/2013
SW-846 6020 A	SB-2 (GW)	Initial	13041921-008	1033	W	45664	105552	04/18/2013	04/19/2013	04/24/2013	04/24/2013
	SB-1 (GW)	Initial	13041921-011	1033	W	45664	105552	04/18/2013	04/19/2013	04/24/2013	04/24/2013
	SB-041813 (GW)	Initial	13041921-012	1033	W	45664	105552	04/18/2013	04/19/2013	04/24/2013	04/24/2013
	SB-5 (GW)	Initial	13041921-015	1033	W	45664	105552	04/18/2013	04/19/2013	04/24/2013	04/24/2013
	45664-1-BKS	BKS	45664-1-BKS	1033	W	45664	105552	--------	04/19/2013	04/24/2013	04/24/2013
	45664-1-BLK	BLK	45664-1-BLK	1033	W	45664	105552	--------	04/19/2013	04/24/2013	04/24/2013
	SB-1 (GW) S	MS	13041921-011 S	1033	W	45664	105552	04/18/2013	04/19/2013	04/24/2013	04/24/2013
	SB-1 (GW) SD	MSD	13041921-011 SD	1033	W	45664	105552	04/18/2013	04/19/2013	04/24/2013	04/24/2013
	SB-4 (7-8)	Initial	13041921-001	1033	S	45675	105587	04/18/2013	04/19/2013	04/24/2013	04/25/2013
	SB-4 (17-18)	Initial	13041921-002	1033	S	45675	105587	04/18/2013	04/19/2013	04/24/2013	04/25/2013
	SB-041813 (7-8)	Initial	13041921-003	1033	S	45675	105587	04/18/2013	04/19/2013	04/24/2013	04/25/2013
	SB-3 (5-6)	Initial	13041921-004	1033	S	45675	105587	04/18/2013	04/19/2013	04/24/2013	04/25/2013
	SB-3 (6-7)	Initial	13041921-005	1033	S	45675	105587	04/18/2013	04/19/2013	04/24/2013	04/25/2013
	SB-2 (8-9)	Initial	13041921-006	1033	S	45675	105587	04/18/2013	04/19/2013	04/24/2013	04/25/2013
	SB-2 (9-10)	Initial	13041921-007	1033	S	45675	105587	04/18/2013	04/19/2013	04/24/2013	04/25/2013
	SB-1 (8-9)	Initial	13041921-009	1033	S	45675	105587	04/18/2013	04/19/2013	04/24/2013	04/25/2013
	SB-1 (7-8)	Initial	13041921-010	1033	S	45675	105587	04/18/2013	04/19/2013	04/24/2013	04/25/2013
	SB-5 (4-5)	Initial	13041921-013	1033	S	45675	105587	04/18/2013	04/19/2013	04/24/2013	04/25/2013

Analytical Data Package Information Summary

Work Order(s): 13041921
Report Prepared For: WSP Environment & Energy - Reston, Reston
Project Name: Robinson Terminal
Project Manager: David Sarr

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Received	Prepared	Analyzed
SW-846 6020 A	SB-5 (5-6)	Initial	13041921-014	1033	S	45675	105587	04/18/2013	04/19/2013	04/24/2013	04/25/2013
	45675-1-BKS	BKS	45675-1-BKS	1033	S	45675	105587	--------	04/19/2013	04/24/2013	04/25/2013
	45675-1-BLK	BLK	45675-1-BLK	1033	S	45675	105587	--------	04/19/2013	04/24/2013	04/25/2013
	SB-4 (17-18) S	MS	13041921-002 S	1033	S	45675	105587	04/18/2013	04/19/2013	04/24/2013	04/25/2013
	SB-4 (17-18) SD	MSD	13041921-002 SD	1033	S	45675	105587	04/18/2013	04/19/2013	04/24/2013	04/25/2013
	SB-4 (7-8)	Reanalysis	13041921-001	1033	S	45675	105592	04/18/2013	04/19/2013	04/24/2013	04/26/2013
	SB-4 (17-18)	Reanalysis	13041921-002	1033	S	45675	105592	04/18/2013	04/19/2013	04/24/2013	04/26/2013
	SB-041813 (7-8)	Reanalysis	13041921-003	1033	S	45675	105592	04/18/2013	04/19/2013	04/24/2013	04/26/2013
	SB-3 (5-6)	Reanalysis	13041921-004	1033	S	45675	105592	04/18/2013	04/19/2013	04/24/2013	04/26/2013
	SB-3 (6-7)	Reanalysis	13041921-005	1033	S	45675	105592	04/18/2013	04/19/2013	04/24/2013	04/26/2013
	SB-2 (8-9)	Reanalysis	13041921-006	1033	S	45675	105592	04/18/2013	04/19/2013	04/24/2013	04/26/2013
	SB-2 (9-10)	Reanalysis	13041921-007	1033	S	45675	105592	04/18/2013	04/19/2013	04/24/2013	04/26/2013
	SB-1 (8-9)	Reanalysis	13041921-009	1033	S	45675	105592	04/18/2013	04/19/2013	04/24/2013	04/26/2013
	SB-1 (7-8)	Reanalysis	13041921-010	1033	S	45675	105592	04/18/2013	04/19/2013	04/24/2013	04/26/2013
	SB-5 (4-5)	Reanalysis	13041921-013	1033	S	45675	105592	04/18/2013	04/19/2013	04/24/2013	04/26/2013
	SB-5 (5-6)	Reanalysis	13041921-014	1033	S	45675	105592	04/18/2013	04/19/2013	04/24/2013	04/26/2013
	SB-2 (GW)	Reanalysis	13041921-008	1033	W	45664	105597	04/18/2013	04/19/2013	04/24/2013	04/26/2013
	SB-1 (GW)	Reanalysis	13041921-011	1033	W	45664	105597	04/18/2013	04/19/2013	04/24/2013	04/26/2013
	SB-041813 (GW)	Reanalysis	13041921-012	1033	W	45664	105597	04/18/2013	04/19/2013	04/24/2013	04/26/2013
	SB-5 (GW)	Reanalysis	13041921-015	1033	W	45664	105597	04/18/2013	04/19/2013	04/24/2013	04/26/2013
SW-846 8015 C	SB-2 (GW)	Initial	13041921-008	1040	W	45665	105548	04/18/2013	04/19/2013	04/24/2013	04/24/2013
	SB-1 (GW)	Initial	13041921-011	1040	W	45665	105548	04/18/2013	04/19/2013	04/24/2013	04/24/2013
	SB-041813 (GW)	Initial	13041921-012	1040	W	45665	105548	04/18/2013	04/19/2013	04/24/2013	04/24/2013
	SB-5 (GW)	Initial	13041921-015	1040	W	45665	105548	04/18/2013	04/19/2013	04/24/2013	04/24/2013
	45665-1-BKS	BKS	45665-1-BKS	1040	W	45665	105548	--------	04/19/2013	04/24/2013	04/24/2013
	45665-1-BLK	BLK	45665-1-BLK	1040	W	45665	105548	--------	04/19/2013	04/24/2013	04/24/2013
	45665-1-BSD	BSD	45665-1-BSD	1040	W	45665	105548	--------	04/19/2013	04/24/2013	04/24/2013
	SB-1 (GW) S	MS	13041921-011 S	1040	W	45665	105548	04/18/2013	04/19/2013	04/24/2013	04/24/2013
	SB-1 (GW) SD	MSD	13041921-011 SD	1040	W	45665	105548	04/18/2013	04/19/2013	04/24/2013	04/24/2013

Analytical Data Package Information Summary

Work Order(s): 13041921
Report Prepared For: WSP Environment & Energy - Reston, Reston
Project Name: Robinson Terminal
Project Manager: David Sarr

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Received	Prepared	Analyzed
SW-846 8015 C	SB-4 (7-8)	Initial	13041921-001	1040	S	45692	105605	04/18/2013	04/19/2013	04/26/2013	04/26/2013
	SB-4 (17-18)	Initial	13041921-002	1040	S	45692	105605	04/18/2013	04/19/2013	04/26/2013	04/26/2013
	SB-041813 (7-8)	Initial	13041921-003	1040	S	45692	105605	04/18/2013	04/19/2013	04/26/2013	04/26/2013
	SB-3 (5-6)	Initial	13041921-004	1040	S	45692	105605	04/18/2013	04/19/2013	04/26/2013	04/29/2013
	SB-3 (6-7)	Initial	13041921-005	1040	S	45692	105605	04/18/2013	04/19/2013	04/26/2013	04/29/2013
	SB-2 (8-9)	Initial	13041921-006	1040	S	45692	105605	04/18/2013	04/19/2013	04/26/2013	04/26/2013
	SB-2 (9-10)	Initial	13041921-007	1040	S	45692	105605	04/18/2013	04/19/2013	04/26/2013	04/26/2013
	SB-1 (8-9)	Initial	13041921-009	1040	S	45692	105605	04/18/2013	04/19/2013	04/26/2013	04/26/2013
	SB-1 (7-8)	Initial	13041921-010	1040	S	45692	105605	04/18/2013	04/19/2013	04/26/2013	04/26/2013
	SB-5 (4-5)	Initial	13041921-013	1040	S	45692	105605	04/18/2013	04/19/2013	04/26/2013	04/26/2013
	SB-5 (5-6)	Initial	13041921-014	1040	S	45692	105605	04/18/2013	04/19/2013	04/26/2013	04/26/2013
	45692-1-BKS	BKS	45692-1-BKS	1040	S	45692	105605	--------	04/19/2013	04/26/2013	04/26/2013
	45692-1-BLK	BLK	45692-1-BLK	1040	S	45692	105605	--------	04/19/2013	04/26/2013	04/26/2013
	45692-1-BSD	BSD	45692-1-BSD	1040	S	45692	105605	--------	04/19/2013	04/26/2013	04/26/2013
	Tank #4-2 S	MS	13042423-002 S	1040	S	45692	105605	04/24/2013	04/19/2013	04/26/2013	04/26/2013
	Tank #4-2 SD	MSD	13042423-002 SD	1040	S	45692	105605	04/24/2013	04/19/2013	04/26/2013	04/26/2013
SW-846 8015C	SB-2 (GW)	Initial	13041921-008	1035	W	45657	105504	04/18/2013	04/19/2013	04/22/2013	04/22/2013
	SB-1 (GW)	Initial	13041921-011	1035	W	45657	105504	04/18/2013	04/19/2013	04/22/2013	04/22/2013
	SB-041813 (GW)	Initial	13041921-012	1035	W	45657	105504	04/18/2013	04/19/2013	04/22/2013	04/22/2013
	SB-5 (GW)	Initial	13041921-015	1035	W	45657	105504	04/18/2013	04/19/2013	04/22/2013	04/22/2013
	45657-2-BKS	BKS	45657-2-BKS	1035	W	45657	105504	--------	04/19/2013	04/22/2013	04/22/2013
	45657-2-BLK	BLK	45657-2-BLK	1035	W	45657	105504	--------	04/19/2013	04/22/2013	04/22/2013
	SB-1 (GW) S	MS	13041921-011 S	1035	W	45657	105504	04/18/2013	04/19/2013	04/22/2013	04/22/2013
	SB-1 (GW) SD	MSD	13041921-011 SD	1035	W	45657	105504	04/18/2013	04/19/2013	04/22/2013	04/22/2013
SW-846 8082 A	SB-4 (7-8)	Initial	13041921-001	1029	S	45653	105536	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	SB-4 (17-18)	Initial	13041921-002	1029	S	45653	105536	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	SB-041813 (7-8)	Initial	13041921-003	1029	S	45653	105536	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	SB-5 (4-5)	Initial	13041921-013	1029	S	45653	105536	04/18/2013	04/19/2013	04/23/2013	04/23/2013

Analytical Data Package Information Summary

Work Order(s): 13041921
Report Prepared For: WSP Environment & Energy - Reston, Reston
Project Name: Robinson Terminal
Project Manager: David Sarr

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Received	Prepared	Analyzed
SW-846 8082 A	SB-5 (5-6)	Initial	13041921-014	1029	S	45653	105536	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	45653-1-BKS	BKS	45653-1-BKS	1029	S	45653	105536	--------	04/19/2013	04/23/2013	04/23/2013
	45653-1-BLK	BLK	45653-1-BLK	1029	S	45653	105536	--------	04/19/2013	04/23/2013	04/23/2013
	45653-1-BSD	BSD	45653-1-BSD	1029	S	45653	105536	--------	04/19/2013	04/23/2013	04/23/2013
	SB-4 (17-18) S	MS	13041921-002 S	1029	S	45653	105536	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	SB-4 (17-18) SD	MSD	13041921-002 SD	1029	S	45653	105536	04/18/2013	04/19/2013	04/23/2013	04/23/2013
SW-846 8260 B	SB-4 (7-8)	Initial	13041921-001	1011	S	45673	105526	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	SB-4 (17-18)	Initial	13041921-002	1011	S	45673	105526	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	SB-041813 (7-8)	Initial	13041921-003	1011	S	45673	105526	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	SB-2 (8-9)	Initial	13041921-006	1011	S	45673	105526	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	SB-1 (7-8)	Initial	13041921-010	1011	S	45673	105526	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	45673-1-BKS	BKS	45673-1-BKS	1011	S	45673	105526	--------	04/19/2013	04/23/2013	04/23/2013
	45673-1-BLK	BLK	45673-1-BLK	1011	S	45673	105526	--------	04/19/2013	04/23/2013	04/23/2013
	SB-4 (17-18) S	MS	13041921-002 S	1011	S	45673	105526	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	SB-4 (17-18) SD	MSD	13041921-002 SD	1011	S	45673	105526	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	SB-2 (GW)	Initial	13041921-008	1011	W	45674	105527	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	SB-1 (GW)	Initial	13041921-011	1011	W	45674	105527	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	SB-041813 (GW)	Initial	13041921-012	1011	W	45674	105527	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	SB-5 (GW)	Initial	13041921-015	1011	W	45674	105527	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	Trip Blank #1	Initial	13041921-016	1011	W	45674	105527	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	Trip Blank #2	Initial	13041921-017	1011	W	45674	105527	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	Trip Blank #3	Initial	13041921-018	1011	W	45674	105527	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	45674-1-BKS	BKS	45674-1-BKS	1011	W	45674	105527	--------	04/19/2013	04/23/2013	04/23/2013
	45674-1-BLK	BLK	45674-1-BLK	1011	W	45674	105527	--------	04/19/2013	04/23/2013	04/23/2013
	SB-1 (GW) S	MS	13041921-011 S	1011	W	45674	105527	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	SB-1 (GW) SD	MSD	13041921-011 SD	1011	W	45674	105527	04/18/2013	04/19/2013	04/23/2013	04/23/2013
	SB-3 (5-6)	Initial	13041921-004	1011	S	45684	105555	04/18/2013	04/19/2013	04/24/2013	04/24/2013
	SB-5 (4-5)	Initial	13041921-013	1011	S	45684	105555	04/18/2013	04/19/2013	04/24/2013	04/24/2013
	45684-1-BKS	BKS	45684-1-BKS	1011	S	45684	105555	--------	04/19/2013	04/24/2013	04/24/2013

Analytical Data Package Information Summary

Work Order(s): 13041921
Report Prepared For: WSP Environment & Energy - Reston, Reston
Project Name: Robinson Terminal
Project Manager: David Sarr

Method	Client Sample Id	Analysis Type	Lab Sample Id	Analyst	Mtx	Prep Batch	Analytical Batch	Sampled	Received	Prepared	Analyzed
SW-846 8260 B	45684-1-BLK	BLK	45684-1-BLK	1011	S	45684	105555	--------	04/19/2013	04/24/2013	04/24/2013
	Composite S	MS	13042408-001 S	1011	S	45684	105555	04/24/2013	04/19/2013	04/24/2013	04/24/2013
	Composite SD	MSD	13042408-001 SD	1011	S	45684	105555	04/24/2013	04/19/2013	04/24/2013	04/24/2013
SW-846 8270 C	SB-1 (7-8)	Initial	13041921-010	1014	S	45669	105563	04/18/2013	04/19/2013	04/24/2013	04/25/2013
	SB-5 (5-6)	Initial	13041921-014	1014	S	45669	105563	04/18/2013	04/19/2013	04/24/2013	04/25/2013
	45669-1-BKS	BKS	45669-1-BKS	1014	S	45669	105563	--------	04/19/2013	04/24/2013	04/24/2013
	45669-1-BLK	BLK	45669-1-BLK	1014	S	45669	105563	--------	04/19/2013	04/24/2013	04/24/2013
	45669-1-BSD	BSD	45669-1-BSD	1014	S	45669	105563	--------	04/19/2013	04/24/2013	04/24/2013
	B-4 (8.5-14) S	MS	13042209-002 S	1014	S	45669	105563	04/18/2013	04/19/2013	04/24/2013	04/24/2013
	B-4 (8.5-14) SD	MSD	13042209-002 SD	1014	S	45669	105563	04/18/2013	04/19/2013	04/24/2013	04/24/2013
	SB-3 (5-6)	Initial	13041921-004	1014	S	45669	105566	04/18/2013	04/19/2013	04/24/2013	04/25/2013

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105548 **Sample:** 13041921-008 / SMP **Matrix:** Ground Water

Units: mg/L

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	0.930	1.18	79	50-131	

Lab Batch #: 105548 **Sample:** 13041921-011 / SMP **Matrix:** Ground Water

Units: mg/L

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	0.850	1.00	85	50-131	

Lab Batch #: 105548 **Sample:** 13041921-011 S / MS **Matrix:** Ground Water

Units: mg/L

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	0.950	1.00	95	50-131	

Lab Batch #: 105548 **Sample:** 13041921-011 SD / MSD **Matrix:** Ground Water

Units: mg/L

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	0.895	1.00	89	50-131	

Lab Batch #: 105548 **Sample:** 13041921-012 / SMP **Matrix:** Ground Water

Units: mg/L

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	0.780	1.00	78	50-131	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105548 **Sample:** 13041921-015 / SMP **Matrix:** Ground Water

Units: mg/L

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	1.30	1.18	107	50-131	

Lab Batch #: 105548 **Sample:** 45665-1-BKS / BKS **Matrix:** Water

Units: mg/L

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	0.744	1.00	74	50-131	

Lab Batch #: 105548 **Sample:** 45665-1-BLK / BLK **Matrix:** Water

Units: mg/L

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	0.705	1.00	70	50-131	

Lab Batch #: 105548 **Sample:** 45665-1-BSD / BSD **Matrix:** Water

Units: mg/L

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	0.707	1.00	71	50-131	

Lab Batch #: 105605 **Sample:** 13041921-001 / SMP **Matrix:** Soil

Units: mg/kg

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	27.0	32.80	84	10-189	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105605 **Sample:** 13041921-002 / SMP **Matrix:** Soil

Units: mg/kg

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	28.0	33.20	83	10-189	

Lab Batch #: 105605 **Sample:** 13041921-003 / SMP **Matrix:** Soil

Units: mg/kg

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	25.0	33.00	76	10-189	

Lab Batch #: 105605 **Sample:** 13041921-004 / SMP **Matrix:** Soil

Units: mg/kg

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	56.0	32.70	171	10-189	

Lab Batch #: 105605 **Sample:** 13041921-005 / SMP **Matrix:** Soil

Units: mg/kg

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	47.0	33.20	143	10-189	

Lab Batch #: 105605 **Sample:** 13041921-006 / SMP **Matrix:** Soil

Units: mg/kg

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	33.0	33.00	100	10-189	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105605 **Sample:** 13041921-007 / SMP **Matrix:** Soil

Units: mg/kg

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	30.0	33.10	91	10-189	

Lab Batch #: 105605 **Sample:** 13041921-009 / SMP **Matrix:** Soil

Units: mg/kg

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	29.0	32.90	88	10-189	

Lab Batch #: 105605 **Sample:** 13041921-010 / SMP **Matrix:** Soil

Units: mg/kg

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	33.0	32.80	102	10-189	

Lab Batch #: 105605 **Sample:** 13041921-013 / SMP **Matrix:** Soil

Units: mg/kg

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	31.0	32.70	96	10-189	

Lab Batch #: 105605 **Sample:** 13041921-014 / SMP **Matrix:** Soil

Units: mg/kg

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	38.0	33.20	114	10-189	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105605 **Sample:** 13042423-002 S / MS **Matrix:** Soil

Units: mg/kg

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	27.3	32.90	83	10-189	

Lab Batch #: 105605 **Sample:** 13042423-002 SD / MSD **Matrix:** Soil

Units: mg/kg

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	27.3	33.00	83	10-189	

Lab Batch #: 105605 **Sample:** 45692-1-BKS / BKS **Matrix:** Solid

Units: mg/kg

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	27.7	33.20	83	10-189	

Lab Batch #: 105605 **Sample:** 45692-1-BLK / BLK **Matrix:** Solid

Units: mg/kg

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	25.5	33.30	76	10-189	

Lab Batch #: 105605 **Sample:** 45692-1-BSD / BSD **Matrix:** Solid

Units: mg/kg

Total Petroleum Hydrocarbons - DRO Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
o-Terphenyl	28.4	33.20	85	10-189	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105504 **Sample:** 13041921-008 / SMP **Matrix:** Ground Water

Units: ug/L

Total Petroleum Hydrocarbons-GRO Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	77.0	100	77	69-100	

Lab Batch #: 105504 **Sample:** 13041921-011 / SMP **Matrix:** Ground Water

Units: ug/L

Total Petroleum Hydrocarbons-GRO Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	63.0	100	63	69-100	*

Lab Batch #: 105504 **Sample:** 13041921-011 S / MS **Matrix:** Ground Water

Units: ug/L

Total Petroleum Hydrocarbons-GRO Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	99.9	100	100	69-100	

Lab Batch #: 105504 **Sample:** 13041921-011 SD / MSD **Matrix:** Ground Water

Units: ug/L

Total Petroleum Hydrocarbons-GRO Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	89.8	100	90	69-100	

Lab Batch #: 105504 **Sample:** 13041921-012 / SMP **Matrix:** Ground Water

Units: ug/L

Total Petroleum Hydrocarbons-GRO Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	74.0	100	74	69-100	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105504 **Sample:** 13041921-015 / SMP **Matrix:** Ground Water

Units: ug/L

Total Petroleum Hydrocarbons-GRO Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	76.0	100	76	69-100	

Lab Batch #: 105504 **Sample:** 45657-2-BKS / BKS **Matrix:** Water

Units: ug/L

Total Petroleum Hydrocarbons-GRO Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	104	100	104	69-100	*

Lab Batch #: 105504 **Sample:** 45657-2-BLK / BLK **Matrix:** Water

Units: ug/L

Total Petroleum Hydrocarbons-GRO Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
a,a,a-Trifluorotoluene	73.4	100	73	69-100	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105536 **Sample:** 13041921-001 / SMP **Matrix:** Soil

Units: ug/kg

Polychlorinated Biphenyls Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Decachlorobiphenyl	22.0	25.00	89	59-157	
Tetrachloro-m-xylene	21.0	25.00	84	25-141	

Lab Batch #: 105536 **Sample:** 13041921-002 / SMP **Matrix:** Soil

Units: ug/kg

Polychlorinated Biphenyls Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Decachlorobiphenyl	16.0	25.00	62	59-157	
Tetrachloro-m-xylene	19.0	25.00	75	25-141	

Lab Batch #: 105536 **Sample:** 13041921-002 S / MS **Matrix:** Soil

Units: ug/kg

Polychlorinated Biphenyls Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Decachlorobiphenyl	18.5	25.00	74	59-157	
Tetrachloro-m-xylene	17.7	25.00	71	25-141	

Lab Batch #: 105536 **Sample:** 13041921-002 SD / MSD **Matrix:** Soil

Units: ug/kg

Polychlorinated Biphenyls Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Decachlorobiphenyl	20.3	25.00	81	59-157	
Tetrachloro-m-xylene	17.0	25.00	68	25-141	

Lab Batch #: 105536 **Sample:** 13041921-003 / SMP **Matrix:** Soil

Units: ug/kg

Polychlorinated Biphenyls Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Decachlorobiphenyl	26.0	25.00	103	59-157	
Tetrachloro-m-xylene	22.0	25.00	89	25-141	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105536 **Sample:** 13041921-013 / SMP **Matrix:** Soil

Units: ug/kg

Polychlorinated Biphenyls Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Decachlorobiphenyl	23.0	25.00	94	59-157	
Tetrachloro-m-xylene	21.0	25.00	82	25-141	

Lab Batch #: 105536 **Sample:** 13041921-014 / SMP **Matrix:** Soil

Units: ug/kg

Polychlorinated Biphenyls Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Decachlorobiphenyl	22.0	25.00	90	59-157	
Tetrachloro-m-xylene	21.0	25.00	84	25-141	

Lab Batch #: 105536 **Sample:** 45653-1-BKS / BKS **Matrix:** Solid

Units: ug/kg

Polychlorinated Biphenyls Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Decachlorobiphenyl	27.4	25.00	109	59-157	
Tetrachloro-m-xylene	22.0	25.00	88	25-141	

Lab Batch #: 105536 **Sample:** 45653-1-BLK / BLK **Matrix:** Solid

Units: ug/kg

Polychlorinated Biphenyls Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Decachlorobiphenyl	25.6	25.00	102	59-157	
Tetrachloro-m-xylene	22.9	25.00	92	25-141	

Lab Batch #: 105536 **Sample:** 45653-1-BSD / BSD **Matrix:** Solid

Units: ug/kg

Polychlorinated Biphenyls Analytes	SURROGATE RECOVERY STUDY				
	Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Decachlorobiphenyl	28.4	25.00	114	59-157	
Tetrachloro-m-xylene	24.7	25.00	99	25-141	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105526 **Sample:** 13041921-001 / SMP **Matrix:** Soil

Units: ug/kg

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	56.0	50.00	112	75-128	
Toluene-D8	51.0	50.00	103	77-120	
4-Bromofluorobenzene	39.0	50.00	77	73-111	

Lab Batch #: 105526 **Sample:** 13041921-002 / SMP **Matrix:** Soil

Units: ug/kg

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	57.0	50.00	115	75-128	
Toluene-D8	50.0	50.00	100	77-120	
4-Bromofluorobenzene	46.0	50.00	93	73-111	

Lab Batch #: 105526 **Sample:** 13041921-002 S / MS **Matrix:** Soil

Units: ug/kg

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	55.1	50.00	110	75-128	
Toluene-D8	53.2	50.00	106	77-120	
4-Bromofluorobenzene	43.3	50.00	87	73-111	

Lab Batch #: 105526 **Sample:** 13041921-002 SD / MSD **Matrix:** Soil

Units: ug/kg

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	53.3	50.00	107	75-128	
Toluene-D8	53.3	50.00	107	77-120	
4-Bromofluorobenzene	40.7	50.00	81	73-111	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105526 **Sample:** 13041921-003 / SMP **Matrix:** Soil

Units: ug/kg

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	56.0	50.00	112	75-128	
Toluene-D8	52.0	50.00	104	77-120	
4-Bromofluorobenzene	39.0	50.00	78	73-111	

Lab Batch #: 105526 **Sample:** 13041921-006 / SMP **Matrix:** Soil

Units: ug/kg

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	56.0	50.00	113	75-128	
Toluene-D8	52.0	50.00	104	77-120	
4-Bromofluorobenzene	39.0	50.00	78	73-111	

Lab Batch #: 105526 **Sample:** 13041921-010 / SMP **Matrix:** Soil

Units: ug/kg

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	70.0	50.00	140	75-128	*
Toluene-D8	51.0	50.00	102	77-120	
4-Bromofluorobenzene	18.0	50.00	37	73-111	*

Lab Batch #: 105526 **Sample:** 45673-1-BKS / BKS **Matrix:** Solid

Units: ug/kg

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	52.5	50.00	105	75-128	
Toluene-D8	52.9	50.00	106	77-120	
4-Bromofluorobenzene	40.3	50.00	81	73-111	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105526 **Sample:** 45673-1-BLK / BLK **Matrix:** Solid

Units: ug/kg

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	52.7	50.00	105	75-128	
Toluene-D8	50.8	50.00	102	77-120	
4-Bromofluorobenzene	39.2	50.00	78	73-111	

Lab Batch #: 105527 **Sample:** 13041921-008 / SMP **Matrix:** Ground Water

Units: ug/L

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	49.0	50.00	98	94-107	
Toluene-D8	48.0	50.00	95	96-104	*
4-Bromofluorobenzene	53.0	50.00	107	89-112	

Lab Batch #: 105527 **Sample:** 13041921-011 / SMP **Matrix:** Ground Water

Units: ug/L

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	49.0	50.00	98	94-107	
Toluene-D8	49.0	50.00	98	96-104	
4-Bromofluorobenzene	53.0	50.00	107	89-112	

Lab Batch #: 105527 **Sample:** 13041921-011 S / MS **Matrix:** Ground Water

Units: ug/L

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	50.0	50.00	100	94-107	
Toluene-D8	48.9	50.00	98	96-104	
4-Bromofluorobenzene	51.3	50.00	103	89-112	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105527 **Sample:** 13041921-011 SD / MSD **Matrix:** Ground Water

Units: ug/L

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	51.2	50.00	102	94-107	
Toluene-D8	49.4	50.00	99	96-104	
4-Bromofluorobenzene	51.0	50.00	102	89-112	

Lab Batch #: 105527 **Sample:** 13041921-012 / SMP **Matrix:** Ground Water

Units: ug/L

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	49.0	50.00	99	94-107	
Toluene-D8	49.0	50.00	98	96-104	
4-Bromofluorobenzene	53.0	50.00	106	89-112	

Lab Batch #: 105527 **Sample:** 13041921-015 / SMP **Matrix:** Ground Water

Units: ug/L

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	49.0	50.00	97	94-107	
Toluene-D8	49.0	50.00	97	96-104	
4-Bromofluorobenzene	55.0	50.00	109	89-112	

Lab Batch #: 105527 **Sample:** 13041921-016 / SMP **Matrix:** Water

Units: ug/L

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	50.0	50.00	100	94-107	
Toluene-D8	49.0	50.00	98	96-104	
4-Bromofluorobenzene	53.0	50.00	105	89-112	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105527 **Sample:** 13041921-017 / SMP **Matrix:** Water

Units: ug/L

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	49.0	50.00	98	94-107	
Toluene-D8	49.0	50.00	97	96-104	
4-Bromofluorobenzene	53.0	50.00	106	89-112	

Lab Batch #: 105527 **Sample:** 13041921-018 / SMP **Matrix:** Water

Units: ug/L

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	50.0	50.00	99	94-107	
Toluene-D8	50.0	50.00	99	96-104	
4-Bromofluorobenzene	54.0	50.00	108	89-112	

Lab Batch #: 105527 **Sample:** 45674-1-BKS / BKS **Matrix:** Water

Units: ug/L

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	51.3	50.00	103	94-107	
Toluene-D8	49.3	50.00	99	96-104	
4-Bromofluorobenzene	51.3	50.00	103	89-112	

Lab Batch #: 105527 **Sample:** 45674-1-BLK / BLK **Matrix:** Water

Units: ug/L

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	49.8	50.00	100	94-107	
Toluene-D8	48.9	50.00	98	96-104	
4-Bromofluorobenzene	54.0	50.00	108	89-112	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105555 **Sample:** 13041921-004 / SMP **Matrix:** Soil

Units: ug/kg

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	56.0	50.00	112	75-128	
Toluene-D8	48.0	50.00	96	77-120	
4-Bromofluorobenzene	38.0	50.00	76	73-111	

Lab Batch #: 105555 **Sample:** 13041921-013 / SMP **Matrix:** Soil

Units: ug/kg

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	53.0	50.00	105	75-128	
Toluene-D8	53.0	50.00	105	77-120	
4-Bromofluorobenzene	43.0	50.00	86	73-111	

Lab Batch #: 105555 **Sample:** 13042408-001 S / MS **Matrix:** Soil

Units: ug/kg

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	58.8	50.00	118	75-128	
Toluene-D8	48.7	50.00	97	77-120	
4-Bromofluorobenzene	38.6	50.00	77	73-111	

Lab Batch #: 105555 **Sample:** 13042408-001 SD / MSD **Matrix:** Soil

Units: ug/kg

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	52.9	50.00	106	75-128	
Toluene-D8	52.4	50.00	105	77-120	
4-Bromofluorobenzene	42.6	50.00	85	73-111	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105555 **Sample:** 45684-1-BKS / BKS **Matrix:** Solid

Units: ug/kg

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	51.4	50.00	103	75-128	
Toluene-D8	52.1	50.00	104	77-120	
4-Bromofluorobenzene	44.0	50.00	88	73-111	

Lab Batch #: 105555 **Sample:** 45684-1-BLK / BLK **Matrix:** Solid

Units: ug/kg

TCL Volatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
Dibromofluoromethane	52.1	50.00	104	75-128	
Toluene-D8	52.2	50.00	104	77-120	
4-Bromofluorobenzene	43.7	50.00	87	73-111	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105563 **Sample:** 13041921-010 / SMP **Matrix:** Soil

Units: ug/kg

TCL Semivolatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
2-Fluorobiphenyl	640	666	95	60-132	
2-Fluorophenol	1000	1330	78	43-110	
Nitrobenzene-d5	570	666	86	48-123	
Phenol-d6	1100	1330	84	58-120	
Terphenyl-D14	640	666	96	48-140	
2,4,6-Tribromophenol	1200	1330	90	47-138	

Lab Batch #: 105563 **Sample:** 13041921-014 / SMP **Matrix:** Soil

Units: ug/kg

TCL Semivolatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
2-Fluorobiphenyl	680	669	102	60-132	
2-Fluorophenol	1200	1340	88	43-110	
Nitrobenzene-d5	610	669	91	48-123	
Phenol-d6	1200	1340	93	58-120	
Terphenyl-D14	820	669	123	48-140	
2,4,6-Tribromophenol	1400	1340	103	47-138	

Lab Batch #: 105563 **Sample:** 13042209-002 S / MS **Matrix:** Soil

Units: ug/kg

TCL Semivolatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
2-Fluorobiphenyl	655	674	97	60-132	
2-Fluorophenol	1170	1350	87	43-110	
Nitrobenzene-d5	614	674	91	48-123	
Phenol-d6	1190	1350	88	58-120	
Terphenyl-D14	677	674	101	48-140	
2,4,6-Tribromophenol	1380	1350	102	47-138	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105563 **Sample:** 13042209-002 SD / MSD **Matrix:** Soil

Units: ug/kg

TCL Semivolatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
2-Fluorobiphenyl	619	661	94	60-132	
2-Fluorophenol	1120	1320	85	43-110	
Nitrobenzene-d5	581	661	88	48-123	
Phenol-d6	1120	1320	84	58-120	
Terphenyl-D14	659	661	100	48-140	
2,4,6-Tribromophenol	1330	1320	101	47-138	

Lab Batch #: 105563 **Sample:** 45669-1-BKS / BKS **Matrix:** Solid

Units: ug/kg

TCL Semivolatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
2-Fluorobiphenyl	669	664	101	60-132	
2-Fluorophenol	1250	1330	94	43-110	
Nitrobenzene-d5	638	664	96	48-123	
Phenol-d6	1230	1330	93	58-120	
Terphenyl-D14	708	664	107	48-140	
2,4,6-Tribromophenol	1450	1330	109	47-138	

Lab Batch #: 105563 **Sample:** 45669-1-BLK / BLK **Matrix:** Solid

Units: ug/kg

TCL Semivolatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
2-Fluorobiphenyl	677	665	102	60-132	
2-Fluorophenol	1280	1330	96	43-110	
Nitrobenzene-d5	662	665	100	48-123	
Phenol-d6	1250	1330	94	58-120	
Terphenyl-D14	734	665	110	48-140	
2,4,6-Tribromophenol	1090	1330	82	47-138	

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Form 2 - Surrogate Recoveries

Project Name: Robinson Terminal

04/30/2013

Work Order #: 13041921 **Project ID:** 36454

Lab Batch #: 105563 **Sample:** 45669-1-BSD / BSD **Matrix:** Solid

Units: ug/kg

TCL Semivolatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
2-Fluorobiphenyl	641	665	96	60-132	
2-Fluorophenol	1180	1330	89	43-110	
Nitrobenzene-d5	612	665	92	48-123	
Phenol-d6	1160	1330	87	58-120	
Terphenyl-D14	696	665	105	48-140	
2,4,6-Tribromophenol	1320	1330	100	47-138	

Lab Batch #: 105566 **Sample:** 13041921-004 / SMP **Matrix:** Soil

Units: ug/kg

TCL Semivolatile Organic Compounds Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [C]	Control Limits %R	Flags
2-Fluorobiphenyl	640	667	97	60-132	
2-Fluorophenol	1200	1330	92	43-110	
Nitrobenzene-d5	1000	667	151	48-123	*
Phenol-d6	1200	1330	93	58-120	
Terphenyl-D14	560	667	83	48-140	
2,4,6-Tribromophenol	3300	1330	250	47-138	*

* Surrogate outside of Laboratory QC limits

Surrogate Recovery [C] = 100 * A / B

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

Blank Summary 13041921

WSP Environment & Energy - Reston, Reston, VA

Robinson Terminal

Analytical Method: **SW-846 6020 A** Prep Method: SW3010A
Matrix: **WATER**

Sample Id: **45664-1-BLK** Lab Sample Id: **45664-1-BLK**

Date Analyzed: Apr-24-13 17:56 Analyst: 1033 Date Prep: Apr-24-13 08:09 Tech: 1034
Seq Number: 105552

Parameter	Cas Number	Result	RL	LOD	Units	Flag	Dil
Arsenic	7440-38-2	ND	1.000	0.5000	ug/L	U	1
Barium	7440-39-3	ND	1.000	0.5000	ug/L	U	1
Cadmium	7440-43-9	ND	1.000	0.5000	ug/L	U	1
Chromium	7440-47-3	ND	1.000	0.5000	ug/L	U	1
Lead	7439-92-1	ND	1.000	0.5000	ug/L	U	1
Mercury	7439-97-6	ND	0.2000	0.1000	ug/L	U	1
Selenium	7782-49-2	ND	1.000	0.5000	ug/L	U	1
Silver	7440-22-4	ND	1.000	0.5000	ug/L	U	1

Blank Summary 13041921

WSP Environment & Energy - Reston, Reston, VA

Robinson Terminal

Analytical Method: **SW-846 6020 A** Prep Method: SW3050B
Matrix: **SOLID**

Sample Id: **45675-1-BLK** Lab Sample Id: **45675-1-BLK**

Date Analyzed: Apr-25-13 15:46 Analyst: 1033 Date Prep: Apr-24-13 11:47 Tech: 1033
Seq Number: 105587

Parameter	Cas Number	Result	RL	LOD	Units	Flag	Dil
Arsenic	7440-38-2	ND	0.5000	0.2500	mg/kg	U	1
Barium	7440-39-3	ND	2.500	1.250	mg/kg	U	1
Cadmium	7440-43-9	ND	2.500	1.250	mg/kg	U	1
Chromium	7440-47-3	ND	2.500	1.250	mg/kg	U	1
Lead	7439-92-1	ND	2.500	1.250	mg/kg	U	1
Mercury	7439-97-6	ND	0.1000	0.05000	mg/kg	U	1
Selenium	7782-49-2	ND	2.500	1.250	mg/kg	U	1
Silver	7440-22-4	ND	2.500	1.250	mg/kg	U	1

Blank Summary 13041921

WSP Environment & Energy - Reston, Reston, VA

Robinson Terminal

Analytical Method: **SW-846 8015 C** Prep Method: SW3510C
Matrix: **WATER**

Sample Id: **45665-1-BLK** Lab Sample Id: **45665-1-BLK**

Date Analyzed: Apr-24-13 11:17 Analyst: 1040 Date Prep: Apr-24-13 08:10 Tech: 1028
Seq Number: 105548

Parameter	Cas Number	Result	RL	LOD	Units	Flag	Dil
TPH-DRO (Diesel Range Organics)		ND	0.1000	0.04000	mg/L	U	1

Blank Summary 13041921

WSP Environment & Energy - Reston, Reston, VA

Robinson Terminal

Analytical Method: **SW-846 8015 C** Prep Method: SW3550
Matrix: **SOLID**

Sample Id: **45692-1-BLK** Lab Sample Id: **45692-1-BLK**

Date Analyzed: Apr-26-13 15:10 Analyst: 1040 Date Prep: Apr-26-13 06:53 Tech: 1028
Seq Number: 105605

Parameter	Cas Number	Result	RL	LOD	Units	Flag	Dil
TPH-DRO (Diesel Range Organics)		ND	3.999	3.999	mg/kg	U	1

Blank Summary 13041921

WSP Environment & Energy - Reston, Reston, VA

Robinson Terminal

Analytical Method: **SW-846 8015C** Prep Method: SW5030
Matrix: **WATER**

Sample Id: **45657-2-BLK** Lab Sample Id: **45657-2-BLK**

Date Analyzed: Apr-22-13 12:25 Analyst: 1035 Date Prep: Apr-22-13 10:34 Tech: 1035
Seq Number: 105504

Parameter	Cas Number	Result	RL	LOD	Units	Flag	Dil
TPH-GRO (Gasoline Range Organics)		ND	100	40.00	ug/L	U	1

Blank Summary 13041921

WSP Environment & Energy - Reston, Reston, VA

Robinson Terminal

Analytical Method: **SW-846 8082 A** Prep Method: SW3550
Matrix: **SOLID**

Sample Id: **45653-1-BLK** Lab Sample Id: **45653-1-BLK**

Date Analyzed: Apr-23-13 14:23 Analyst: 1029 Date Prep: Apr-23-13 09:52 Tech: 1050
Seq Number: 105536

Parameter	Cas Number	Result	RL	LOD	Units	Flag	Dil
PCB-1016	12674-11-2	ND	0.09891	0.04946	mg/kg	U	1
PCB-1221	11104-28-2	ND	0.09891	0.04946	mg/kg	U	1
PCB-1232	11141-16-5	ND	0.09891	0.04946	mg/kg	U	1
PCB-1242	53469-21-9	ND	0.09891	0.04946	mg/kg	U	1
PCB-1248	12672-29-6	ND	0.09891	0.04946	mg/kg	U	1
PCB-1254	11097-69-1	ND	0.09891	0.04946	mg/kg	U	1
PCB-1260	11096-82-5	ND	0.09891	0.04946	mg/kg	U	1

Blank Summary 13041921

WSP Environment & Energy - Reston, Reston, VA

Robinson Terminal

Analytical Method: **SW-846 8260 B** Prep Method: SW5030
Matrix: **SOLID**

Sample Id: **45673-1-BLK** Lab Sample Id: **45673-1-BLK**

Date Analyzed: Apr-23-13 12:25 Analyst: 1011 Date Prep: Apr-23-13 11:00 Tech: 1011
Seq Number: 105526

Parameter	Cas Number	Result	RL	LOD	Units	Flag	Dil
Dichlorodifluoromethane	75-71-8	ND	5.000	2.500	ug/kg	U	1
Chloromethane	74-87-3	ND	5.000	2.500	ug/kg	U	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	ND	5.000	2.500	ug/kg	U	1
Vinyl Chloride	75-01-4	ND	5.000	2.500	ug/kg	U	1
Bromomethane	74-83-9	ND	5.000	2.500	ug/kg	U	1
Chloroethane	75-00-3	ND	5.000	2.500	ug/kg	U	1
Acetone	67-64-1	ND	20.00	10.00	ug/kg	U	1
Cyclohexane	110-82-7	ND	20.00	10.00	ug/kg	U	1
Trichlorofluoromethane	75-69-4	ND	5.000	2.500	ug/kg	U	1
1,1-Dichloroethene	75-35-4	ND	5.000	2.500	ug/kg	U	1
Methylene Chloride	75-09-2	ND	5.000	2.500	ug/kg	U	1
trans-1,2-Dichloroethene	156-60-5	ND	5.000	2.500	ug/kg	U	1
Methyl-t-butyl ether	1634-04-4	ND	5.000	2.500	ug/kg	U	1
1,1-Dichloroethane	75-34-3	ND	5.000	2.500	ug/kg	U	1
2-Butanone (MEK)	78-93-3	ND	20.00	10.00	ug/kg	U	1
cis-1,2-Dichloroethene	156-59-2	ND	5.000	2.500	ug/kg	U	1
Bromochloromethane	74-97-5	ND	5.000	2.500	ug/kg	U	1
Chloroform	67-66-3	ND	5.000	2.500	ug/kg	U	1
1,1,1-Trichloroethane	71-55-6	ND	5.000	2.500	ug/kg	U	1
1,2-Dichloroethane	107-06-2	ND	5.000	2.500	ug/kg	U	1
Carbon Tetrachloride	56-23-5	ND	5.000	2.500	ug/kg	U	1
Benzene	71-43-2	ND	5.000	2.500	ug/kg	U	1
1,2-Dichloropropane	78-87-5	ND	5.000	2.500	ug/kg	U	1
Carbon Disulfide	75-15-0	ND	10.00	5.000	ug/kg	U	1
Methylcyclohexane	108-87-2	ND	20.00	10.00	ug/kg	U	1
Trichloroethene	79-01-6	ND	5.000	2.500	ug/kg	U	1
Methyl Acetate	79-20-9	ND	20.00	10.00	ug/kg	U	1
Bromodichloromethane	75-27-4	ND	5.000	2.500	ug/kg	U	1
cis-1,3-Dichloropropene	10061-01-5	ND	5.000	2.500	ug/kg	U	1
4-Methyl-2-Pentanone	108-10-1	ND	20.00	10.00	ug/kg	U	1
trans-1,3-Dichloropropene	10061-02-6	ND	5.000	2.500	ug/kg	U	1
1,1,2-Trichloroethane	79-00-5	ND	5.000	2.500	ug/kg	U	1
Toluene	108-88-3	ND	5.000	2.500	ug/kg	U	1
2-Hexanone	591-78-6	ND	20.00	10.00	ug/kg	U	1
1,2-Dibromoethane (EDB)	106-93-4	ND	5.000	2.500	ug/kg	U	1
Dibromochloromethane	124-48-1	ND	5.000	2.500	ug/kg	U	1
Bromoform	75-25-2	ND	5.000	2.500	ug/kg	U	1
Tetrachloroethene	127-18-4	ND	5.000	2.500	ug/kg	U	1
Chlorobenzene	108-90-7	ND	5.000	2.500	ug/kg	U	1
Ethylbenzene	100-41-4	ND	5.000	2.500	ug/kg	U	1
m,p-Xylenes	108-38-3	ND	10.00	5.000	ug/kg	U	1

Blank Summary 13041921

WSP Environment & Energy - Reston, Reston, VA

Robinson Terminal

Analytical Method: **SW-846 8260 B** Prep Method: SW5030
Matrix: **SOLID**

Sample Id: **45673-1-BLK** Lab Sample Id: **45673-1-BLK**

Date Analyzed: Apr-23-13 12:25 Analyst: 1011 Date Prep: Apr-23-13 11:00 Tech: 1011
Seq Number: 105526

Parameter	Cas Number	Result	RL	LOD	Units	Flag	Dil
Styrene	100-42-5	ND	5.000	2.500	ug/kg	U	1
1,1,2,2-Tetrachloroethane	79-34-5	ND	5.000	2.500	ug/kg	U	1
o-Xylene	95-47-6	ND	5.000	2.500	ug/kg	U	1
Isopropylbenzene	98-82-8	ND	5.000	2.500	ug/kg	U	1
1,3-Dichlorobenzene	541-73-1	ND	5.000	2.500	ug/kg	U	1
1,4-Dichlorobenzene	106-46-7	ND	5.000	2.500	ug/kg	U	1
1,2-Dichlorobenzene	95-50-1	ND	5.000	2.500	ug/kg	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	ND	40.00	20.00	ug/kg	U	1
1,2,4-Trichlorobenzene	120-82-1	ND	5.000	2.500	ug/kg	U	1
Naphthalene	91-20-3	ND	5.000	2.500	ug/kg	U	1
1,2,3-Trichlorobenzene	87-61-6	ND	5.000	2.500	ug/kg	U	1

Blank Summary 13041921

WSP Environment & Energy - Reston, Reston, VA

Robinson Terminal

Analytical Method: **SW-846 8260 B** Prep Method: SW5030
Matrix: **SOLID**

Sample Id: **45684-1-BLK** Lab Sample Id: **45684-1-BLK**

Date Analyzed: Apr-24-13 13:56 Analyst: 1011 Date Prep: Apr-24-13 11:00 Tech: 1011
Seq Number: 105555

Parameter	Cas Number	Result	RL	LOD	Units	Flag	Dil
Dichlorodifluoromethane	75-71-8	ND	4.990	2.495	ug/kg	U	1
Chloromethane	74-87-3	ND	4.990	2.495	ug/kg	U	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	ND	4.990	2.495	ug/kg	U	1
Vinyl Chloride	75-01-4	ND	4.990	2.495	ug/kg	U	1
Bromomethane	74-83-9	ND	4.990	2.495	ug/kg	U	1
Chloroethane	75-00-3	ND	4.990	2.495	ug/kg	U	1
Acetone	67-64-1	ND	19.96	9.980	ug/kg	U	1
Cyclohexane	110-82-7	ND	19.96	9.980	ug/kg	U	1
Trichlorofluoromethane	75-69-4	ND	4.990	2.495	ug/kg	U	1
1,1-Dichloroethene	75-35-4	ND	4.990	2.495	ug/kg	U	1
Methylene Chloride	75-09-2	ND	4.990	2.495	ug/kg	U	1
trans-1,2-Dichloroethene	156-60-5	ND	4.990	2.495	ug/kg	U	1
Methyl-t-butyl ether	1634-04-4	ND	4.990	2.495	ug/kg	U	1
1,1-Dichloroethane	75-34-3	ND	4.990	2.495	ug/kg	U	1
2-Butanone (MEK)	78-93-3	ND	19.96	9.980	ug/kg	U	1
cis-1,2-Dichloroethene	156-59-2	ND	4.990	2.495	ug/kg	U	1
Bromochloromethane	74-97-5	ND	4.990	2.495	ug/kg	U	1
Chloroform	67-66-3	ND	4.990	2.495	ug/kg	U	1
1,1,1-Trichloroethane	71-55-6	ND	4.990	2.495	ug/kg	U	1
1,2-Dichloroethane	107-06-2	ND	4.990	2.495	ug/kg	U	1
Carbon Tetrachloride	56-23-5	ND	4.990	2.495	ug/kg	U	1
Benzene	71-43-2	ND	4.990	2.495	ug/kg	U	1
1,2-Dichloropropane	78-87-5	ND	4.990	2.495	ug/kg	U	1
Carbon Disulfide	75-15-0	ND	9.980	4.990	ug/kg	U	1
Methylcyclohexane	108-87-2	ND	19.96	9.980	ug/kg	U	1
Trichloroethene	79-01-6	ND	4.990	2.495	ug/kg	U	1
Methyl Acetate	79-20-9	ND	19.96	9.980	ug/kg	U	1
Bromodichloromethane	75-27-4	ND	4.990	2.495	ug/kg	U	1
cis-1,3-Dichloropropene	10061-01-5	ND	4.990	2.495	ug/kg	U	1
4-Methyl-2-Pentanone	108-10-1	ND	19.96	9.980	ug/kg	U	1
trans-1,3-Dichloropropene	10061-02-6	ND	4.990	2.495	ug/kg	U	1
1,1,2-Trichloroethane	79-00-5	ND	4.990	2.495	ug/kg	U	1
Toluene	108-88-3	ND	4.990	2.495	ug/kg	U	1
2-Hexanone	591-78-6	ND	19.96	9.980	ug/kg	U	1
1,2-Dibromoethane (EDB)	106-93-4	ND	4.990	2.495	ug/kg	U	1
Dibromochloromethane	124-48-1	ND	4.990	2.495	ug/kg	U	1
Bromoform	75-25-2	ND	4.990	2.495	ug/kg	U	1
Tetrachloroethene	127-18-4	ND	4.990	2.495	ug/kg	U	1
Chlorobenzene	108-90-7	ND	4.990	2.495	ug/kg	U	1
Ethylbenzene	100-41-4	ND	4.990	2.495	ug/kg	U	1
m,p-Xylenes	108-38-3	ND	9.980	4.990	ug/kg	U	1

Blank Summary 13041921

WSP Environment & Energy - Reston, Reston, VA

Robinson Terminal

Analytical Method: **SW-846 8260 B** Prep Method: SW5030
Matrix: **SOLID**

Sample Id: **45684-1-BLK** Lab Sample Id: **45684-1-BLK**

Date Analyzed: Apr-24-13 13:56 Analyst: 1011 Date Prep: Apr-24-13 11:00 Tech: 1011
Seq Number: 105555

Parameter	Cas Number	Result	RL	LOD	Units	Flag	Dil
Styrene	100-42-5	ND	4.990	2.495	ug/kg	U	1
1,1,2,2-Tetrachloroethane	79-34-5	ND	4.990	2.495	ug/kg	U	1
o-Xylene	95-47-6	ND	4.990	2.495	ug/kg	U	1
Isopropylbenzene	98-82-8	ND	4.990	2.495	ug/kg	U	1
1,3-Dichlorobenzene	541-73-1	ND	4.990	2.495	ug/kg	U	1
1,4-Dichlorobenzene	106-46-7	ND	4.990	2.495	ug/kg	U	1
1,2-Dichlorobenzene	95-50-1	ND	4.990	2.495	ug/kg	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	ND	39.92	19.96	ug/kg	U	1
1,2,4-Trichlorobenzene	120-82-1	ND	4.990	2.495	ug/kg	U	1
Naphthalene	91-20-3	ND	4.990	2.495	ug/kg	U	1
1,2,3-Trichlorobenzene	87-61-6	ND	4.990	2.495	ug/kg	U	1

Blank Summary 13041921

WSP Environment & Energy - Reston, Reston, VA

Robinson Terminal

Analytical Method: **SW-846 8260 B** Prep Method: SW5030B
Matrix: **WATER**

Sample Id: **45674-1-BLK** Lab Sample Id: **45674-1-BLK**

Date Analyzed: Apr-23-13 13:36 Analyst: 1011 Date Prep: Apr-23-13 11:00 Tech: 1011
Seq Number: 105527

Parameter	Cas Number	Result	RL	LOD	Units	Flag	Dil
Dichlorodifluoromethane	75-71-8	ND	1.000	0.5000	ug/L	U	1
Chloromethane	74-87-3	ND	1.000	0.5000	ug/L	U	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	ND	1.000	0.5000	ug/L	U	1
Vinyl Chloride	75-01-4	ND	1.000	0.5000	ug/L	U	1
Bromomethane	74-83-9	ND	1.000	0.5000	ug/L	U	1
Chloroethane	75-00-3	ND	1.000	0.5000	ug/L	U	1
Acetone	67-64-1	ND	10.00	5.000	ug/L	U	1
Cyclohexane	110-82-7	ND	10.00	5.000	ug/L	U	1
Trichlorofluoromethane	75-69-4	ND	5.000	2.500	ug/L	U	1
1,1-Dichloroethene	75-35-4	ND	1.000	0.5000	ug/L	U	1
Methylene Chloride	75-09-2	ND	1.000	0.5000	ug/L	U	1
trans-1,2-Dichloroethene	156-60-5	ND	1.000	0.5000	ug/L	U	1
Methyl-t-butyl ether	1634-04-4	ND	1.000	0.5000	ug/L	U	1
1,1-Dichloroethane	75-34-3	ND	1.000	0.5000	ug/L	U	1
2-Butanone (MEK)	78-93-3	ND	10.00	5.000	ug/L	U	1
cis-1,2-Dichloroethene	156-59-2	ND	1.000	0.5000	ug/L	U	1
Bromochloromethane	74-97-5	ND	1.000	0.5000	ug/L	U	1
Chloroform	67-66-3	ND	1.000	0.5000	ug/L	U	1
1,1,1-Trichloroethane	71-55-6	ND	1.000	0.5000	ug/L	U	1
1,2-Dichloroethane	107-06-2	ND	1.000	0.5000	ug/L	U	1
Carbon Tetrachloride	56-23-5	ND	1.000	0.5000	ug/L	U	1
Benzene	71-43-2	ND	1.000	0.5000	ug/L	U	1
1,2-Dichloropropane	78-87-5	ND	1.000	0.5000	ug/L	U	1
Methyl Acetate	79-20-9	ND	10.00	5.000	ug/L	U	1
Methylcyclohexane	108-87-2	ND	10.00	5.000	ug/L	U	1
Trichloroethene	79-01-6	ND	1.000	0.5000	ug/L	U	1
Carbon Disulfide	75-15-0	ND	10.00	5.000	ug/L	U	1
Bromodichloromethane	75-27-4	ND	1.000	0.5000	ug/L	U	1
cis-1,3-Dichloropropene	10061-01-5	ND	1.000	0.5000	ug/L	U	1
4-Methyl-2-Pentanone	108-10-1	ND	5.000	2.500	ug/L	U	1
trans-1,3-Dichloropropene	10061-02-6	ND	1.000	0.5000	ug/L	U	1
1,1,2-Trichloroethane	79-00-5	ND	1.000	0.5000	ug/L	U	1
Toluene	108-88-3	ND	1.000	0.5000	ug/L	U	1
2-Hexanone	591-78-6	ND	10.00	5.000	ug/L	U	1
1,2-Dibromoethane (EDB)	106-93-4	ND	1.000	0.5000	ug/L	U	1
Dibromochloromethane	124-48-1	ND	1.000	0.5000	ug/L	U	1
Bromoform	75-25-2	ND	5.000	2.500	ug/L	U	1
Tetrachloroethene	127-18-4	ND	1.000	0.5000	ug/L	U	1
Chlorobenzene	108-90-7	ND	1.000	0.5000	ug/L	U	1
Ethylbenzene	100-41-4	ND	1.000	0.5000	ug/L	U	1
m,p-Xylenes	108-38-3	ND	2.000	1.000	ug/L	U	1

Blank Summary 13041921

WSP Environment & Energy - Reston, Reston, VA

Robinson Terminal

Analytical Method: **SW-846 8260 B** Prep Method: SW5030B
Matrix: **WATER**

Sample Id: **45674-1-BLK** Lab Sample Id: **45674-1-BLK**

Date Analyzed: Apr-23-13 13:36 Analyst: 1011 Date Prep: Apr-23-13 11:00 Tech: 1011
Seq Number: 105527

Parameter	Cas Number	Result	RL	LOD	Units	Flag	Dil
Styrene	100-42-5	ND	1.000	0.5000	ug/L	U	1
1,1,2,2-Tetrachloroethane	79-34-5	ND	1.000	0.5000	ug/L	U	1
o-Xylene	95-47-6	ND	1.000	0.5000	ug/L	U	1
Isopropylbenzene	98-82-8	ND	1.000	0.5000	ug/L	U	1
1,3-Dichlorobenzene	541-73-1	ND	1.000	0.5000	ug/L	U	1
1,4-Dichlorobenzene	106-46-7	ND	1.000	0.5000	ug/L	U	1
1,2-Dichlorobenzene	95-50-1	ND	1.000	0.5000	ug/L	U	1
1,2-Dibromo-3-Chloropropane	96-12-8	ND	10.00	5.000	ug/L	U	1
1,2,4-Trichlorobenzene	120-82-1	ND	1.000	0.5000	ug/L	U	1
Naphthalene	91-20-3	ND	1.000	0.5000	ug/L	U	1
1,2,3-Trichlorobenzene	87-61-6	ND	1.000	0.5000	ug/L	U	1

Blank Summary 13041921

WSP Environment & Energy - Reston, Reston, VA

Robinson Terminal

Analytical Method: **SW-846 8270 C** Prep Method: SW3550
Matrix: **SOLID**

Sample Id: **45669-1-BLK** Lab Sample Id: **45669-1-BLK**

Date Analyzed: Apr-24-13 21:49 Analyst: 1014 Date Prep: Apr-24-13 09:57 Tech: 1022
Seq Number: 105563

Parameter	Cas Number	Result	RL	LOD	Units	Flag	Dil
Acenaphthene	83-32-9	ND	166.3	83.17	ug/kg	U	1
Acenaphthylene	208-96-8	ND	166.3	83.17	ug/kg	U	1
Acetophenone	98-86-2	ND	166.3	83.17	ug/kg	U	1
Anthracene	120-12-7	ND	166.3	83.17	ug/kg	U	1
Benzo(a)anthracene	56-55-3	ND	166.3	83.17	ug/kg	U	1
Benzo(a)pyrene	50-32-8	ND	166.3	83.17	ug/kg	U	1
Benzo(b)fluoranthene	205-99-2	ND	166.3	83.17	ug/kg	U	1
Benzo(g,h,i)perylene	191-24-2	ND	166.3	83.17	ug/kg	U	1
Benzo(k)fluoranthene	207-08-9	ND	166.3	83.17	ug/kg	U	1
Biphenyl (Diphenyl)	92-52-4	ND	166.3	83.17	ug/kg	U	1
Butyl benzyl phthalate	85-68-7	ND	166.3	83.17	ug/kg	U	1
bis(2-chloroethoxy) methane	111-91-1	ND	166.3	83.17	ug/kg	U	1
bis(2-chloroethyl) ether	111-44-4	ND	166.3	83.17	ug/kg	U	1
bis(2-chloroisopropyl) ether	108-60-1	ND	166.3	83.17	ug/kg	U	1
bis(2-ethylhexyl) phthalate	117-81-7	ND	166.3	83.17	ug/kg	U	1
4-Bromophenylphenyl ether	101-55-3	ND	166.3	83.17	ug/kg	U	1
Di-n-butyl phthalate	84-74-2	ND	332.7	166.3	ug/kg	U	1
Carbazole	86-74-8	ND	166.3	83.17	ug/kg	U	1
4-Chloro-3-methyl phenol	59-50-7	ND	166.3	83.17	ug/kg	U	1
4-Chloroaniline	106-47-8	ND	332.7	166.3	ug/kg	U	1
2-Chloronaphthalene	91-58-7	ND	166.3	83.17	ug/kg	U	1
2-Chlorophenol	95-57-8	ND	166.3	83.17	ug/kg	U	1
4-Chlorophenyl Phenyl ether	7005-72-3	ND	166.3	83.17	ug/kg	U	1
Chrysene	218-01-9	ND	166.3	83.17	ug/kg	U	1
Dibenz(a,h)Anthracene	53-70-3	ND	166.3	83.17	ug/kg	U	1
Dibenzofuran	132-64-9	ND	166.3	83.17	ug/kg	U	1
3,3-Dichlorobenzidine	91-94-1	ND	166.3	83.17	ug/kg	U	1
2,4-Dichlorophenol	120-83-2	ND	166.3	83.17	ug/kg	U	1
Diethyl phthalate	84-66-2	ND	166.3	83.17	ug/kg	U	1
Dimethyl phthalate	131-11-3	ND	166.3	83.17	ug/kg	U	1
2,4-Dimethylphenol	105-67-9	ND	166.3	83.17	ug/kg	U	1
4,6-Dinitro-2-methyl phenol	534-52-1	ND	166.3	83.17	ug/kg	U	1
2,4-Dinitrophenol	51-28-5	ND	332.7	166.3	ug/kg	U	1
2,4-Dinitrotoluene	121-14-2	ND	166.3	83.17	ug/kg	U	1
2,6-Dinitrotoluene	606-20-2	ND	166.3	83.17	ug/kg	U	1
Fluoranthene	206-44-0	ND	166.3	83.17	ug/kg	U	1
Fluorene	86-73-7	ND	166.3	83.17	ug/kg	U	1
Hexachlorobenzene	118-74-1	ND	166.3	83.17	ug/kg	U	1
Hexachlorobutadiene	87-68-3	ND	166.3	83.17	ug/kg	U	1
Hexachlorocyclopentadiene	77-47-4	ND	166.3	83.17	ug/kg	U	1
Hexachloroethane	67-72-1	ND	166.3	83.17	ug/kg	U	1

Blank Summary 13041921

WSP Environment & Energy - Reston, Reston, VA

Robinson Terminal

Analytical Method: **SW-846 8270 C** Prep Method: SW3550
Matrix: **SOLID**

Sample Id: **45669-1-BLK** Lab Sample Id: **45669-1-BLK**

Date Analyzed: Apr-24-13 21:49 Analyst: 1014 Date Prep: Apr-24-13 09:57 Tech: 1022
Seq Number: 105563

Parameter	Cas Number	Result	RL	LOD	Units	Flag	Dil
Indeno(1,2,3-c,d)Pyrene	193-39-5	ND	166.3	83.17	ug/kg	U	1
Isophorone	78-59-1	ND	166.3	83.17	ug/kg	U	1
2-Methylnaphthalene	91-57-6	ND	166.3	83.17	ug/kg	U	1
2-Methyl phenol	95-48-7	ND	166.3	83.17	ug/kg	U	1
3&4-Methylphenol		ND	166.3	83.17	ug/kg	U	1
Naphthalene	91-20-3	ND	166.3	83.17	ug/kg	U	1
4-Nitroaniline	100-01-6	ND	166.3	83.17	ug/kg	U	1
3-Nitroaniline	99-09-2	ND	166.3	83.17	ug/kg	U	1
2-Nitroaniline	88-74-4	ND	332.7	166.3	ug/kg	U	1
Nitrobenzene	98-95-3	ND	166.3	83.17	ug/kg	U	1
2-Nitrophenol	88-75-5	ND	166.3	83.17	ug/kg	U	1
4-Nitrophenol	100-02-7	ND	166.3	83.17	ug/kg	U	1
N-Nitrosodi-n-propyl amine	621-64-7	ND	166.3	83.17	ug/kg	U	1
N-Nitrosodiphenylamine	86-30-6	ND	166.3	83.17	ug/kg	U	1
Di-n-octyl phthalate	117-84-0	ND	166.3	83.17	ug/kg	U	1
Pentachlorophenol	87-86-5	ND	332.7	166.3	ug/kg	U	1
Phenanthrene	85-01-8	ND	166.3	83.17	ug/kg	U	1
Phenol	108-95-2	ND	166.3	83.17	ug/kg	U	1
Atrazine	1912-24-9	ND	166.3	83.17	ug/kg	U	1
Pyrene	129-00-0	ND	166.3	83.17	ug/kg	U	1
Pyridine	110-86-1	ND	166.3	83.17	ug/kg	U	1
Caprolactam	105-60-2	ND	166.3	83.17	ug/kg	U	1
2,4,6-Trichlorophenol	88-06-2	ND	166.3	83.17	ug/kg	U	1
2,4,5-Trichlorophenol	95-95-4	ND	166.3	83.17	ug/kg	U	1

Form 3 - MS / MSD Recoveries

Project Name: Robinson Terminal

Work Order # : 13041921

Client Sample Id: SB-1 (GW) S **Project ID:** 36454

Prep Batch #: 45664 **Date Prepared:** 04/24/2013 **Sample ID:** 13041921-011 S **Analyst:** 1033

Lab Batch ID: 105552 **Date Analyzed:** 04/24/2013 **Method:** SW3010A /SW6020 **Matrix:** Ground Water

Reporting Units: ug/L

RCRA Metals Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Arsenic	<1.000	40.00	30.88	77	40.00	32.05	80	4	75-125	25	
Barium	26.51	40.00	60.23	84	40.00	63.03	91	5	75-125	25	
Cadmium	<1.000	40.00	30.17	75	40.00	30.85	77	2	75-125	25	
Chromium	<1.000	40.00	34.87	87	40.00	35.58	89	2	75-125	25	
Lead	<1.000	40.00	36.37	91	40.00	37.76	94	4	75-125	25	
Mercury	<0.2000	1.000	0.8400	84	1.000	0.8400	84	0	75-125	25	
Selenium	<1.000	40.00	24.64	62	40.00	26.10	65	6	75-125	25	X
Silver	<1.000	40.00	33.45	84	40.00	34.00	85	2	75-125	25	

Client Sample Id: SB-4 (17-18) S

Prep Batch #: 45675 **Date Prepared:** 04/24/2013 **Sample ID:** 13041921-002 S **Analyst:** 1033

Lab Batch ID: 105587 **Date Analyzed:** 04/25/2013 **Method:** SW3050B /SW6020 **Matrix:** Soil

Reporting Units: mg/kg

RCRA Metals Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Arsenic	4.429	25.34	24.88	81	24.28	23.20	77	7	75-125	30	
Barium	91.52	25.34	109.6	71	24.28	115.6	99	5	75-125	30	X
Cadmium	<3.168	25.34	23.37	92	24.28	23.28	96	0	75-125	30	
Chromium	19.78	25.34	41.76	87	24.28	41.74	90	0	75-125	30	
Lead	9.634	25.34	32.73	91	24.28	31.89	92	3	75-125	30	
Mercury	<0.1267	0.6336	0.6590	104	0.6070	0.6435	106	2	75-125	30	
Selenium	<3.168	25.34	19.22	76	24.28	19.44	80	1	75-125	30	
Silver	<3.168	25.34	24.50	97	24.28	23.97	99	2	75-125	30	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
XF = Recovery of MS, MSD or both outside of QC Criteria and RPD exceeded the laboratory control limits.

Form 3 - MS / MSD Recoveries

Project Name: Robinson Terminal

Work Order # : 13041921

Client Sample Id: SB-1 (GW) S **Project ID:** 36454

Prep Batch #: 45665 **Date Prepared:** 04/24/2013 **Sample ID:** 13041921-011 S **Analyst:** 1040

Lab Batch ID: 105548 **Date Analyzed:** 04/24/2013 **Method:** SW3510C /SW8015DRO **Matrix:** Ground Water

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Total Petroleum Hydrocarbons - DRO Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH-DRO (Diesel Range Organics)	0.2235	1.000	1.018	79	1.000	1.018	79	0	33-157	25	

Client Sample Id: Tank #4-2 S

Prep Batch #: 45692 **Date Prepared:** 04/26/2013 **Sample ID:** 13042423-002 S **Analyst:** 1040

Lab Batch ID: 105605 **Date Analyzed:** 04/26/2013 **Method:** SW3550 /SW8015DRO **Matrix:** Soil

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Total Petroleum Hydrocarbons - DRO Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH-DRO (Diesel Range Organics)	<4.203	35.03	26.96	77	35.14	29.17	83	8	13-183	30	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
XF = Recovery of MS, MSD or both outside of QC Criteria and RPD exceeded the laboratory control limits.

Form 3 - MS / MSD Recoveries

Project Name: Robinson Terminal

Work Order # : 13041921

Client Sample Id: SB-1 (GW) S **Project ID:** 36454

Prep Batch #: 45657 **Date Prepared:** 04/22/2013 **Sample ID:** 13041921-011 S **Analyst:** 1035

Lab Batch ID: 105504 **Date Analyzed:** 04/22/2013 **Method:** SW5030 /SW8021B_SW8015 **Matrix:** Ground Water

Reporting Units: ug/L

Total Petroleum Hydrocarbons-GRO Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH-GRO (Gasoline Range Organics)	<100	5000	3815	76	5000	4376	88	14	67-134	25	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
XF = Recovery of MS, MSD or both outside of QC Criteria and RPD exceeded the laboratory control limits.

Final 1.000

Form 3 - MS / MSD Recoveries

Project Name: Robinson Terminal

Work Order # : 13041921

Client Sample Id: SB-4 (17-18) S **Project ID:** 36454

Prep Batch #: 45653 **Date Prepared:** 04/23/2013 **Sample ID:** 13041921-002 S **Analyst:** 1029

Lab Batch ID: 105536 **Date Analyzed:** 04/23/2013 **Method:** SW3550 /SW8082 **Matrix:** Soil

Reporting Units: mg/kg

Polychlorinated Biphenyls Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
PCB-1016	<0.1267	0.6336	0.5071	80	0.6986	0.5470	78	8	51-109	30	
PCB-1260	<0.1267	0.6336	0.4396	69	0.6986	0.4542	65	3	53-115	30	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
XF = Recovery of MS, MSD or both outside of QC Criteria and RPD exceeded the laboratory control limits.

Form 3 - MS / MSD Recoveries

Project Name: Robinson Terminal

Work Order # : 13041921

Client Sample Id: SB-4 (17-18) S **Project ID:** 36454

Prep Batch #: 45673 **Date Prepared:** 04/23/2013 **Sample ID:** 13041921-002 S **Analyst:** 1011

Lab Batch ID: 105526 **Date Analyzed:** 04/23/2013 **Method:** SW5035 /SW8260B **Matrix:** Soil

Reporting Units: ug/kg

TCL Volatile Organic Compounds Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	Marginal Exceedance Limit
Dichlorodifluoromethane	<6.931	83.17	59.28	71	89.03	78.18	88	27	38-187	30		13-211
Chloromethane	<6.931	83.17	47.49	57	89.03	62.00	70	27	45-174	30		23-196
1,1,2-Trichloro-1,2,2-Trifluoroethane	<6.931	83.17	52.06	63	89.03	61.82	69	17	35-166	30		13-187
Vinyl Chloride	<6.931	83.17	43.93	53	89.03	55.05	62	22	40-165	30		19-186
Bromomethane	<6.931	83.17	61.81	74	89.03	78.41	88	24	42-168	30		21-190
Chloroethane	<6.931	83.17	51.30	62	89.03	62.51	70	20	45-171	30		24-192
Acetone	<27.72	83.17	102.3	123	89.03	116.1	130	13	42-146	30		24-164
Cyclohexane	<27.72	83.17	36.61	44	89.03	45.51	51	22	20-144	30		1-164
Trichlorofluoromethane	<6.931	83.17	65.59	79	89.03	78.72	88	18	35-163	30		13-185
1,1-Dichloroethene	<6.931	83.17	55.26	66	89.03	65.84	74	17	46-157	30		27-176
Methylene Chloride	<6.931	83.17	54.39	65	89.03	65.47	74	18	49-137	30		34-152
trans-1,2-Dichloroethene	<6.931	83.17	54.57	66	89.03	65.99	74	19	48-144	30		32-159
Methyl-t-butyl ether	<6.931	83.17	57.18	69	89.03	70.16	79	20	40-120	30		27-133
1,1-Dichloroethane	<6.931	83.17	47.21	57	89.03	57.35	64	19	46-134	30		31-149
2-Butanone (MEK)	<27.72	83.17	85.50	103	89.03	103.4	116	19	39-147	30		22-165
cis-1,2-Dichloroethene	<6.931	83.17	55.62	67	89.03	67.20	75	19	49-128	30		36-141
Bromochloromethane	<6.931	83.17	65.65	79	89.03	79.39	89	19	54-112	30		44-122
Chloroform	<6.931	83.17	49.15	59	89.03	59.41	67	19	48-124	30		35-136
1,1,1-Trichloroethane	<6.931	83.17	44.40	53	89.03	54.00	61	20	38-126	30		24-141
1,2-Dichloroethane	<6.931	83.17	52.73	63	89.03	63.85	72	19	39-118	30		26-131
Carbon Tetrachloride	<6.931	83.17	46.80	56	89.03	56.61	64	19	35-128	30		20-143
Benzene	<6.931	83.17	51.23	62	89.03	62.40	70	20	50-134	30		35-148
1,2-Dichloropropane	<6.931	83.17	55.96	67	89.03	68.41	77	20	48-128	30		35-141
Carbon Disulfide	<13.86	83.17	46.31	56	89.03	54.01	61	15	31-137	30		13-154

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
XF = Recovery of MS, MSD or both outside of QC Criteria and RPD exceeded the laboratory control limits.

Form 3 - MS / MSD Recoveries

Project Name: Robinson Terminal

Work Order # : 13041921

Client Sample Id:

Project ID: 36454

Prep Batch #: 45673 **Date Prepared:** 04/23/2013 **Sample ID:** 13041921-002 S **Analyst:** 1011

Lab Batch ID: 105526 **Date Analyzed:** 04/23/2013 **Method:** SW5035 /SW8260B **Matrix:** Soil

Reporting Units: ug/kg

TCL Volatile Organic Compounds Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	Marginal Exceedance Limit
Methylcyclohexane	<27.72	83.17	43.05	52	89.03	54.12	61	23	12-145	30		1-167
Trichloroethene	<6.931	83.17	51.13	61	89.03	61.79	69	19	46-122	30		33-135
Methyl Acetate	<27.72	83.17	91.39	110	89.03	106.6	120	15	42-143	30		25-160
Bromodichloromethane	<6.931	83.17	50.01	60	89.03	60.47	68	19	38-123	30		24-137
cis-1,3-Dichloropropene	<6.931	83.17	54.36	65	89.03	65.38	73	18	34-131	30		18-147
4-Methyl-2-Pentanone	<27.72	83.17	87.39	105	89.03	101.4	114	15	42-119	30		29-132
trans-1,3-Dichloropropene	<6.931	83.17	58.33	70	89.03	71.18	80	20	28-131	30		11-148
1,1,2-Trichloroethane	<6.931	83.17	67.95	82	89.03	82.81	93	20	40-131	30		25-146
Toluene	<6.931	83.17	56.08	67	89.03	68.27	77	20	38-128	30		23-142
2-Hexanone	<27.72	83.17	70.98	85	89.03	90.25	101	24	29-141	30		10-159
1,2-Dibromoethane (EDB)	<6.931	83.17	67.64	81	89.03	79.99	90	17	46-112	30		35-123
Dibromochloromethane	<6.931	83.17	56.19	68	89.03	64.43	72	14	51-110	30		41-120
Bromoform	<6.931	83.17	59.27	71	89.03	70.08	79	17	44-108	30		34-119
Tetrachloroethene	<6.931	83.17	59.96	72	89.03	71.11	80	17	25-132	30		8-150
Chlorobenzene	<6.931	83.17	55.44	67	89.03	64.19	72	15	40-121	30		27-134
Ethylbenzene	<6.931	83.17	50.15	60	89.03	59.10	66	16	44-125	30		30-139
m,p-Xylenes	<13.86	166.3	106.6	64	178.1	125.4	70	16	42-125	30		28-139
Styrene	<6.931	83.17	50.62	61	89.03	59.37	67	16	55-111	30		46-120
1,1,2,2-Tetrachloroethane	<6.931	83.17	70.97	85	89.03	78.29	88	10	59-117	30		49-127
o-Xylene	<6.931	83.17	50.54	61	89.03	59.75	67	17	36-123	30		22-137
Isopropylbenzene	<6.931	83.17	52.62	63	89.03	55.13	62	5	32-120	30		18-135
1,3-Dichlorobenzene	<6.931	83.17	56.76	68	89.03	58.85	66	4	20-125	30		3-142
1,4-Dichlorobenzene	<6.931	83.17	56.87	68	89.03	59.34	67	4	30-121	30		15-136
1,2-Dichlorobenzene	<6.931	83.17	55.46	67	89.03	58.88	66	6	23-123	30		6-140

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
XF = Recovery of MS, MSD or both outside of QC Criteria and RPD exceeded the laboratory control limits.

Final 1.000

Form 3 - MS / MSD Recoveries

Project Name: Robinson Terminal

Work Order # : 13041921

Client Sample Id:

Project ID: 36454

Prep Batch #: 45673 **Date Prepared:** 04/23/2013 **Sample ID:** 13041921-002 S **Analyst:** 1011

Lab Batch ID: 105526 **Date Analyzed:** 04/23/2013 **Method:** SW5035 /SW8260B **Matrix:** Soil

Reporting Units: ug/kg

TCL Volatile Organic Compounds Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	Marginal Exceedance Limit
1,2-Dibromo-3-Chloropropane	<55.44	83.17	<55.44	0	89.03	63.02	71	200	37-122	30	XF	22-137
1,2,4-Trichlorobenzene	<6.931	83.17	49.60	60	89.03	51.99	58	5	7-111	30		1-128
Naphthalene	<6.931	83.17	49.57	60	89.03	57.32	64	15	22-121	30		5-138
1,2,3-Trichlorobenzene	<6.931	83.17	49.04	59	89.03	52.80	59	7	6-111	30		1-129

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
XF = Recovery of MS, MSD or both outside of QC Criteria and RPD exceeded the laboratory control limits.

Final 1.000

Form 3 - MS / MSD Recoveries

Project Name: Robinson Terminal

Work Order # : 13041921

Client Sample Id: SB-1 (GW) S **Project ID:** 36454

Prep Batch #: 45674 **Date Prepared:** 04/23/2013 **Sample ID:** 13041921-011 S **Analyst:** 1011

Lab Batch ID: 105527 **Date Analyzed:** 04/23/2013 **Method:** SW5030B /SW8260B **Matrix:** Ground Water

Reporting Units: ug/L

TCL Volatile Organic Compounds Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	Marginal Exceedance Limit
Dichlorodifluoromethane	<1.000	50.00	65.44	131	50.00	63.96	128	2	66-170	25		49-188
Chloromethane	<1.000	50.00	56.46	113	50.00	57.61	115	2	74-130	25		64-139
1,1,2-Trichloro-1,2,2-Trifluoroethane	<1.000	50.00	57.77	116	50.00	55.92	112	3	76-133	25		67-143
Vinyl Chloride	<1.000	50.00	48.05	96	50.00	44.79	90	7	72-136	25		62-147
Bromomethane	<1.000	50.00	52.11	104	50.00	49.64	99	5	82-140	25		72-150
Chloroethane	<1.000	50.00	57.33	115	50.00	53.58	107	7	77-135	25		67-144
Acetone	<10.00	50.00	52.12	104	50.00	59.38	119	13	22-154	25		1-176
Cyclohexane	<10.00	50.00	46.87	94	50.00	45.57	91	3	44-159	25		24-179
Trichlorofluoromethane	<5.000	50.00	59.00	118	50.00	58.84	118	0	79-156	25		67-169
1,1-Dichloroethene	<1.000	50.00	51.89	104	50.00	49.21	98	5	84-125	25		77-131
Methylene Chloride	<1.000	50.00	54.34	109	50.00	53.09	106	2	81-123	25		74-129
trans-1,2-Dichloroethene	<1.000	50.00	54.18	108	50.00	54.43	109	0	85-132	25		77-140
Methyl-t-butyl ether	<1.000	50.00	51.43	103	50.00	52.35	105	2	75-135	25		65-145
1,1-Dichloroethane	<1.000	50.00	57.69	115	50.00	57.43	115	0	88-126	25		82-133
2-Butanone (MEK)	<10.00	50.00	49.19	98	50.00	48.50	97	1	33-143	25		15-161
cis-1,2-Dichloroethene	<1.000	50.00	48.14	96	50.00	47.88	96	1	90-132	25		83-139
Bromochloromethane	<1.000	50.00	48.10	96	50.00	48.88	98	2	90-131	25		83-138
Chloroform	<1.000	50.00	52.60	105	50.00	52.59	105	0	91-136	25		83-143
1,1,1-Trichloroethane	<1.000	50.00	54.37	109	50.00	54.62	109	0	90-158	25		79-169
1,2-Dichloroethane	<1.000	50.00	53.86	108	50.00	53.32	107	1	90-137	25		82-145
Carbon Tetrachloride	<1.000	50.00	43.67	87	50.00	43.64	87	0	80-157	25		67-170
Benzene	<1.000	50.00	50.31	101	50.00	49.76	100	1	85-131	25		77-138
1,2-Dichloropropane	<1.000	50.00	58.54	117	50.00	58.11	116	1	84-129	25		77-136
Methyl Acetate	<10.00	50.00	55.97	112	50.00	54.49	109	3	40-127	25		25-142

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
XF = Recovery of MS, MSD or both outside of QC Criteria and RPD exceeded the laboratory control limits.

Form 3 - MS / MSD Recoveries

Project Name: Robinson Terminal

Work Order # : 13041921

Client Sample Id:

Project ID: 36454

Prep Batch #: 45674 **Date Prepared:** 04/23/2013 **Sample ID:** 13041921-011 S **Analyst:** 1011

Lab Batch ID: 105527 **Date Analyzed:** 04/23/2013 **Method:** SW5030B /SW8260B **Matrix:** Ground Water

Reporting Units: ug/L

TCL Volatile Organic Compounds Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	Marginal Exceedance Limit
Methylcyclohexane	<10.00	50.00	44.62	89	50.00	46.50	93	4	64-140	25		51-152
Trichloroethene	<1.000	50.00	47.46	95	50.00	46.49	93	2	89-134	25		81-141
Carbon Disulfide	<10.00	50.00	50.00	100	50.00	46.84	94	7	79-134	25		70-143
Bromodichloromethane	<1.000	50.00	53.04	106	50.00	53.26	107	0	78-125	25		70-133
cis-1,3-Dichloropropene	<1.000	50.00	52.78	106	50.00	53.23	106	1	72-116	25		64-123
4-Methyl-2-Pentanone	<5.000	50.00	44.92	90	50.00	45.26	91	1	60-127	25		49-139
trans-1,3-Dichloropropene	<1.000	50.00	45.56	91	50.00	45.96	92	1	69-115	25		61-122
1,1,2-Trichloroethane	<1.000	50.00	50.64	101	50.00	49.86	100	2	83-129	25		75-137
Toluene	<1.000	50.00	48.03	96	50.00	47.07	94	2	87-125	25		81-131
2-Hexanone	<10.00	50.00	46.60	93	50.00	47.66	95	2	59-127	25		48-138
1,2-Dibromoethane (EDB)	<1.000	50.00	51.59	103	50.00	51.27	103	1	86-128	25		79-135
Dibromochloromethane	<1.000	50.00	42.39	85	50.00	42.73	85	1	68-128	25		58-138
Bromoform	<5.000	50.00	37.08	74	50.00	37.23	74	0	57-124	25		45-135
Tetrachloroethene	<1.000	50.00	42.39	85	50.00	41.07	82	3	91-127	25	X	85-133
Chlorobenzene	<1.000	50.00	49.18	98	50.00	48.37	97	2	87-123	25		81-129
Ethylbenzene	<1.000	50.00	49.55	99	50.00	49.29	99	1	88-129	25		81-135
m,p-Xylenes	<2.000	100	96.66	97	100	95.41	95	1	88-126	25		81-132
Styrene	<1.000	50.00	49.15	98	50.00	48.84	98	1	88-129	25		81-136
1,1,2,2-Tetrachloroethane	<1.000	50.00	54.61	109	50.00	53.61	107	2	77-125	25		69-134
o-Xylene	<1.000	50.00	49.48	99	50.00	49.05	98	1	91-128	25		85-134
Isopropylbenzene	<1.000	50.00	50.23	100	50.00	49.13	98	2	86-134	25		78-141
1,3-Dichlorobenzene	<1.000	50.00	46.99	94	50.00	46.11	92	2	86-121	25		80-127
1,4-Dichlorobenzene	<1.000	50.00	46.83	94	50.00	45.55	91	3	84-118	25		78-123
1,2-Dichlorobenzene	<1.000	50.00	47.02	94	50.00	47.36	95	1	85-119	25		80-125

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
XF = Recovery of MS, MSD or both outside of QC Criteria and RPD exceeded the laboratory control limits.

Form 3 - MS / MSD Recoveries

Project Name: Robinson Terminal

Work Order # : 13041921

Client Sample Id:

Project ID: 36454

Prep Batch #: 45674 **Date Prepared:** 04/23/2013 **Sample ID:** 13041921-011 S **Analyst:** 1011

Lab Batch ID: 105527 **Date Analyzed:** 04/23/2013 **Method:** SW5030B /SW8260B **Matrix:** Ground Water

Reporting Units: ug/L

TCL Volatile Organic Compounds Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	Marginal Exceedance Limit
1,2-Dibromo-3-Chloropropane	<10.00	50.00	42.65	85	50.00	45.79	92	7	56-107	25		48-115
1,2,4-Trichlorobenzene	<1.000	50.00	35.67	71	50.00	40.89	82	14	50-130	25		37-143
Naphthalene	<1.000	50.00	30.99	62	50.00	41.75	84	30	38-143	25	F	20-161
1,2,3-Trichlorobenzene	<1.000	50.00	30.57	61	50.00	40.37	81	28	36-135	25	F	19-151

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
XF = Recovery of MS, MSD or both outside of QC Criteria and RPD exceeded the laboratory control limits.

Final 1.000

Form 3 - MS / MSD Recoveries

Project Name: Robinson Terminal

Work Order # : 13041921

Client Sample Id: Composite S **Project ID:** 36454

Prep Batch #: 45684 **Date Prepared:** 04/24/2013 **Sample ID:** 13042408-001 S **Analyst:** 1011

Lab Batch ID: 105555 **Date Analyzed:** 04/24/2013 **Method:** SW5030 /SW8260B **Matrix:** Soil

Reporting Units: ug/kg

TCL Volatile Organic Compounds Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	Marginal Exceedance Limit
Dichlorodifluoromethane	<6.599	79.19	79.85	101	77.77	56.52	73	34	38-187	30	F	13-211
Chloromethane	<6.599	79.19	68.02	86	77.77	53.26	68	24	45-174	30		23-196
1,1,2-Trichloro-1,2,2-Trifluoroethane	<6.599	79.19	60.21	76	77.77	46.00	59	27	35-166	30		13-187
Vinyl Chloride	<6.599	79.19	60.01	76	77.77	41.10	53	37	40-165	30	F	19-186
Bromomethane	<6.599	79.19	48.42	61	77.77	53.33	69	10	42-168	30		21-190
Chloroethane	<6.599	79.19	68.95	87	77.77	53.13	68	26	45-171	30		24-192
Acetone	46.50	79.19	110.3	81	77.77	96.56	64	13	42-146	30		24-164
Cyclohexane	<26.40	79.19	42.63	54	77.77	35.60	46	18	20-144	30		1-164
Trichlorofluoromethane	<6.599	79.19	66.65	84	77.77	53.80	69	21	35-163	30		13-185
1,1-Dichloroethene	<6.599	79.19	61.25	77	77.77	47.41	61	25	46-157	30		27-176
Methylene Chloride	<6.599	79.19	55.23	70	77.77	40.09	52	32	49-137	30	F	34-152
trans-1,2-Dichloroethene	<6.599	79.19	51.57	65	77.77	32.40	42	46	48-144	30	XF	32-159
Methyl-t-butyl ether	<6.599	79.19	58.35	74	77.77	51.08	66	13	40-120	30		27-133
1,1-Dichloroethane	<6.599	79.19	58.38	74	77.77	48.86	63	18	46-134	30		31-149
2-Butanone (MEK)	<26.40	79.19	51.42	65	77.77	53.30	69	4	39-147	30		22-165
cis-1,2-Dichloroethene	<6.599	79.19	59.31	75	77.77	44.51	57	29	49-128	30		36-141
Bromochloromethane	<6.599	79.19	66.10	83	77.77	51.52	66	25	54-112	30		44-122
Chloroform	<6.599	79.19	50.96	64	77.77	44.70	57	13	48-124	30		35-136
1,1,1-Trichloroethane	<6.599	79.19	49.11	62	77.77	44.15	57	11	38-126	30		24-141
1,2-Dichloroethane	<6.599	79.19	48.61	61	77.77	44.24	57	9	39-118	30		26-131
Carbon Tetrachloride	<6.599	79.19	41.83	53	77.77	38.97	50	7	35-128	30		20-143
Benzene	<6.599	79.19	51.24	65	77.77	47.88	62	7	50-134	30		35-148
1,2-Dichloropropane	<6.599	79.19	54.57	69	77.77	57.38	74	5	48-128	30		35-141
Carbon Disulfide	<13.20	79.19	34.41	43	77.77	18.79	24	59	31-137	30	XF	13-154

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
XF = Recovery of MS, MSD or both outside of QC Criteria and RPD exceeded the laboratory control limits.

Form 3 - MS / MSD Recoveries

Project Name: Robinson Terminal

Work Order # : 13041921

Client Sample Id:

Project ID: 36454

Prep Batch #: 45684 **Date Prepared:** 04/24/2013 **Sample ID:** 13042408-001 S **Analyst:** 1011

Lab Batch ID: 105555 **Date Analyzed:** 04/24/2013 **Method:** SW5030 /SW8260B **Matrix:** Soil

Reporting Units: ug/kg

TCL Volatile Organic Compounds Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	Marginal Exceedance Limit
Methylcyclohexane	<26.40	79.19	38.21	48	77.77	35.29	45	8	12-145	30		1-167
Trichloroethene	<6.599	79.19	50.50	64	77.77	44.90	58	12	46-122	30		33-135
Methyl Acetate	<26.40	79.19	57.85	73	77.77	51.90	67	11	42-143	30		25-160
Bromodichloromethane	<6.599	79.19	39.38	50	77.77	39.00	50	1	38-123	30		24-137
cis-1,3-Dichloropropene	<6.599	79.19	41.75	53	77.77	39.61	51	5	34-131	30		18-147
4-Methyl-2-Pentanone	<26.40	79.19	45.84	58	77.77	54.19	70	17	42-119	30		29-132
trans-1,3-Dichloropropene	<6.599	79.19	38.47	49	77.77	34.57	44	11	28-131	30		11-148
1,1,2-Trichloroethane	<6.599	79.19	44.28	56	77.77	47.94	62	8	40-131	30		25-146
Toluene	<6.599	79.19	45.14	57	77.77	48.01	62	6	38-128	30		23-142
2-Hexanone	<26.40	79.19	35.61	45	77.77	46.06	59	26	29-141	30		10-159
1,2-Dibromoethane (EDB)	<6.599	79.19	46.97	59	77.77	43.51	56	8	46-112	30		35-123
Dibromochloromethane	<6.599	79.19	40.89	52	77.77	39.92	51	2	51-110	30		41-120
Bromoform	<6.599	79.19	34.80	44	77.77	34.24	44	2	44-108	30		34-119
Tetrachloroethene	<6.599	79.19	45.38	57	77.77	43.55	56	4	25-132	30		8-150
Chlorobenzene	<6.599	79.19	45.76	58	77.77	42.32	54	8	40-121	30		27-134
Ethylbenzene	<6.599	79.19	40.53	51	77.77	42.14	54	4	44-125	30		30-139
m,p-Xylenes	<13.20	158.4	91.23	58	155.5	88.28	57	3	42-125	30		28-139
Styrene	<6.599	79.19	39.58	50	77.77	37.61	48	5	55-111	30	X	46-120
1,1,2,2-Tetrachloroethane	<6.599	79.19	41.96	53	77.77	45.93	59	9	59-117	30	X	49-127
o-Xylene	<6.599	79.19	49.70	63	77.77	45.64	59	9	36-123	30		22-137
Isopropylbenzene	11.92	79.19	46.34	43	77.77	46.35	44	0	32-120	30		18-135
1,3-Dichlorobenzene	<6.599	79.19	36.28	46	77.77	32.57	42	11	20-125	30		3-142
1,4-Dichlorobenzene	<6.599	79.19	35.62	45	77.77	32.21	41	10	30-121	30		15-136
1,2-Dichlorobenzene	<6.599	79.19	37.80	48	77.77	33.12	43	13	23-123	30		6-140

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
XF = Recovery of MS, MSD or both outside of QC Criteria and RPD exceeded the laboratory control limits.

Form 3 - MS / MSD Recoveries

Project Name: Robinson Terminal

Work Order # : 13041921

Client Sample Id:

Project ID: 36454

Prep Batch #: 45684 **Date Prepared:** 04/24/2013 **Sample ID:** 13042408-001 S **Analyst:** 1011

Lab Batch ID: 105555 **Date Analyzed:** 04/24/2013 **Method:** SW5030 /SW8260B **Matrix:** Soil

Reporting Units: ug/kg

TCL Volatile Organic Compounds Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	Marginal Exceedance Limit
1,2-Dibromo-3-Chloropropane	<52.79	79.19	<52.79	0	77.77	<51.84	0	NC	37-122	30	X	22-137
1,2,4-Trichlorobenzene	<6.599	79.19	26.19	33	77.77	19.12	25	31	7-111	30	F	1-128
Naphthalene	188.4	79.19	155	0	77.77	206.5	23	28	22-121	30	X	5-138
1,2,3-Trichlorobenzene	<6.599	79.19	27.24	34	77.77	20.82	27	27	6-111	30		1-129

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
XF = Recovery of MS, MSD or both outside of QC Criteria and RPD exceeded the laboratory control limits.

Final 1.000

Form 3 - MS / MSD Recoveries

Project Name: Robinson Terminal

Work Order # : 13041921

Client Sample Id: B-4 (8.5-14) S **Project ID:** 36454

Prep Batch #: 45669 **Date Prepared:** 04/24/2013 **Sample ID:** 13042209-002 S **Analyst:** 1014

Lab Batch ID: 105563 **Date Analyzed:** 04/24/2013 **Method:** SW3550 /SW8270C **Matrix:** Soil

Reporting Units: ug/kg

TCL Semivolatile Organic Compounds Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	Marginal Exceedance Limit
Acenaphthene	<181.1	1449	1208	83	1422	1239	87	3	42-128	30		28-143
Acenaphthylene	<181.1	1449	1209	83	1422	1216	86	1	48-122	30		35-134
Acetophenone	<181.1	1449	1084	75	1422	1106	78	2	47-108	30		37-118
Anthracene	<181.1	1449	1173	81	1422	1155	81	2	65-114	30		57-122
Benzo(a)anthracene	<181.1	1449	1318	91	1422	1326	93	1	66-124	30		57-134
Benzo(a)pyrene	<181.1	1449	1302	90	1422	1302	92	0	61-117	30		52-126
Benzo(b)fluoranthene	<181.1	1449	1237	85	1422	1279	90	3	53-122	30		42-133
Benzo(g,h,i)perylene	<181.1	1449	1341	93	1422	1233	87	8	39-139	30		22-156
Benzo(k)fluoranthene	<181.1	1449	1335	92	1422	1369	96	3	64-123	30		54-133
Biphenyl (Diphenyl)	<181.1	1449	1219	84	1422	1257	88	3	39-139	30		18-156
Butyl benzyl phthalate	<181.1	1449	1411	97	1422	1447	102	3	55-150	30		39-166
bis(2-chloroethoxy) methane	<181.1	1449	999.9	69	1422	1012	71	1	40-121	30		27-135
bis(2-chloroethyl) ether	<181.1	1449	989.8	68	1422	1014	71	2	45-104	30		35-114
bis(2-chloroisopropyl) ether	<181.1	1449	1050	72	1422	1084	76	3	42-105	30		32-115
bis(2-ethylhexyl) phthalate	<181.1	1449	1385	96	1422	1433	101	3	54-155	30		38-172
4-Bromophenylphenyl ether	<181.1	1449	1088	75	1422	1082	76	1	56-121	30		45-131
Di-n-butyl phthalate	<362.2	1449	1198	83	1422	1228	86	2	62-132	30		51-144
Carbazole	<181.1	1449	1093	75	1422	1096	77	0	50-123	30		38-135
4-Chloro-3-methyl phenol	<181.1	1449	1244	86	1422	1270	89	2	46-114	30		35-125
4-Chloroaniline	<362.2	1449	1115	77	1422	1126	79	1	43-117	30		30-130
2-Chloronaphthalene	<181.1	1449	1227	85	1422	1227	86	0	44-114	30		33-125
2-Chlorophenol	<181.1	1449	1089	75	1422	1107	78	2	44-108	30		33-118
4-Chlorophenyl Phenyl ether	<181.1	1449	1114	77	1422	1116	78	0	53-116	30		42-127
Chrysene	<181.1	1449	1270	88	1422	1279	90	1	66-122	30		57-132

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
XF = Recovery of MS, MSD or both outside of QC Criteria and RPD exceeded the laboratory control limits.

Form 3 - MS / MSD Recoveries

Project Name: Robinson Terminal

Work Order # : 13041921

Client Sample Id:

Project ID: 36454

Prep Batch #: 45669 **Date Prepared:** 04/24/2013 **Sample ID:** 13042209-002 S **Analyst:** 1014

Lab Batch ID: 105563 **Date Analyzed:** 04/24/2013 **Method:** SW3550 /SW8270C **Matrix:** Soil

Reporting Units: ug/kg

TCL Semivolatile Organic Compounds Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	Marginal Exceedance Limit
Dibenz(a,h)Anthracene	<181.1	1449	1328	92	1422	1255	88	6	34-143	30		16-161
Dibenzofuran	<181.1	1449	1116	77	1422	1122	79	1	49-115	30		38-126
3,3-Dichlorobenzidine	<181.1	1449	1112	77	1422	1234	87	10	41-140	30		25-157
2,4-Dichlorophenol	<181.1	1449	1184	82	1422	1189	84	0	42-122	30		29-135
Diethyl phthalate	<181.1	1449	1439	99	1422	1449	102	1	64-125	30		54-135
Dimethyl phthalate	<181.1	1449	1293	89	1422	1292	91	0	47-141	30		32-157
2,4-Dimethylphenol	<181.1	1449	876.4	60	1422	787	55	11	30-118	30		16-133
4,6-Dinitro-2-methyl phenol	<181.1	1449	1316	91	1422	1337	94	2	26-135	30		8-153
2,4-Dinitrophenol	<362.2	1449	1260	87	1422	1307	92	4	42-143	30		25-160
2,4-Dinitrotoluene	<181.1	1449	1182	82	1422	1212	85	3	61-112	30		53-121
2,6-Dinitrotoluene	<181.1	1449	1167	81	1422	1170	82	0	56-114	30		46-123
Fluoranthene	<181.1	1449	1234	85	1422	1266	89	3	60-122	30		49-133
Fluorene	<181.1	1449	1211	84	1422	1223	86	1	57-116	30		47-126
Hexachlorobenzene	<181.1	1449	1177	81	1422	1178	83	0	60-115	30		51-124
Hexachlorobutadiene	<181.1	1449	1131	78	1422	1163	82	3	41-117	30		28-130
Hexachlorocyclopentadiene	<181.1	1449	1190	82	1422	1211	85	2	44-112	30		32-124
Hexachloroethane	<181.1	1449	1113	77	1422	1146	81	3	48-106	30		38-116
Indeno(1,2,3-c,d)Pyrene	<181.1	1449	1323	91	1422	1247	88	6	33-140	30		15-158
Isophorone	<181.1	1449	1131	78	1422	1160	82	3	37-122	30		23-136
2-Methylnaphthalene	<181.1	1449	994.5	69	1422	1018	72	2	48-116	30		36-127
2-Methyl phenol	<181.1	1449	1113	77	1422	1108	78	0	45-111	30		34-122
3&4-Methylphenol	<181.1	1449	1099	76	1422	1093	77	1	44-111	30		33-122
Naphthalene	<181.1	1449	1160	80	1422	1175	83	1	43-120	30		30-133
4-Nitroaniline	<181.1	1449	951.8	66	1422	948	67	0	25-128	30		8-145

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
XF = Recovery of MS, MSD or both outside of QC Criteria and RPD exceeded the laboratory control limits.

Final 1.000

Form 3 - MS / MSD Recoveries

Project Name: Robinson Terminal

Work Order # : 13041921

Client Sample Id:

Project ID: 36454

Prep Batch #: 45669 **Date Prepared:** 04/24/2013 **Sample ID:** 13042209-002 S **Analyst:** 1014

Lab Batch ID: 105563 **Date Analyzed:** 04/24/2013 **Method:** SW3550 /SW8270C **Matrix:** Soil

Reporting Units: ug/kg

TCL Semivolatile Organic Compounds Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	Marginal Exceedance Limit
3-Nitroaniline	<181.1	1449	1068	74	1422	1074	76	1	44-121	30		32-133
2-Nitroaniline	<362.2	1449	1190	82	1422	1199	84	1	41-117	30		29-129
Nitrobenzene	<181.1	1449	1060	73	1422	1081	76	2	41-117	30		28-130
2-Nitrophenol	<181.1	1449	1228	85	1422	1253	88	2	47-114	30		35-125
4-Nitrophenol	<181.1	1449	1232	85	1422	1271	89	3	29-132	30		11-149
N-Nitrosodi-n-propyl amine	<181.1	1449	1034	71	1422	1059	74	2	50-111	30		40-121
N-Nitrosodiphenylamine	<181.1	1449	1163	80	1422	1140	80	2	56-124	30		44-135
Di-n-octyl phthalate	<181.1	1449	1282	88	1422	1469	103	14	47-151	30		30-168
Pentachlorophenol	<362.2	1449	1260	87	1422	1294	91	3	56-110	30		47-119
Phenanthrene	<181.1	1449	1201	83	1422	1225	86	2	62-114	30		53-123
Phenol	<181.1	1449	1140	79	1422	1157	81	1	44-109	30		33-120
Atrazine	<181.1	1449	1306	90	1422	1358	95	4	10-145	30		1-171
Pyrene	<181.1	1449	1201	83	1422	1263	89	5	58-128	30		46-139
Pyridine	<181.1	1449	972.8	67	1422	990.7	70	2	39-96	30		29-106
Caprolactam	<181.1	1449	1247	86	1422	1192	84	5	34-124	30		19-139
2,4,6-Trichlorophenol	<181.1	1449	1273	88	1422	1265	89	1	43-113	30		31-124
2,4,5-Trichlorophenol	<181.1	1449	1329	92	1422	1327	93	0	50-127	30		37-139

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

F = RPD exceeded the laboratory control limits
X = Recovery of MS, MSD or both outside of QC Criteria
XF = Recovery of MS, MSD or both outside of QC Criteria and RPD exceeded the laboratory control limits.

Final 1.000

Blank Spike Recovery

Project Name: Robinson Terminal

Work Order #: 13041921 **Project ID:** 36454

Prep Batch #: 45664 **Date Prepared:** 04/24/2013 **Sample ID:** 45664-1-BKS **Matrix:** Water

Lab Batch ID: 105552 **Date Analyzed:** 04/24/2013 **Analyst:** 1033

Reporting Units: ug/L

BLANK /BLANK SPIKE RECOVERY STUDY

RCRA Metals Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Arsenic	<1.000	40.00	34.17	85	80-120	
Barium	<1.000	40.00	39.21	98	80-120	
Cadmium	<1.000	40.00	33.95	85	80-120	
Chromium	<1.000	40.00	36.99	92	80-120	
Lead	<1.000	40.00	39.01	98	80-120	
Mercury	<0.2000	1.000	0.8100	81	80-120	
Selenium	<1.000	40.00	28.31	71	80-120	,L,L,
Silver	<1.000	40.00	37.45	94	80-120	

Prep Batch #: 45675 **Date Prepared:** 04/24/2013 **Sample ID:** 45675-1-BKS **Matrix:** Solid

Lab Batch ID: 105587 **Date Analyzed:** 04/25/2013 **Analyst:** 1033

Reporting Units: mg/kg

BLANK /BLANK SPIKE RECOVERY STUDY

RCRA Metals Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Arsenic	<0.5000	20.00	18.38	92	80-120	
Barium	<2.500	20.00	21.32	107	80-120	
Cadmium	<2.500	20.00	19.41	97	80-120	
Chromium	<2.500	20.00	20.12	101	80-120	
Lead	<2.500	20.00	19.76	99	80-120	
Mercury	<0.1000	0.5000	0.5150	103	80-120	
Selenium	<2.500	20.00	17.01	85	80-120	
Silver	<2.500	20.00	21.20	106	80-120	

Blank Spike Recovery [D] = 100*(([C]-[A])/[B])

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

H= Recovery of BS,BSD or both exceeded the laboratory control limits
F = RPD exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

Blank Spike Recovery

Project Name: Robinson Terminal

Work Order #: 13041921 **Project ID:** 36454

Prep Batch #: 45657 **Date Prepared:** 04/22/2013 **Sample ID:** 45657-2-BKS **Matrix:** Water

Lab Batch ID: 105504 **Date Analyzed:** 04/22/2013 **Analyst:** 1035

Reporting Units: ug/L

BLANK /BLANK SPIKE RECOVERY STUDY

Total Petroleum Hydrocarbons-GRO Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
TPH-GRO (Gasoline Range Organics)	<100	5000	4882	98	64-127	

Blank Spike Recovery [D] = 100*(([C]-[A])/[B])

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

H= Recovery of BS,BSD or both exceeded the laboratory control limits
F = RPD exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

Blank Spike Recovery

Project Name: Robinson Terminal

Work Order #: 13041921 **Project ID:** 36454

Prep Batch #: 45673 **Date Prepared:** 04/23/2013 **Sample ID:** 45673-1-BKS **Matrix:** Solid

Lab Batch ID: 105526 **Date Analyzed:** 04/23/2013 **Analyst:** 1011

Reporting Units: ug/kg

TCL Volatile Organic Compounds Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags	Marginal Exceedance Limits
Dichlorodifluoromethane	<4.970	59.64	68.86	115	49-153		32-170
Chloromethane	<4.970	59.64	50.78	85	57-162		40-179
1,1,2-Trichloro-1,2,2-Trifluoroethane	<4.970	59.64	66.30	111	51-144		36-159
Vinyl Chloride	<4.970	59.64	51.39	86	53-146		38-161
Bromomethane	<4.970	59.64	75.07	126	49-170		29-190
Chloroethane	<4.970	59.64	54.40	91	68-145		55-158
Acetone	<19.88	59.64	45.96	77	48-138		33-153
Cyclohexane	<19.88	59.64	41.34	69	44-127		31-141
Trichlorofluoromethane	<4.970	59.64	75.27	126	39-152		20-171
1,1-Dichloroethene	<4.970	59.64	61.43	103	58-140		45-154
Methylene Chloride	<4.970	59.64	52.87	89	63-132		52-143
trans-1,2-Dichloroethene	<4.970	59.64	59.66	100	62-133		50-145
Methyl-t-butyl ether	<4.970	59.64	48.43	81	45-124		32-137
1,1-Dichloroethane	<4.970	59.64	50.32	84	62-124		52-134
2-Butanone (MEK)	<19.88	59.64	47.01	79	59-130		47-142
cis-1,2-Dichloroethene	<4.970	59.64	59.18	99	66-118		57-127
Bromochloromethane	<4.970	59.64	61.30	103	61-111		53-120
Chloroform	<4.970	59.64	51.47	86	55-121		44-132
1,1,1-Trichloroethane	<4.970	59.64	50.83	85	43-120		31-133
1,2-Dichloroethane	<4.970	59.64	47.15	79	42-129		27-143
Carbon Tetrachloride	<4.970	59.64	53.05	89	44-119		31-132
Benzene	<4.970	59.64	54.79	92	67-121		58-131
1,2-Dichloropropane	<4.970	59.64	56.81	95	65-118		56-127
Carbon Disulfide	<9.940	59.64	45.00	75	52-118		41-129
Methylcyclohexane	<19.88	59.64	48.63	82	49-123		37-135
Trichloroethene	<4.970	59.64	55.76	93	56-112		47-122
Methyl Acetate	<19.88	59.64	55.36	93	61-123		51-134
Bromodichloromethane	<4.970	59.64	48.59	81	51-119		40-130
cis-1,3-Dichloropropene	<4.970	59.64	53.56	90	53-123		41-135
4-Methyl-2-Pentanone	<19.88	59.64	51.70	87	38-125		24-139
trans-1,3-Dichloropropene	<4.970	59.64	53.36	89	44-126		30-139
1,1,2-Trichloroethane	<4.970	59.64	56.63	95	54-122		43-133
Toluene	<4.970	59.64	60.91	102	60-111		51-119
2-Hexanone	<19.88	59.64	40.75	68	35-138		17-155
1,2-Dibromoethane (EDB)	<4.970	59.64	54.32	91	59-106		52-114

Blank Spike Recovery [D] = 100*(([C]-[A])/[B])

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

H= Recovery of BS,BSD or both exceeded the laboratory control limits
F = RPD exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

Blank Spike Recovery

Project Name: Robinson Terminal

Work Order #: 13041921 **Project ID:** 36454

Prep Batch #: 45673 **Date Prepared:** 04/23/2013 **Sample ID:** 45673-1-BKS **Matrix:** Solid

Lab Batch ID: 105526 **Date Analyzed:** 04/23/2013 **Analyst:** 1011

Reporting Units: ug/kg

TCL Volatile Organic Compounds Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags	Marginal Exceedance Limits
Dibromochloromethane	<4.970	59.64	51.30	86	62-104		56-110
Bromoform	<4.970	59.64	51.06	86	51-101		42-110
Tetrachloroethene	<4.970	59.64	64.26	108	46-118		33-130
Chlorobenzene	<4.970	59.64	58.09	97	61-106		54-114
Ethylbenzene	<4.970	59.64	54.83	92	59-112		50-121
m,p-Xylenes	<9.940	119.3	117.9	99	60-111		51-120
Styrene	<4.970	59.64	56.29	94	61-105		53-113
1,1,2,2-Tetrachloroethane	<4.970	59.64	49.83	84	52-119		41-131
o-Xylene	<4.970	59.64	55.95	94	58-108		50-117
Isopropylbenzene	<4.970	59.64	52.60	88	51-116		40-126
1,3-Dichlorobenzene	<4.970	59.64	54.76	92	46-112		35-123
1,4-Dichlorobenzene	<4.970	59.64	54.50	91	45-113		34-125
1,2-Dichlorobenzene	<4.970	59.64	54.03	91	45-113		34-124
1,2-Dibromo-3-Chloropropane	<39.76	59.64	<39.76	0	47-110	L	36-121
1,2,4-Trichlorobenzene	<4.970	59.64	50.56	85	24-105		11-118
Naphthalene	<4.970	59.64	47.49	80	35-112		22-125
1,2,3-Trichlorobenzene	<4.970	59.64	49.40	83	25-103		12-116

Blank Spike Recovery [D] = 100*(([C]-[A])/[B])

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

H= Recovery of BS,BSD or both exceeded the laboratory control limits
F = RPD exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

Blank Spike Recovery

Project Name: Robinson Terminal

Work Order #: 13041921 **Project ID:** 36454

Prep Batch #: 45674 **Date Prepared:** 04/23/2013 **Sample ID:** 45674-1-BKS **Matrix:** Water

Lab Batch ID: 105527 **Date Analyzed:** 04/23/2013 **Analyst:** 1011

Reporting Units: ug/L

TCL Volatile Organic Compounds Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags	Marginal Exceedance Limits
Dichlorodifluoromethane	<1.000	50.00	57.27	115	70-154		56-168
Chloromethane	<1.000	50.00	50.63	101	74-121		66-129
1,1,2-Trichloro-1,2,2-Trifluoroethane	<1.000	50.00	48.93	98	74-129		65-138
Vinyl Chloride	<1.000	50.00	41.44	83	71-128		61-138
Bromomethane	<1.000	50.00	45.34	91	86-131		78-139
Chloroethane	<1.000	50.00	50.96	102	74-127		66-136
Acetone	<10.00	50.00	52.65	105	35-153		16-172
Cyclohexane	<10.00	50.00	44.41	89	53-151		37-168
Trichlorofluoromethane	<5.000	50.00	52.38	105	71-150		58-163
1,1-Dichloroethene	<1.000	50.00	45.82	92	81-118		74-124
Methylene Chloride	<1.000	50.00	49.18	98	80-117		74-123
trans-1,2-Dichloroethene	<1.000	50.00	53.53	107	78-131		69-139
Methyl-t-butyl ether	<1.000	50.00	49.97	100	78-132		69-141
1,1-Dichloroethane	<1.000	50.00	51.66	103	87-119		82-124
2-Butanone (MEK)	<10.00	50.00	49.69	99	46-143		29-160
cis-1,2-Dichloroethene	<1.000	50.00	47.84	96	87-127		81-134
Bromochloromethane	<1.000	50.00	49.40	99	86-129		78-136
Chloroform	<1.000	50.00	49.57	99	86-130		79-137
1,1,1-Trichloroethane	<1.000	50.00	52.51	105	80-157		67-170
1,2-Dichloroethane	<1.000	50.00	52.46	105	85-134		77-142
Carbon Tetrachloride	<1.000	50.00	41.30	83	76-150		63-162
Benzene	<1.000	50.00	47.13	94	84-123		78-129
1,2-Dichloropropane	<1.000	50.00	55.20	110	86-122		79-128
Methyl Acetate	<10.00	50.00	54.81	110	49-134		35-148
Methylcyclohexane	<10.00	50.00	45.32	91	60-144		46-158
Trichloroethene	<1.000	50.00	46.55	93	85-127		78-134
Carbon Disulfide	<10.00	50.00	47.94	96	76-125		68-134
Bromodichloromethane	<1.000	50.00	52.13	104	75-124		67-132
cis-1,3-Dichloropropene	<1.000	50.00	56.66	113	75-117		68-124
4-Methyl-2-Pentanone	<5.000	50.00	47.27	95	62-128		51-139
trans-1,3-Dichloropropene	<1.000	50.00	50.88	102	70-117		62-125
1,1,2-Trichloroethane	<1.000	50.00	48.99	98	84-124		77-130
Toluene	<1.000	50.00	46.04	92	84-120		78-126
2-Hexanone	<10.00	50.00	47.54	95	59-132		47-144
1,2-Dibromoethane (EDB)	<1.000	50.00	51.61	103	83-130		75-137

Blank Spike Recovery [D] = 100*(([C]-[A])/[B])

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

H= Recovery of BS,BSD or both exceeded the laboratory control limits
F = RPD exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

Blank Spike Recovery

Project Name: Robinson Terminal

Work Order #: 13041921 **Project ID:** 36454

Prep Batch #: 45674 **Date Prepared:** 04/23/2013 **Sample ID:** 45674-1-BKS **Matrix:** Water

Lab Batch ID: 105527 **Date Analyzed:** 04/23/2013 **Analyst:** 1011

Reporting Units: ug/L

TCL Volatile Organic Compounds Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags	Marginal Exceedance Limits
Dibromochloromethane	<1.000	50.00	44.26	89	65-130		54-141
Bromoform	<5.000	50.00	39.14	78	48-138		33-153
Tetrachloroethene	<1.000	50.00	41.01	82	83-126	L	76-133
Chlorobenzene	<1.000	50.00	47.33	95	86-119		80-124
Ethylbenzene	<1.000	50.00	46.74	93	88-122		83-127
m,p-Xylenes	<2.000	100	92.25	92	88-120		83-125
Styrene	<1.000	50.00	48.04	96	90-125		84-131
1,1,2,2-Tetrachloroethane	<1.000	50.00	53.18	106	76-126		68-134
o-Xylene	<1.000	50.00	46.34	93	90-123		85-128
Isopropylbenzene	<1.000	50.00	47.59	95	81-134		72-143
1,3-Dichlorobenzene	<1.000	50.00	48.75	98	84-124		77-130
1,4-Dichlorobenzene	<1.000	50.00	49.52	99	81-122		75-128
1,2-Dichlorobenzene	<1.000	50.00	48.63	97	83-123		77-129
1,2-Dibromo-3-Chloropropane	<10.00	50.00	48.28	97	53-127		40-139
1,2,4-Trichlorobenzene	<1.000	50.00	45.65	91	75-134		65-144
Naphthalene	<1.000	50.00	44.35	89	65-152		51-167
1,2,3-Trichlorobenzene	<1.000	50.00	44.55	89	67-147		53-161

Blank Spike Recovery [D] = 100*(([C]-[A])/[B])

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

H= Recovery of BS,BSD or both exceeded the laboratory control limits
F = RPD exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

Blank Spike Recovery

Project Name: Robinson Terminal

Work Order #: 13041921 **Project ID:** 36454

Prep Batch #: 45684 **Date Prepared:** 04/24/2013 **Sample ID:** 45684-1-BKS **Matrix:** Solid

Lab Batch ID: 105555 **Date Analyzed:** 04/24/2013 **Analyst:** 1011

Reporting Units: ug/kg

TCL Volatile Organic Compounds Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags	Marginal Exceedance Limits
Dichlorodifluoromethane	<5.155	61.86	66.35	107	49-153		32-170
Chloromethane	<5.155	61.86	58.61	95	57-162		40-179
1,1,2-Trichloro-1,2,2-Trifluoroethane	<5.155	61.86	57.06	92	51-144		36-159
Vinyl Chloride	<5.155	61.86	51.49	83	53-146		38-161
Bromomethane	<5.155	61.86	75.70	122	49-170		29-190
Chloroethane	<5.155	61.86	57.28	93	68-145		55-158
Acetone	<20.62	61.86	41.53	67	48-138		33-153
Cyclohexane	<20.62	61.86	41.65	67	44-127		31-141
Trichlorofluoromethane	<5.155	61.86	65.54	106	39-152		20-171
1,1-Dichloroethene	<5.155	61.86	57.16	92	58-140		45-154
Methylene Chloride	<5.155	61.86	50.92	82	63-132		52-143
trans-1,2-Dichloroethene	<5.155	61.86	55.86	90	62-133		50-145
Methyl-t-butyl ether	<5.155	61.86	46.63	75	45-124		32-137
1,1-Dichloroethane	<5.155	61.86	49.27	80	62-124		52-134
2-Butanone (MEK)	<20.62	61.86	44.10	71	59-130		47-142
cis-1,2-Dichloroethene	<5.155	61.86	53.04	86	66-118		57-127
Bromochloromethane	<5.155	61.86	52.43	85	61-111		53-120
Chloroform	<5.155	61.86	52.98	86	55-121		44-132
1,1,1-Trichloroethane	<5.155	61.86	47.87	77	43-120		31-133
1,2-Dichloroethane	<5.155	61.86	48.56	78	42-129		27-143
Carbon Tetrachloride	<5.155	61.86	48.67	79	44-119		31-132
Benzene	<5.155	61.86	54.95	89	67-121		58-131
1,2-Dichloropropane	<5.155	61.86	58.54	95	65-118		56-127
Carbon Disulfide	<10.31	61.86	44.36	72	52-118		41-129
Methylcyclohexane	<20.62	61.86	44.93	73	49-123		37-135
Trichloroethene	<5.155	61.86	52.37	85	56-112		47-122
Methyl Acetate	<20.62	61.86	50.90	82	61-123		51-134
Bromodichloromethane	<5.155	61.86	49.82	81	51-119		40-130
cis-1,3-Dichloropropene	<5.155	61.86	55.67	90	53-123		41-135
4-Methyl-2-Pentanone	<20.62	61.86	44.47	72	38-125		24-139
trans-1,3-Dichloropropene	<5.155	61.86	53.94	87	44-126		30-139
1,1,2-Trichloroethane	<5.155	61.86	52.73	85	54-122		43-133
Toluene	<5.155	61.86	54.35	88	60-111		51-119
2-Hexanone	<20.62	61.86	43.23	70	35-138		17-155
1,2-Dibromoethane (EDB)	<5.155	61.86	48.56	78	59-106		52-114

Blank Spike Recovery [D] = 100*(([C]-[A])/[B])

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

H= Recovery of BS,BSD or both exceeded the laboratory control limits
F = RPD exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

Blank Spike Recovery

Project Name: Robinson Terminal

Work Order #: 13041921 **Project ID:** 36454

Prep Batch #: 45684 **Date Prepared:** 04/24/2013 **Sample ID:** 45684-1-BKS **Matrix:** Solid

Lab Batch ID: 105555 **Date Analyzed:** 04/24/2013 **Analyst:** 1011

Reporting Units: ug/kg

TCL Volatile Organic Compounds Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags	Marginal Exceedance Limits
Dibromochloromethane	<5.155	61.86	46.65	75	62-104		56-110
Bromoform	<5.155	61.86	44.19	71	51-101		42-110
Tetrachloroethene	<5.155	61.86	55.25	89	46-118		33-130
Chlorobenzene	<5.155	61.86	51.84	84	61-106		54-114
Ethylbenzene	<5.155	61.86	52.34	85	59-112		50-121
m,p-Xylenes	<10.31	123.7	103.1	83	60-111		51-120
Styrene	<5.155	61.86	49.39	80	61-105		53-113
1,1,2,2-Tetrachloroethane	<5.155	61.86	47.62	77	52-119		41-131
o-Xylene	<5.155	61.86	49.43	80	58-108		50-117
Isopropylbenzene	<5.155	61.86	48.70	79	51-116		40-126
1,3-Dichlorobenzene	<5.155	61.86	48.03	78	46-112		35-123
1,4-Dichlorobenzene	<5.155	61.86	47.49	77	45-113		34-125
1,2-Dichlorobenzene	<5.155	61.86	46.10	75	45-113		34-124
1,2-Dibromo-3-Chloropropane	<41.24	61.86	<41.24	0	47-110	L	36-121
1,2,4-Trichlorobenzene	<5.155	61.86	40.56	66	24-105		11-118
Naphthalene	<5.155	61.86	38.26	62	35-112		22-125
1,2,3-Trichlorobenzene	<5.155	61.86	39.36	64	25-103		12-116

Blank Spike Recovery [D] = 100*(([C]-[A])/[B])

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

H= Recovery of BS,BSD or both exceeded the laboratory control limits
F = RPD exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

LCS/LCSD Recoveries

Project Name: Robinson Terminal

Work Order #: 13041921 **Project ID:** 36454

Prep Batch #: 45665 **Date Prepared:** 04/24/2013 **Sample:** 45665-1-BKS **Analyst:** 1040

Lab Batch ID: 105548 **Date Analyzed:** 04/24/2013 **Method:** SW3510C / SW8015DRO **Matrix:** Water

Units: mg/L

Total Petroleum Hydrocarbons - DRO	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH-DRO (Diesel Range Organics)	<0.1000	1.000	0.7315	73	1.000	0.7382	74	1	60-104	20	

Prep Batch #: 45692 **Date Prepared:** 04/26/2013 **Sample:** 45692-1-BKS **Analyst:** 1040

Lab Batch ID: 105605 **Date Analyzed:** 04/26/2013 **Method:** SW3550 / SW8015DRO **Matrix:** Solid

Units: mg/kg

Total Petroleum Hydrocarbons - DRO	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH-DRO (Diesel Range Organics)	<3.989	33.24	28.59	86	33.23	29.05	87	2	56-110	25	

Relative Percent Difference RPD = 200*|(D-G)/(D+G)|
Laboratory Control Sample (LCS) Percent Recovery [D] = 100*(C)/[B]
Laboratory Control Sample Duplicate (LCSD) Percent Recovery [G] = 100*(F)/[E]

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

H= Recovery of BS,BSD or both exceeded the laboratory control limits
F = RPD exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

LCS/LCSD Recoveries

Project Name: Robinson Terminal

Work Order #: 13041921 **Project ID:** 36454

Prep Batch #: 45653 **Date Prepared:** 04/23/2013 **Sample:** 45653-1-BKS **Analyst:** 1029

Lab Batch ID: 105536 **Date Analyzed:** 04/23/2013 **Method:** SW3550 / SW8082 **Matrix:** Solid

Units: mg/kg

	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Polychlorinated Biphenyls **Analytes**	**Blank Sample Result [A]**	**Spike Added [B]**	**Blank Spike Result [C]**	**Blank Spike %R [D]**	**Spike Added [E]**	**Blank Spike Duplicate Result [F]**	**Blk. Spk Dup. %R [G]**	**RPD %**	**Control Limits %R**	**Control Limits %RPD**	**Flag**
PCB-1016	<0.1018	0.5092	0.4498	88	0.4873	0.4178	86	7	61-108	25	
PCB-1260	<0.1018	0.5092	0.4074	80	0.4873	0.3669	75	10	62-107	25	

Relative Percent Difference RPD = 200*|(D-G)/(D+G)|
Laboratory Control Sample (LCS) Percent Recovery [D] = 100*(C)/[B]
Laboratory Control Sample Duplicate (LCSD) Percent Recovery [G] = 100*(F)/[E]

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

H= Recovery of BS,BSD or both exceeded the laboratory control limits
F = RPD exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

LCS/LCSD Recoveries

Project Name: Robinson Terminal

Work Order #: 13041921 **Project ID:** 36454

Prep Batch #: 45669 **Date Prepared:** 04/24/2013 **Sample:** 45669-1-BKS **Analyst:** 1014

Lab Batch ID: 105563 **Date Analyzed:** 04/24/2013 **Method:** SW3550 / SW8270C **Matrix:** Solid

Units: ug/kg

TCL Semivolatile Organic Compounds	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	Marginal Exceedance Limit
Acenaphthene	<165.9	1327	1218	92	1330	1213	91	0	63-115	25		55-123
Acenaphthylene	<165.9	1327	1190	90	1330	1189	89	0	64-115	25		55-124
Acetophenone	<165.9	1327	1091	82	1330	1086	82	0	56-120	25		46-130
Anthracene	<165.9	1327	1179	89	1330	1165	88	1	69-120	25		60-128
Benzo(a)anthracene	<165.9	1327	1274	96	1330	1252	94	2	63-128	25		53-139
Benzo(a)pyrene	<165.9	1327	1275	96	1330	1251	94	2	61-118	25		52-128
Benzo(b)fluoranthene	<165.9	1327	1203	91	1330	1157	87	4	56-119	25		45-129
Benzo(g,h,i)perylene	<165.9	1327	1134	85	1330	1282	96	12	47-140	25		32-155
Benzo(k)fluoranthene	<165.9	1327	1369	103	1330	1379	104	1	63-125	25		52-136
Biphenyl (Diphenyl)	<165.9	1327	1202	91	1330	1211	91	1	53-125	25		41-137
Butyl benzyl phthalate	<165.9	1327	1331	100	1330	1439	108	8	71-141	25		59-153
bis(2-chloroethoxy) methane	<165.9	1327	979.1	74	1330	996.7	75	2	59-120	25		48-130
bis(2-chloroethyl) ether	<165.9	1327	984.7	74	1330	959.8	72	3	57-116	25		47-126
bis(2-chloroisopropyl) ether	<165.9	1327	1062	80	1330	1046	79	2	56-111	25		47-120
bis(2-ethylhexyl) phthalate	<165.9	1327	1294	98	1330	1405	106	8	69-146	25		56-159
4-Bromophenylphenyl ether	<165.9	1327	1051	79	1330	1058	80	1	62-124	25		52-134
Di-n-butyl phthalate	<331.8	1327	1214	91	1330	1225	92	1	67-130	25		56-141
Carbazole	<165.9	1327	1081	81	1330	1037	78	4	18-137	25		0-157
4-Chloro-3-methyl phenol	<165.9	1327	1248	94	1330	1243	93	0	55-122	25		44-133
4-Chloroaniline	<331.8	1327	1141	86	1330	1148	86	1	42-126	25		28-140

Relative Percent Difference RPD = 200*|(D-G)/(D+G)|
Laboratory Control Sample (LCS) Percent Recovery [D] = 100*(C)/[B]
Laboratory Control Sample Duplicate (LCSD) Percent Recovery [G] = 100*(F)/[E]

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

H= Recovery of BS,BSD or both exceeded the laboratory control limits
F = RPD exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

LCS/LCSD Recoveries

Project Name: Robinson Terminal

Work Order #: 13041921 **Project ID:** 36454

Prep Batch #: 45669 **Date Prepared:** 04/24/2013 **Sample:** 45669-1-BKS **Analyst:** 1014

Lab Batch ID: 105563 **Date Analyzed:** 04/24/2013 **Method:** SW3550 / SW8270C **Matrix:** Solid

Units: ug/kg

TCL Semivolatile Organic Compounds	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	Marginal Exceedance Limit
2-Chloronaphthalene	<165.9	1327	1201	91	1330	1195	90	1	57-115	25		48-125
2-Chlorophenol	<165.9	1327	1084	82	1330	1071	81	1	56-117	25		46-127
4-Chlorophenyl Phenyl ether	<165.9	1327	1115	84	1330	1088	82	2	67-109	25		60-116
Chrysene	<165.9	1327	1261	95	1330	1248	94	1	67-124	25		57-134
Dibenz(a,h)Anthracene	<165.9	1327	1153	87	1330	1188	89	3	47-136	25		32-151
Dibenzofuran	<165.9	1327	1090	82	1330	1078	81	1	61-110	25		53-118
3,3-Dichlorobenzidine	<165.9	1327	1170	88	1330	1070	80	9	27-121	25		11-137
2,4-Dichlorophenol	<165.9	1327	1170	88	1330	1178	89	1	60-120	25		49-130
Diethyl phthalate	<165.9	1327	1418	107	1330	1399	105	1	66-129	25		55-139
Dimethyl phthalate	<165.9	1327	1245	94	1330	1228	92	1	66-130	25		56-141
2,4-Dimethylphenol	<165.9	1327	1118	84	1330	1122	84	0	53-119	25		42-130
4,6-Dinitro-2-methyl phenol	<165.9	1327	1247	94	1330	1240	93	1	17-148	25		0-170
2,4-Dinitrophenol	<331.8	1327	1191	90	1330	1138	86	5	44-131	25		29-146
2,4-Dinitrotoluene	<165.9	1327	1191	90	1330	1155	87	3	61-117	25		51-126
2,6-Dinitrotoluene	<165.9	1327	1152	87	1330	1145	86	1	61-115	25		52-125
Fluoranthene	<165.9	1327	1268	96	1330	1181	89	7	69-114	25		62-121
Fluorene	<165.9	1327	1237	93	1330	1202	90	3	59-123	25		49-133
Hexachlorobenzene	<165.9	1327	1127	85	1330	1145	86	2	63-119	25		54-129
Hexachlorobutadiene	<165.9	1327	1136	86	1330	1140	86	0	59-119	25		49-128
Hexachlorocyclopentadiene	<165.9	1327	1137	86	1330	1120	84	2	51-124	25		39-137

Relative Percent Difference RPD = 200*|(D-G)/(D+G)|
Laboratory Control Sample (LCS) Percent Recovery [D] = 100*(C)/[B]
Laboratory Control Sample Duplicate (LCSD) Percent Recovery [G] = 100*(F)/[E]

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

H= Recovery of BS,BSD or both exceeded the laboratory control limits
F = RPD exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

LCS/LCSD Recoveries

Project Name: Robinson Terminal

Work Order #: 13041921 **Project ID:** 36454

Prep Batch #: 45669 **Date Prepared:** 04/24/2013 **Sample:** 45669-1-BKS **Analyst:** 1014

Lab Batch ID: 105563 **Date Analyzed:** 04/24/2013 **Method:** SW3550 / SW8270C **Matrix:** Solid

Units: ug/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TCL Semivolatile Organic Compounds Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	Marginal Exceedance Limit
Hexachloroethane	<165.9	1327	1117	84	1330	1113	84	0	55-123	25		44-135
Indeno(1,2,3-c,d)Pyrene	<165.9	1327	1106	83	1330	1186	89	7	45-131	25		30-146
Isophorone	<165.9	1327	1137	86	1330	1135	85	0	58-117	25		48-127
2-Methylnaphthalene	<165.9	1327	977.8	74	1330	978.7	74	0	58-121	25		47-132
2-Methyl phenol	<165.9	1327	1129	85	1330	1117	84	1	57-119	25		47-130
3&4-Methylphenol	<165.9	1327	1099	83	1330	1096	82	0	51-122	25		40-133
Naphthalene	<165.9	1327	1156	87	1330	1169	88	1	61-117	25		52-126
4-Nitroaniline	<165.9	1327	1008	76	1330	893.6	67	12	10-119	25		1-138
3-Nitroaniline	<165.9	1327	1095	83	1330	1020	77	7	10-153	25		1-181
2-Nitroaniline	<331.8	1327	1171	88	1330	1158	87	1	57-119	25		46-129
Nitrobenzene	<165.9	1327	1055	80	1330	1067	80	1	56-122	25		45-132
2-Nitrophenol	<165.9	1327	1208	91	1330	1234	93	2	60-119	25		50-129
4-Nitrophenol	<165.9	1327	1153	87	1330	1137	85	1	39-123	25		25-137
N-Nitrosodi-n-propyl amine	<165.9	1327	1036	78	1330	1036	78	0	54-126	25		42-138
N-Nitrosodiphenylamine	<165.9	1327	1097	83	1330	1117	84	2	59-128	25		48-139
Di-n-octyl phthalate	<165.9	1327	1191	90	1330	1376	103	14	55-142	25		40-156
Pentachlorophenol	<331.8	1327	1233	93	1330	1198	90	3	55-110	25		46-119
Phenanthrene	<165.9	1327	1132	85	1330	1130	85	0	62-121	25		52-131
Phenol	<165.9	1327	1136	86	1330	1140	86	0	52-122	25		40-133
Atrazine	<165.9	1327	1411	106	1330	1369	103	3	10-136	25		1-159

Relative Percent Difference RPD = 200*|(D-G)/(D+G)|
Laboratory Control Sample (LCS) Percent Recovery [D] = 100*(C)/[B]
Laboratory Control Sample Duplicate (LCSD) Percent Recovery [G] = 100*(F)/[E]

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

H= Recovery of BS,BSD or both exceeded the laboratory control limits
F = RPD exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

LCS/LCSD Recoveries

Project Name: Robinson Terminal

Work Order #: 13041921 **Project ID:** 36454

Prep Batch #: 45669 **Date Prepared:** 04/24/2013 **Sample:** 45669-1-BKS **Analyst:** 1014

Lab Batch ID: 105563 **Date Analyzed:** 04/24/2013 **Method:** SW3550 / SW8270C **Matrix:** Solid

Units: ug/kg

TCL Semivolatile Organic Compounds	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY											
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag	Marginal Exceedance Limit
Pyrene	<165.9	1327	1207	91	1330	1236	93	2	62-129	25		51-140
Pyridine	<165.9	1327	998.3	75	1330	981.1	74	2	54-110	25		44-120
Caprolactam	<165.9	1327	1295	98	1330	1255	94	3	46-124	25		33-137
2,4,6-Trichlorophenol	<165.9	1327	1246	94	1330	1252	94	0	56-113	25		47-122
2,4,5-Trichlorophenol	<165.9	1327	1334	101	1330	1318	99	1	62-123	25		52-134

Relative Percent Difference RPD = 200*|(D-G)/(D+G)|
Laboratory Control Sample (LCS) Percent Recovery [D] = 100*(C)/[B]
Laboratory Control Sample Duplicate (LCSD) Percent Recovery [G] = 100*(F)/[E]

Phase Separation Science, Inc.
6630 Baltimore National Pike
Baltimore, MD 21228

H= Recovery of BS,BSD or both exceeded the laboratory control limits
F = RPD exceeded the laboratory control limits
L = Recovery of BS,BSD or both below the laboratory control limits

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

(1)
*CLIENT: WSP *OFFICE LOC. Reston
*PROJECT MGR: Dave Sarr *PHONE NO.: (703) 709-6500
EMAIL: David.Sarr@WSPgroup FAX NO.: ( )
*PROJECT NAME: Robinson Terminal PROJECT NO.: 36454
SITE LOCATION: Alexandria, VA P.O. NO.:
SAMPLER(S): Rob Wallace DW CERT NO.:

PSS Work Order #: 13041921 PAGE 1 OF 2

Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WI=Wipe

(2)

LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	VOCs+MTBE (8260B)	RCRA Metals (6020)	TPH-DRO (8015)	TPH-GRO (8015)	PCBs							REMARKS
						Preservatives Used												
						Analysis/ Method Required (3) *												
1	SB-4 (7-8)	4/18/13	0922	S	5	G	X	X	X		X							
2	SB-4 (17-18)	"	0950	S	5	G		X	X		X							No VOCs
3	SB-041813 (7-8)	"	0930	S	5	G	X	X	X		X							
~~4~~ 2	MS/MSD #1	"	0952	S	10	G	X	X	X		X							MS of SB-4 (17-18)
~~4~~ 3	SB-3 (5-6)	"	1117	S	5	G	X	X	X									
~~5~~ 4	SB-3 (6-7)	"	1119	S	1	G		X	X									
~~6~~ 5	SB-2 (8-9)	"	1209	S	5	G	X	X	X									
~~7~~ 6	SB-2 (9-10)	"	1212	S	1	G		X	X									
~~8~~ 7	SB-2 (GW)	"	1230	GW	8	C	X	X	X	X								
~~9~~ 8	SB-1 (8-9)	"	1406	S	1	G		X	X									

(5)

Relinquished By: (1)	Date	Time	Received By:
[signature]	4/18/13	1815	TTE
Relinquished By: (2) TTE	4/19/13	18:35	[signature]
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4)
*Requested TAT (One TAT per COC): ☐ 5-Day ☐ 3-Day ☐ 2-Day ☐ Next Day ☐ Emergency ☒ Other 10-Day
Data Deliverables Required: COA ☐ QC SUMM ☐ CLP LIKE ☐ OTHER ____
Special Instructions:
DW COMPLIANCE? YES ☐ EDD FORMAT TYPE ____
STATE RESULTS REPORTED TO: MD ☐ DE ☐ PA ☐ VA ☒ WV ☐ OTHER ____

# of Coolers: 3
Custody Seal: Pres S+D (cooler)
Ice Present: Pres Temp 4 1 1 @ 0° not frozen
Shipping Carrier: TTE

6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723

The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary. * = REQUIRED

SAMPLE CHAIN OF CUSTODY/AGREEMENT FORM

PHASE SEPARATION SCIENCE, INC.

www.phaseonline.com
email: info@phaseonline.com

(1) *CLIENT: WSP *OFFICE LOC.: Reston
*PROJECT MGR: Dave Sarr *PHONE NO.: (703) 709-6500
EMAIL: David.Sarr@wpgroup FAX NO.: ( )
*PROJECT NAME: Robinson Terminal PROJECT NO.:
SITE LOCATION: Alexandria, VA P.O. NO.:
SAMPLER(S): Rob Wallace DW CERT NO.:

PSS Work Order #: 13041921 PAGE 2 OF 2

Matrix Codes: SW=Surface Wtr DW=Drinking Wtr GW=Ground Wtr WW=Waste Wtr O=Oil S=Soil L=Liquid SOL=Solid A=Air WI=Wipe

(2)

LAB NO.	*SAMPLE IDENTIFICATION	*DATE (SAMPLED)	*TIME (SAMPLED)	MATRIX (See Codes)	No. CONTAINERS	SAMPLE TYPE C = COMP G = GRAB	VOCs + MTBE (8260B)	RCRA Metals (6020)	TPH-DRO (8015)	TPH-GRO (8015)	PCBs								REMARKS
10	SB-1 (7-8)	4/18/13	1409	S	5	G	X	X	X										
11	SB-1 (GW)	4/18/13	1430	GW	8	C	X	X	X	X									
12	SB-04813 (GW)	"	1400	GW	8	C	X	X	X	X									
11	MS/MSD #2	"	1433	GW	16	C	X	X	X	X									MS of SB-1 (GW)
13	SB-5 (4-5)	"	1512	S	1	G	X	X	X		X								USE 4oz for VOCs
14	SB-5 (5-6)	"	1514	S	1	G		X	X		X								
15	SB-5 (GW)	"	1525	GW	8	C	X	X	X	X									
16/17/18	TRIP Blank #1-#3	"	1955	Distilled Water	6	—	X												

(5)

Relinquished By: (1)	Date	Time	Received By:
[signature]	4/18/13	1815	TTE
Relinquished By: (2) TTE	4/19/13	18:35	[signature]
Relinquished By: (3)	Date	Time	Received By:
Relinquished By: (4)	Date	Time	Received By:

(4) *Requested TAT (One TAT per COC)
☐ 5-Day ☐ 3-Day ☐ 2-Day
☐ Next Day ☐ Emergency ☒ Other 10-day

Data Deliverables Required: COA ☐ QC SUMM ☐ CLP LIKE ☐ OTHER _____

Special Instructions:

DW COMPLIANCE? YES ☐ EDD FORMAT TYPE _____

STATE RESULTS REPORTED TO: MD ☐ DE ☐ PA ☐ VA ☒ WV ☐ OTHER _____

# of Coolers: 3
Custody Seal: Yes SID (cooler)
Ice Present: Yes Temp: All @ 0° not frozen
Shipping Carrier: TTE

6630 Baltimore National Pike • Route 40 West • Baltimore, Maryland 21228 • (410) 747-8770 • (800) 932-9047 • Fax (410) 788-8723

The client (Client Name), by signing, or having client's agent sign, this "Sample Chain of Custody/Agreement Form", agrees to pay for the above requested services per the latest version of the Service Brochure or PSS-provided quotation including any and all attorney's or other reasonable fees if collection becomes necessary. * = REQUIRED

Final 1.000

Phase Separation Science, Inc

Sample Receipt Checklist

Work Order #	13041921	**Received By**	Rachel Davis
Client Name	WSP Environment & Energy - Restor	**Date Received**	04/19/2013 06:35:00 PM
Project Name	Robinson Terminal	**Delivered By**	Trans Time Express
Project Number	36454	**Tracking No**	Not Applicable
Disposal Date	05/24/2013	**Logged In By**	Rachel Davis

Shipping Container(s)

No. of Coolers	1	Ice	Present
		Temp (deg C)	0
Custody Seal(s) Intact?	Yes	Temp Blank Present	No
Seal(s) Signed / Dated?	Yes		

Documentation

		Sampler Name	Robert Wallace
		MD DW Cert. No.	N/A
COC agrees with sample labels?	Yes		
Chain of Custody	Yes		

Sample Container

		Custody Seal(s) Intact?	Not Applicable
Appropriate for Specified Analysis?	Yes	Seal(s) Signed / Dated	Not Applicable
Intact?	Yes		
Labeled and Labels Legible?	Yes		

Total No. of Samples Received 18

Total No. of Containers Received 99

Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(ph<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Per client email, SVOCs added to SB-3 (5-6), SB-1 (7-8) and SB-5 (5-6). Also VOCs added to SB-4(17-18). Trip Blank #1 received with SB-1 (GW) and SB-041813 (GW), vials and amber and ambers from SB-2 (GW) and SB-5 (GW). Trip Blank #2 was received with all 4oz soil jars, all water metals containers and the vials for sample SB-5 (GW) and SB-2 (GW). Trip Blank #3 was received with all of the terra core kits.

Samples Inspected/Checklist Completed By: Rachel Davis — Date: 04/22/2013

PM Review and Approval: Simon Crisp — Date: 04/22/2013

APPENDIX II

SEPTEMBER 2013 PHASE II ESA

ENVIRONMENTAL SOIL AND GROUNDWATER SAMPLING

ROBINSON TERMINAL-SOUTH
DUKE STREET AND SOUTH UNION STREET
ALEXANDRIA, VA

ECS PROJECT NO. 01:21983

FOR

EYA

OCTOBER 17, 2013

October 17, 2013

Mr. Adam D. Hayes
Sr. Director of Engineering
EYA
4800 Hampden Lane, Suite 300
Bethesda, Maryland 20814

ECS Project No. 01:21983

Reference: Environmental Soil and Groundwater Sampling, Robinson Terminal-South, Duke Street and South Union Street, Alexandria, Virginia.

Dear Mr. Hayes:

ECS Mid-Atlantic, LLC (ECS) is pleased to provide EYA with the results of the Environmental Soil and Groundwater Sampling for the above-referenced property. If you have any questions or comments regarding this report, or any other aspect of the project, please contact us at (703) 471-8400.

Respectfully submitted,

ECS MID-ATLANTIC, LLC

Michael J. Johnson
Environmental Project Manager

Demian Wincele, C.P.G
Principal Geologist

Attachments: Figure
Tables
Appendix I – Boring Logs
Appendix II – Laboratory Reports

I:\Environmental\RPT\21000\21983 Robinson Terminal\Report.doc

ENVIRONMENTAL SOIL AND GROUNDWATER SAMPLING
ROBINSON TERMINAL-SOUTH
DUKE STREET AND SOUTH UNION STREET
ALEXANDRIA, VA
ECS PROJECT NO. 21983

BACKGROUND

The subject site is located at 2 Duke Street (Robinson Terminal South) and 226 Strand Street (Alexandria Marine) in Alexandria, Virginia. The site is identified as City of Alexandria Tax Assessment Map Numbers 075.03-04-01 (2 Duke Street) and 075.03-03-14 (226 Strand Street). The 3.35-acre subject site currently has three warehouses on two parcels of land. The warehouse encompassed two parcels: Robinson Terminal South, which had multiple warehouses (#1, 2, 3, 4, 6, 7 and 8) and an office building; and Alexandria Marine, a free-standing building to the adjacent north of Robinson Terminal South.

WSP Environment & Energy previously conducted a limited subsurface and geotechnical Phase II evaluation at the subject site in March 2013. Approximately five soil test borings were drilled to depths of ranging between four and eighteen feet below ground surface. Groundwater was detected in the bore holes. Petroleum odors or other signs of environmental impact were reported in the completed soil boring logs. ECS was not contracted to confirm the information reviewed. ECS cannot attest to the accuracy of the information reviewed. The following conclusions were stated in the Phase II report:

> *This investigation detected petroleum-contaminated soil in areas of the site with historical petroleum storage and transfer operations. The investigation did not identify impacts from other historical operations on site. The petroleum-contaminated is not associated with any existing underground storage tanks, and Virginia regulations do not require reporting the presence of the petroleum-contaminated soil or remediating it. However, the presence of the petroleum-contaminated soil should be considered in any future redevelopment of the property. If this soil is excavated, it must be characterized, managed, and disposed of in accordance with Virginia and federal regulations.*
>
> *The investigation did not detect evidence of impacted groundwater on the property. While one groundwater sample did contain a detectable concentration of petroleum hydrocarbons, the concentration is less than the 1 mg/l TPH criteria that the Virginia DEQ considers to be an indicator of an underground storage tank release. If construction dewatering is conducted on the site in the future, additional groundwater testing should be conducted to confirm that the groundwater meets discharge requirements.*

ECS conducted a Phase I ESA concurrent with this soil and groundwater investigation. Information gathered during preparation of the Phase I ESA found that the central portion of

the site was previously occupied by Texas Oil Company and the northwest corner of the site was occupied by a fertilizer company. Based on this, the scope of the Environmental Soil and Groundwater Sampling was expanded to include the collection of samples in the vicinity of these former businesses.

PURPOSE

The purpose of the Environmental Soil and Groundwater Sampling was to evaluate the subsurface environment at the property to determine whether past use of the property has impacted the subsurface soil and/or groundwater and to provide a preliminary estimate of impacted soils on the property.

SCOPE OF WORK

On September 26 and September 27, 2013, a GeoProbe® was used to advance 23 borings. 20 Borings (B-1 through B-17 & FB-1 through FB-3) were advanced on the Robinson Terminal Property and 3 borings (MB-1 through MB-3) were advanced on the Alexandria Marine property. The borings were advanced to depths ranging from 5-feet to 15-feet below ground surface (bgs). The locations of the soil borings are depicted on Figure 1 and Figure 2 and the boring logs are included in Appendix I. A GeoProbe® is a track-mounted tool that pushes sampling devices into the sub-surface using hydraulics and static pressure. The GeoProbe® creates little disturbance, leaving only a 2-inch diameter hole, and generates little to no soil cuttings. Following sample collection, each hole was filled and patched to match surrounding conditions.

Soil samples collected during drilling operations were screened in the field with a photoionization detector (PID) with a 10.6 electron volt (eV) lamp for the presence of volatile organic compounds (VOCs) by head space analysis. One to two samples from each boring were retained and submitted to an independent laboratory for analysis. Soil samples collected from borings B-1 though B-10 and MB-1 through MB-3 were analyzed for total petroleum hydrocarbons diesel- and gasoline range organics (TPH-DRO & TPH GRO), VOCs, polyaromatic hydrocarbons (PAHs), and RCRA metals. Soil samples collected from borings B-11 through B-17 were analyzed for TPH DRO, TPH GRO and VOCs and soil samples collected from FB-1 through FB-3 were only analyzed for pesticides and herbicides.

In addition to the soil samples, groundwater samples were collected from borings B-1 though B10 and MB-1. After soil sampling, 1-inch diameter slotted PVC pipe was placed in the open bore holes creating temporary piezometers. No filter sand or bentonite was placed in the borehole, as would be used when constructing a permanent groundwater monitoring well. New PVC pipe was used in each borehole to prevent cross-contamination. Groundwater was collected using an inertial valve in combination with small diameter polyethylene tubing to draw a sample up from the subsurface. The inertial valve was decontaminated with phosphate-free detergent and clean water prior to each use. The

groundwater samples were analyzed for TPH DRO, TPH GRO, VOCs, PAHs, and RCRA Metals.

Soil and groundwater samples were placed in laboratory-provided glass jars, immediately placed on ice and submitted under chain-of-custody documentation to an independent laboratory for the analysis listed above.

Based on the laboratory results, analysis of lead by the toxicity characteristic leaching procedure (TCLP) method was performed on 11 of the soil samples where total lead results exceeded the “20 times rule”.

RESULTS

Soil Results:

A total of 36 soil samples were collected and analyzed during this investigation. The soil results are summarized below and are presented in Table 1. The laboratory reports are included in Appendix II.

Total Petroleum Hydrocarbons

A total of 33 soil samples were collected and analyzed for TPH DRO and TPH GRO from the Robinson Terminal property and the Alexandria Marine property. The results are summarized below, as well as a comparison to the Virginia Department of Environmental Quality (VDEQ) “Clean Fill” requirements as defined in 9VAC20-81-660D.

- TPH DRO was detected in 23 of the 33 soil samples at concentrations ranging from 9.6 milligrams per kilogram (mg/kg) to 4,600 mg/kg. The concentrations of TPH DRO in B1 10’, B2 9’, B5 5’, B5 8’, B6 5’, B6 8’, B10 4’, B11 8’, B12 4’, B13 5’, B14 7’, B15 8’, B16 8’, MB1 8’, MB2 4’, MB2 8’ and MB3 8’ exceeded the 50 mg/kg “clean fill” requirement.
- TPH GRO was detected in 15 of the 33 samples at concentrations ranging from 0.2 mg/kg to 3,300 mg/kg. The concentrations of TPH GRO in B5 8’, B6 8’, B11 8’, B14 7’, and B15 8’ exceeded the 50 mg/kg “clean fill” requirement.

Volatile Organic Compounds

A total of 33 soil samples were collected and analyzed for VOCs from the Robinson Terminal property and the Alexandria Marine property. Acetone, 2-butanone, carbon disulfide, 2-hexanone, methylene chloride and xylenes were detected in one or more samples at concentrations below their established VDEQ Voluntary Remediation Program (VRP) Tier II Screening Levels for Unrestricted (i.e. Residential) Soil. No other VOCs were detected at or above the laboratory reporting limit.

Polyaromatic Hydrocarbons

A total of 26 soil samples were collected and analyzed for PAHs from the Robinson Terminal property and the Alexandria Marine property. The results are summarized below, as well as a comparison to the VDEQ VRP Tier II Screening Levels.

- Benzo(a)anthracene was detected in 23 of the 26 soil samples at concentrations ranging from 0.005 mg/kg to 23 mg/kg. The concentrations of benzo(a)anthracene in B2 4', B4 10', B5 5', B5 8', MB1 4', MB2 4', MB2 8', MB3 5' and MB3 8' exceeded the established VRP Tier II Screening Level of 0.150 mg/kg.
- Benzo(a)pyrene was detected in 24 of the 26 soil samples at concentrations ranging from 0.005 mg/kg to 22 mg/kg. The concentrations of benzo(a)pyrene in B1 5', B2 10', B2 4', B3 9', B4 10', B5 5', B5 8' B9 4', B10 4', B10 8' MB1 4', MB2 4', MB2 8', MB3 5' and MB3 8' exceeded the established VRP Tier II Screening Level of 0.015 mg/kg.
- Benzo(a)fluoranthene was detected in 23 of the 26 samples at concentrations ranging from 0.005 mg/kg to 25 mg/kg. The concentrations of benzo(a)fluoranthene in MB1 4', MB2 4', MB2 8', MB3 5' and MB3 8' exceeded the established VRP Tier II Screening Level of 0.150 mg/kg.
- Chrysene was detected in 23 of 26 samples at concentrations ranging from 0.005 mg/kg to 22 mg/kg. The concentration of chrysene at MB1 4' exceeded the established VRP Tier II Screening Level of 15 mg/kg.
- Dibenz(a,h)anthracene was detected in 18 of the 23 samples at concentrations ranging from 0.004 mg/ kg to 2.7 mg/kg. The concentration of dibenz(a, h)anthracene in MB1 4', MB2 8', MB2 4', MB2 8', M3 5' and MB3 8' exceeded the established VRP Tier II Screening Level of 0.015 mg/kg.
- Indeno(1,2,3-cd)pyrene was detected in 21 of 23 samples at concentrations ranging from 0.007 mg/kg to 13 mg/kg. The concentrations of indeno(1,2,3-cd)pyrene in B5 5', MB1 4', MB2 8', MB3 5' and MB3 8' exceeded the established VRP Tier II Screening Level of 0.150 mg/kg.
- Naphthalene was detected in 15 of the 23 samples at concentrations ranging from 0.005 mg/kg to 10 mg/kg. The concentrations of naphthalene at B2 4', B4 10', B5 4', MB1 8', MB2 4', MB2 8', MB3 5' and MB3 8' exceeded the established VRP Tier II Screening Level of 0.0262 mg/kg.

Several other PAHs were detected, but at concentrations below their established VRP Tier II Screening Levels and therefore would not be expected to pose a risk to human health or the environment.

RCRA Metals

A total of 26 soil samples were collected and analyzed for RCRA Metals from the Robinson Terminal property and the Alexandria Marine property. The results are summarized below, as well as a comparison to the VDEQ VRP Tier II Screening Levels.

- Arsenic was detected in each of the 26 samples at concentrations ranging from 2.49 mg/kg to 48.1 mg/kg. The concentrations of arsenic in each of the 26 samples exceeded the established VRP Tier II Screening Level of 0.39 mg/kg.
- Cadmium was detected in 16 of the 26 samples at concentrations ranging from 0.188 mg/kg to 9.14 mg/kg. The concentrations of cadmium in B2 9', B5 5' and B8 5' exceeded the established VRP Tier II Screening Level of 7.00 mg/kg.
- Total chromium was detected in each of the 26 samples at concentrations ranging from 5.49 mg/kg to 76.9 mg/kg. The concentrations of total chromium in B2 9', B5 5', B5 8', B8 5', B9 4', B10 4', B10 8', MB1 4', MB1 8', MB2 4', MB2 8', MB3 5' and MB3 8' exceeded the established VRP Tier II Screening Level of 0.29 mg/kg.
- Lead was detected in each of the 26 samples at concentrations ranging from 2.59 mg/kg to 1,180 mg/kg. The concentrations of lead in B4 14', MB1 8', MB2 4' and MB2 8' exceeded the established VRP Tier II Screening Level of 552 mg/kg. Additionally, the concentrations of lead in 11 of the 26 samples exceeded the "20 times rule" with concentrations greater than 20 times the TCLP limit of 5 mg/L (i.e. greater than 100 mg/kg). Consequently, these samples have the potential to be a characteristic hazardous waste.
- Mercury was detected in 25 of the 26 samples at concentrations ranging from 0.0138 mg/kg to 2.40 mg/kg. The concentrations of mercury in B4 10', B5 5', and MB3 10' exceeded the established VRP Tier II Screening Level of 1.00 mg/kg.
- Silver was detected in 16 of the 26 samples at concentrations ranging from 0.0154 mg/kg to 7.91 mg/kg. The concentrations of silver in MB2 4' and MB2 8' exceeded the established VRP Tier II Screening Level of 1.19 mg/kg.

Pesticides and Herbicides

A total of 3 soil samples were collected and analyzed for pesticides and herbicides from within the approximate footprint of the building that was previously occupied by a fertilizer company. The laboratory reported that methoxychlor was detected in FB2 3' at an estimated concentration of 0.0034 mg/kg, which is below the VRP Tier II Screening Level of 31.0 mg/kg. No other pesticides or herbicides were detected.

TCLP Lead

Soil samples with total lead concentrations greater than 100 mg/kg were analyzed for TCLP lead to determine if the excavated soil would be classified as a characteristic hazardous waste. Soluble lead was detected in detected in 10 of the 11 TCLP samples at concentrations ranging between 0.0061 milligrams per liter (mg/L) to 2.87 mg/L. The concentrations of lead detected were below the established Resource Conservation and Recovery Act (RCRA) TCLP limit of 5 mg/L. Based on the results, excavated soil would not be classified as a characteristic hazardous waste.

Groundwater Results:

A total of 11 groundwater samples were collected and analyzed during this investigation. The groundwater results are summarized below and are presented in Table 2. The laboratory reports are included in Appendix II.

Total Petroleum Hydrocarbons

A total of 11 groundwater samples were collected and analyzed for TPH DRO and TPH GRO from the Robinson Terminal property and the Alexandria Marine property. The results are summarized below, as well as a comparison to the VDEQ reporting limits for TPH in groundwater.

- TPH DRO was detected each of the 11 groundwater samples at concentrations ranging from 59 micrograms per liter (ug/L) to 28,000 ug/L.
- TPH GRO was detected in 4 of the 11 groundwater samples at concentrations ranging from 45 ug/L to 410 ug/L.

Volatile Organic Compounds

A total of 11 groundwater samples were collected and analyzed for VOCs from the Robinson Terminal property and the Alexandria Marine property. Total xylenes was detected at 1 ug/L in BW-4, which is below the 10,000 ug/L VRP Tier II Screening Level for Unrestricted (i.e residential) Groundwater. No other VOCs were detected in any of the groundwater samples.

Polyaromatic Hydrocarbons

A total of 11 groundwater samples were collected and analyzed for PAHs from the Robinson Terminal property and the Alexandria Marine property. The results are summarized below, as well as a comparison to the VRP Tier II Screening Levels.

- Acenaphthylene was detected in 4 of 11 samples at concentrations ranging from 0.3 ug/L to 11 ug/L. The concentration of acenaphthylene in BW4 exceeded the established VRP Tier II Screening Level of 8.7 ug/L.
- Benzo(a)anthracene was detected in BW1, BW2, BW3, BW4, BW-5 and MBW1 at concentrations ranging from 0.1 ug/L to 53 ug/L. The concentrations of benzo(a)anthrace detected exceeded the established VRP Tier II Screening Level of 0.029 ug/L.
- Benzo(a)pyrene was detected in 5 of the 11 samples at concentrations ranging from 0.2 ug/L to 47 ug/L. The concentrations of benzo(a)pyrene detected exceeded the established VRP Tier II Screening Level of 0.2 ug/L.
- Benzo(a)fluoranthene was detected in 6 of the 11 samples at concentrations ranging from 0.2 ug/L to 66 ug/L. The concentrations of benzo(a)fluoranthene detected exceeded the established VRP Tier II Screening Level of 0.029 ug/L.

- Benzo(g, h, i)perylene was detected in 4 of the 11 samples at concentrations ranging from 0.2 ug/L to 34 ug/L. The concentrations of benzo(g, h, i)perylene detected in BW1, BW3 and MBW1 exceeded the established VRP Tier II Screening Level of 8.7 ug/L.
- Benzo(k)fluoranthene was detected in 3 of the 11 samples at concentrations ranging from 8 ug/L to 25 ug/L. The concentrations of benzo(k)fluoranthene detected exceeded the established VRP Tier II Screening Level of .029 ug/L.
- Chrysene was detected in 6 of the 11 samples at concentrations ranging from 0.2 ug/L to 52 ug/L. The concentrations of chrysene in BW1, BW3, BW4 and MBW1 exceeded the established VRP Tier II Screening Level of 2.9 ug/L.
- Dibenz(a,h)anthracene was detected in 3 of the 11 samples at concentrations ranging from 3 ug/L to 9 ug/L. The concentrations of dibenz (a, h) anthracene exceeded the VRP Tier II Screening Level of 0.0029 ug/L.
- Fluoranthene was detected in 6 of the 11 samples at concentrations ranging from 0.1 ug/L to 120 ug/L. The concentration of fluoranthene detected in MBW1 exceeded the established VRP Tier II Screening Level of 63 ug/L.
- Indeno(1,2,3-cd)pyrene was detected in 5 of the 11 samples at concentrations ranging from 0.1 ug/L to 31 ug/L. The concentrations of indeno(1, 2, 3-cd)pyrene detected exceeded the established VRP Tier II Screening Level of 0.029 ug/L.
- Naphthalene was detected in 4 of the 11 samples at concentrations ranging from 0.1 ug/L to 14 ug/L. The concentrations of naphthalene detected in BW3, BW4 and MBW1 exceeded the established VRP Tier II Screening Level of 0.14 ug/L.

Several other PAHs were detected, but at concentrations below their established VRP Tier II Screening Levels.

RCRA Metals

A total of 11 groundwater samples were collected and analyzed for RCRA Metals from the Robinson Terminal property and the Alexandria Marine property. Arsenic, barium, cadmium, total chromium, lead and mercury were detected in the groundwater samples at concentrations below their established VRP Tier II Screening Levels.

SUMMARY AND CONCLUSIONS

The purpose of the Environmental Soil and Groundwater Sampling was to evaluate the subsurface environment at the property to determine whether past use of the property has impacted the subsurface soil and/or groundwater and to provide a preliminary estimate of impacted soils on the property. In order to accomplish this task, ECS utilized a Geoprobe to advanced 23 soil borings. Twenty borings (B1 through B17 & FB1 through FB3) were advanced on the Robinson Terminal Property and 3 borings (MB1 through MB3) were advanced on the Alexandria Marine property.

Compounds of concern, including TPH DRO & GRO, PAHs and metals were detected in borings advanced throughout the study area.

Total Petroleum Hydrocarbons

The laboratory reported that TPH DRO was detected in 23 of the 36 soil samples at concentrations ranging from 9.6 milligrams per kilogram (mg/kg) to 4,600 mg/kg and in each of the 11 groundwater samples at concentrations ranging from 59 ug/L to 28,000 ug/L. TPH GRO was detected in 15 of the 36 soil samples at concentrations ranging from 0.2 mg/kg to 3,300 mg/kg and in 4 of the 11 groundwater samples at concentrations ranging from 45 ug/L to 410 ug/L.

Based on the results, special considerations will be required with regards to handling and disposal of soils at the site during excavation activities. Specifically, samples B1 10', B2 9', B5 5', B5 8', B6 5', B6 8', B10 4', B11 8', B12 4', B13 5', B14 7', B15 8', B16 8', MB1 8', MB-2 4' MB2 8' and MB3 8' fall within 9VAC20-81-660-D2c which states:

> If the concentration of TPH is greater than 50 mg/kg and less than 500 mg/kg and total BTEX is less than 10 mg/kg, the disposal of the contaminated soil may be approved for permitted landfills equipped with liners and leachate collection systems.

Samples B2 4', B4 10', B4 14', B7 5', B9 4', MB1 4' and MB3 5' fall within 9VAC20-81-660-D2d which states:

> Soil containing less than 50 mg/kg TPH and BTEX less than 10 mg/kg may be used as fill material. This soil, however, may not be disposed of closer than 100 feet of any regularly flowing surface water body or river, 500 feet of any well, spring or other groundwater source of drinking water, and 200 feet from any residence, school, hospital, nursing home, or recreational park area. In addition, if the soil is not to be disposed of on the generator's property, the generator shall notify the property owner that the soil is contaminated and with what it is contaminated.

According to the VDEQ Petroleum Program, discharges of oil from sources other than tanks subject to the UST Technical Regulation must be reported immediately. Consequently, ECS recommends that a copy of this report be provided to the current property owner and the results of this sampling be provided to VDEQ. Additionally, if dewatering is required during construction, it is likely that treatment of the groundwater will be required prior to discharging.

Volatile Organic Compounds

All VOCs detected were below their established VRP Tier II Screening Levels. VOCs would not be expected to pose a risk to human health or the environment. Consequently, ECS does not recommend any further investigation related to VOCs.

Polyaromatic Hydrocarbons

Several PAHs were detected in both soil and groundwater samples at concentrations that exceeded their established VRP Tier II Screening Levels. The concentrations of SVOCs would not be expected to impact the excavation and disposal of petroleum=impacted soils at an offsite facility. However, ECS recommends that a risk assessment be performed to determine if the concentrations of PAHs that are left in place will pose a risk to future residents. Given the dense residential development that is planned for the site, mitigation measures may include capping undisturbed portions of the site with clean fill material.

RCRA Metals

Arsenic, cadmium, total chromium, lead, mercury and silver were detected in one or more of the soil or groundwater samples. Several of the metals detected exceeded their established VRP Tier II Screening Levels. With the exception of lead, metals were detected at concentrations that would be considered to be within the range of naturally occurring metals for this region and would not be expected to impact the excavation or disposal of soils at an offsite facility.

Lead was detected in 11 soil samples at concentrations in excess of the “20 times rule” with concentrations 20 times the TCLP limit of 5 mg/L. Consequently, soil excavated from these sampling locations has the potential to be a characteristic hazardous waste.

Pesticides and Herbicides

Methoxychlor was detected in FB2 3’ at an estimated concentration of 0.0034 mg/kg, which is below the VRP Tier II Screening Level of 31.0 mg/kg. No other pesticides or herbicides were detected. Consequently, ECS does not recommend any further investigation related to pesticides and herbicides.

TCLP Metals

Soluble lead was detected in 10 of the 11 samples at concentrations below the established TCLP Limit of 5 mg/L. Therefore, none of the samples would be considered a characteristic hazardous waste. It should be noted that the results are limited to those areas tested and may not necessarily be representative of all soils that may be encountered during excavation.

PETROLEUM IMPACTED SOIL ESTIMATE

The following soil estimate assumes that all soils onsite can be disposed of as non-hazardous petroleum impacted soil. If any of the samples that contain elevated concentrations of lead are determined to be a characteristic hazardous waste, the volume and cost calculations would need to be adjusted accordingly.

Robinson Terminal Property

TPH was detected in 14 of the 17 borings advanced at the Robinson Terminal property in nearly every portion of the site. For the purposes of providing an estimate of the amount of petroleum-impacted soil, we are assuming that all soils within the footprint of each building to a depth of 15-feet below ground surface (bgs) will require special handling and disposal. As described on the 3D diagrams page of the information provided, the total footprint of the buildings is 82,150 square feet. Therefore the volume of petroleum-impacted soil is 45,639 cubic yards (1,232,250 cubic feet). Based on our assumptions, the estimated amount of petroleum-impacted soil at the Robinson Terminal property is 77,586 tons, assuming a conversion factor of 1.7 tons per cubic yard.

Alexandria Marine Property

TPH was detected in each of the three borings advanced at the Alexandria Marine property. For the purposes of providing an estimate of the amount of petroleum-impacted soil, we are assuming that all soils within the footprint of the building to a depth of 15-feet below ground surface (bgs) will require special handling and disposal. As described on the 3D diagrams page of the information provided, the total footprint of the building is 5,600 square feet. Therefore the volume of petroleum-impacted soil is 3,111 cubic yards (84,000 cubic feet). Based on our assumptions, the estimated amount of petroleum-impacted soil at the Robinson Terminal property is 5,289 tons, assuming a conversion factor of 1.7 tons per cubic yard.

Disposal Costs for Petroleum-impacted Soil

Based on the information gathered from this investigation, 82,875 tons of petroleum-impacted soil will be generated during construction. Assuming a surcharge of $20 per ton for disposal of petroleum-impacted soil, it may cost an additional $1,657,500 to dispose of the impacted soils.

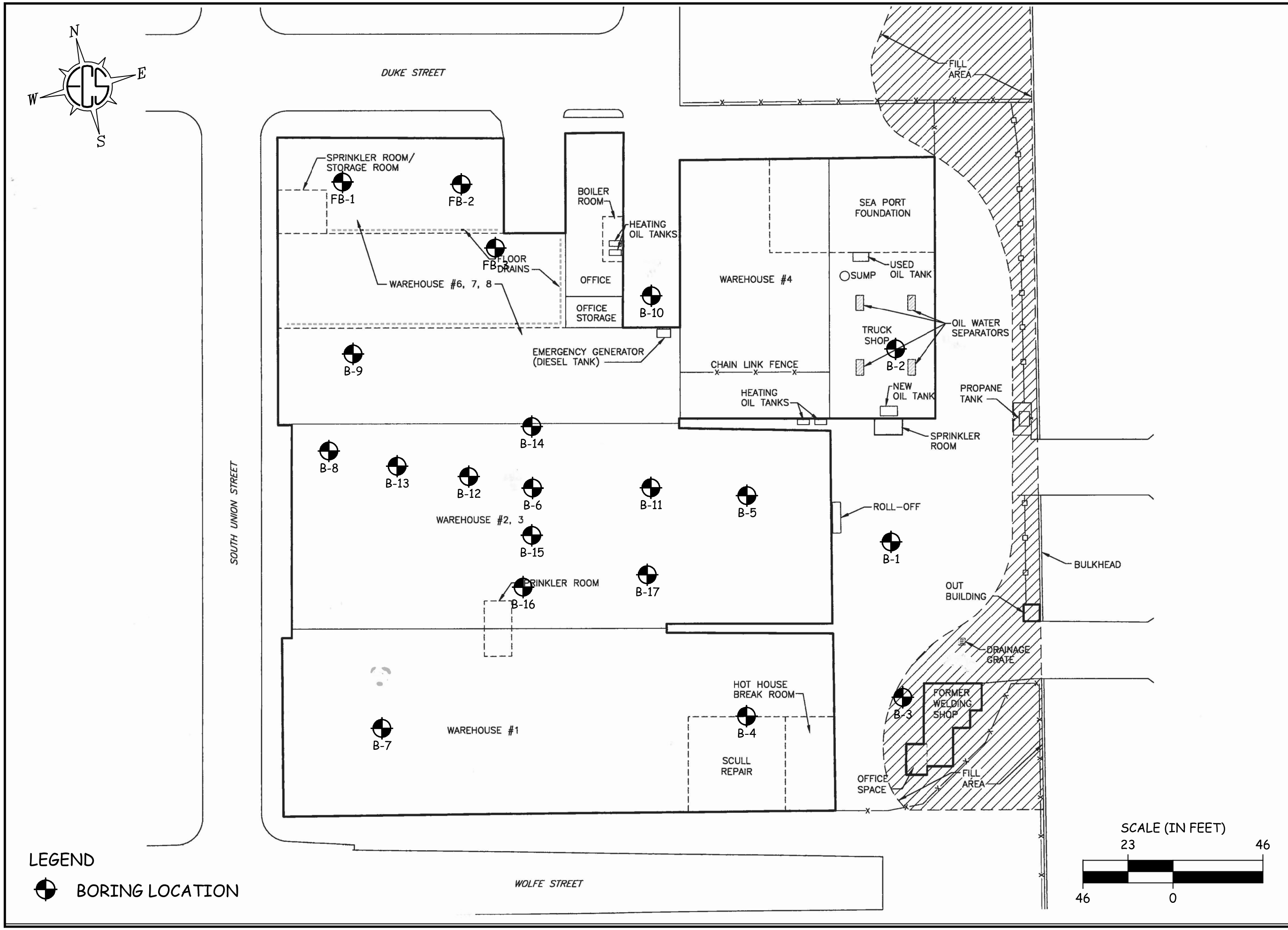
It should be noted that this is a preliminary estimate based on a limited amount of laboratory data. Our findings are limited to those areas and depths tested on the days tested and may not necessarily be representative of true site conditions.

QUALIFICATIONS

The conclusions presented within this report are based upon a reasonable level of investigation within normal bounds and standards of professional practice for a site in this particular geographic and geologic setting. The findings of this study are not intended to serve as an audit of health and safety or compliance issues pertaining to improvements or occupant activities on-site. All observations, conclusions and recommendations pertaining to environmental conditions at the subject site are limited to conditions observed, and or materials reviewed at the time this study was undertaken. No other warranty, expressed or implied, is made with regard to the conclusions and recommendations presented within this report.

This report is provided for the exclusive use of EYA and their prospective partners. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties. The use of this report by any undesignated third party or parties would be at such party's sole risk and ECS disclaims liability for any such third party use or reliance. ECS has not completed or used any form of predetermined language to report the conclusions of this work and it is our understanding that we will not be required to do so. It should be noted that this study was completed prior to completion of the Phase I ESA.

FIGURES



ROBINSON TERMINAL SOUTH

CITY OF ALEXANDRIA

BORING LOCATION DIAGRAM

FIGURE 1

ECS REVISIONS

ENGINEER	DRAFTING
MJJ	MJJ

SCALE 1" = 46'

PROJECT NO. 21389

SHEET 1 OF 1

DATE 10/7/2013

BORING LOCATION DIAGRAM	ECS	**ROBINSON TERMINAL SOUTH**	ENGINEER MJJ	SCALE NOT TO SCALE
			DRAFTSMAN MJJ	PROJECT NO. 21983
			REVISIONS	SHEET 1 OF 1
FIGURE 2		**CITY OF ALEXANDRIA**		DATE 10/7/2013

TABLES

Table 1
Compounds Detected in Soil
September 26 and September 27, 2013
Robinson Terminal-South
Alexandria, Virginia

	Sample ID	B1	B1	B2	B2	B3	B3	B4	B4	B5	B5	B6	B6	B7	B7	B8	B8	B9	B9	B10	B10
	Sample Depth	5'	10'	4'	9'	5'	9'	10'	14'	5'	8'	5'	8'	5'	8'	5'	8'	4'	7'	4'	8'
	Sample Date	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13
Chemical Name	**Screening Level**	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total Petroleum Hydrocarbons																					
TPH DRO	50*	nd	280	36	71	nd	nd	41	9.6J	100	270	580	330	33	nd	nd	nd	nd	nd	100	nd
TPH GRO	50*	nd	2.2	0.4J	0.4J	nd	nd	3.1	nd	4.3	400	1.6	130	nd	nd	nd	nd	0.3J	nd	0.2J	nd
Volatile Organic Compounds																					
Acetone	2.75**	0.12J	0.048	0.009J	0.041	0.043	0.039	0.091	0.028	0.120	nd	0.190	nd	0.140	0.04	nd	nd	nd	nd	0.010J	0.036
2-Butanone	1.25**	nd	0.010J	nd	nd	nd	0.007J	0.009J	nd	0.017	nd	0.021	nd	0.023	0.006J	nd	nd	nd	nd	nd	0.006J
Carbon Disulfide	0.492**	nd	nd	nd	nd	nd	nd	nd	nd	0.001J	nd	nd	nd	nd	0.011	nd	nd	nd	nd	nd	nd
2-Hexanone	0.013**	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Methylene Chloride	0.0231**	0.009	0.014	0.013	0.010	0.013	0.012	0.012	0.014	0.015	nd	0.006	nd	0.010	nd	0.009	0.009	0.007	0.014	nd	0.007
Xylenes (total)	63**	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.180	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Polyaromatic Hydrocarbons																					
Acenaphthene	24.2**	nd	0.014J	0.017J	0.005J	0.009J	0.005J	0.100	nd	0.080J	0.089	nd	0.004J	nd	nd	nd	nd	nd	nd	nd	nd
Acenaphthylene	10.5**	0.006J	0.014J	0.100	0.005J	nd	0.008J	0.200	nd	0.270	0.058	nd	0.018J	nd	nd	nd	nd	nd	nd	0.048J	0.004J
Anthracene	255**	0.009J	0.021J	0.110	0.010J	nd	0.007J	0.140	nd	0.250	0.063	nd	nd	0.005J	nd	nd	0.006J	0.007J	nd	0.022J	nd
Benzo(a)anthracene	0.150**	0.043	0.088	0.350	0.009J	0.010J	0.037	0.160	nd	1.600	0.160	0.007J	0.006J	0.007J	0.005J	nd	0.009J	0.049	nd	0.037J	0.014J
Benzo(a)pyrene	0.015**	0.047	0.079	0.320	0.013J	0.011J	0.044	0.140	0.0058J	1.500	0.150	0.012J	0.005J	0.007J	0.005J	nd	0.010J	0.040	nd	0.042J	0.021
Benzo(b)fluoranthene	0.150**	0.062	0.120	0.460	0.016J	0.017J	0.074	0.170	nd	2.500	0.210	0.014J	0.009J	0.009J	0.007J	nd	0.011J	0.056	nd	0.064J	0.028
Benzo(g, h, i)perylene	170**	0.029	0.048	0.240	0.014J	0.010J	0.044	0.090J	nd	1.300	0.120	0.010J	0.005J	0.008J	nd	nd	0.008J	0.020	nd	0.049J	0.018J
Benzo(k)fluoranthene	1.50**	0.025	0.044	0.180	0.007J	0.007J	0.026	0.089J	nd	1.000	0.070	0.009J	nd	0.005J	0.005J	nd	0.011J	0.027	nd	0.027J	0.016J
Chrysene	15**	0.053	0.087	0.370	0.014J	0.012J	0.044	0.170	nd	1.600	0.150	0.009J	0.011J	0.007J	0.005J	nd	0.009J	0.052	nd	0.058J	0.019J
Dibenz(a, h)anthracene	0.015**	0.010J	0.014J	0.054	0.005J	nd	0.012J	0.035J	nd	0.340	0.029	nd	nd	0.006J	nd	nd	0.005J	0.005J	nd	nd	0.004J
Fluoranthene	230**	0.080	0.130	0.560	0.012J	0.015J	0.073	0.240	nd	2.800	0.260	0.013J	0.008J	0.007J	nd	nd	0.010J	0.094	nd	0.078J	0.036
Fluorene	24.2**	0.007J	0.011J	0.052	0.021	nd	0.005J	0.110	nd	0.110	0.086	0.004J	0.027	0.004J	nd	nd	0.004J	nd	nd	nd	nd
Indeno(1, 2, 3-cd)pyrene	0.150**	0.028	0.044	0.210	0.010J	0.007J	0.036	0.073J	nd	1.300	0.100	0.009J	nd	0.008J	nd	nd	0.007J	0.020	nd	0.030J	0.014J
Naphthalene	0.0262**	0.005J	0.008J	0.160	0.008J	nd	0.006J	0.160	nd	0.260	0.090	0.026	nd	nd	nd	nd	nd	nd	nd	nd	nd
Phenanthrene	170**	0.059	0.060J	0.480	0.04J	0.012J	0.038	0.750	nd	1.600	0.280	0.013J	0.047	0.009J	nd	nd	0.008J	0.029	nd	0.039J	0.014J
Pyrene	65.5**	0.068	0.130	0.570	0.019J	0.017J	0.066	0.330	nd	2.300	0.250	0.012J	0.007J	0.010J	nd	nd	0.010J	0.081	nd	0.12	0.033
RCRA Metals																					
Arsenic	0.39**	10.4J	10.0	8.06	24.1	7.69	6.39	8.86	5.23	16.4	6.79	5.18	5.23	4.90	5.56	6.28	2.77	4.58	2.49	8.43	7.61
Barium	1,500**	104	145	165	125	101	128	205	92.0	235	95.0	47.9	61.1	33.1	50.5	64.9	31.8	32.6	35.3	37.0	77.8
Cadmium	7.00**	nd	nd	0.194J	9.14	nd	nd	0.148J	nd	1.14	0.413J	nd	nd	nd	nd	1.17	0.188J	0.386J	0.278J	0.674	0.951
Chromium (total)	0.29**	16.4	18.1	14.2	22.5	22.6	23.9	17.2	19.4	22.5	17.1	12.1	16.5	7.57	11.4	13.8	5.99	7.90	5.49	14.4	21.1
Lead	552**	254	36.0	212	455	23.0	81.1	222	12.7	926	34.6	45.8	12.9	10.9	12.4	4.58	2.59	30.0	3.05	64.3	47.1
Mercury	1.00**	0.0419J	0.0416J	0.590	0.333	0.0602J	0.302	1.41	0.0316J	2.40	0.277	0.380	0.0379J	0.0391J	0.0480J	0.0154J	0.0138J	0.0829J	nd	0.234	0.0449J
Silver	1.19**	0.374J	nd	0.274J	3.93	nd	nd	0.268J	nd	0.658	nd	nd	nd	nd	nd	0.514J	0.216J	0.267	0.252J	0.385J	0.422J
Pesticides & Herbicides																					
Methoxychlor	31.0**	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
TCLP																					
Lead	5***	nd	na	0.0547	0.0053J	na	na	0.0277	na	2.87	na	na	na	na	na	na	na	na	na	na	na

Notes:
All results are in milligrams per kilogram (mg/kg).
nd - below laboratory detection limit; na - not analyzed
J - estimated value
*Clean Fill requirement, as defined by 9VAC20-81-660D
**Virginia Voluntary Remediation Program, Tier II Screening Levels for Unrestricted (i.e. residential) Soil (mg/kg).
***Resource Conservation and Recovery Act Toxicity Characteristic Leaching Procedure Limit (mg/L)
Exceeds Screening Level

Table 1
Compounds Detected in Soil
September 26 and September 27, 2013
Robinson Terminal-South
Alexandria, Virginia

	Sample ID	B11	B12	B13	B14	B15	B16	B17	FB1	FB2	FB3	MB1	MB1	MB2	MB2	MB3	MB3
	Sample Depth	8'	4'	5'	7'	8'	8'	9'	3'	3'	3'	4'	8'	4'	8'	5'	8'
	Sample Date	9/27/13	9/27/13	9/27/13	9/27/13	9/27/13	9/27/13	9/27/13	9/27/13	9/27/13	9/27/13	9/27/13	9/27/13	9/27/13	9/27/13	9/27/13	9/27/13
Chemical Name	**Screening Level**	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Total Petroleum Hydrocarbons																	
TPH DRO	50*	4,600	64	92	760	450	63	nd	na	na	na	49	140	1,100	240	9.7J	78
TPH GRO	50*	3,300	0.9J	nd	170	190	19	nd	na	na	na	nd	nd	nd	nd	nd	nd
Volatile Organic Compounds																	
Acetone	2.75**	nd	0.017J	nd	nd	nd	nd	0.010J	na	na	na	nd	0.21	nd	0.04	0.018J	0.027J
2-Butanone	1.25**	nd	nd	nd	nd	nd	nd	nd	na	na	na	nd	0.047	0.006J	0.009J	nd	nd
Carbon Disulfide	0.492**	nd	nd	nd	nd	nd	nd	nd	na	na	na	nd	0.002J	nd	nd	nd	0.003J
2-Hexanone	0.013**	nd	nd	nd	nd	nd	0.38J	nd	na	na	na	nd	nd	nd	nd	nd	nd
Methylene Chloride	0.0231**	nd	nd	nd	nd	nd	nd	nd	na	na	na	nd	0.004J	0.003J	0.006J	nd	0.006J
Xylenes (total)	63**	nd	nd	nd	nd	nd	nd	nd	na	na	na	nd	nd	nd	nd	nd	nd
Polyaromatic Hydrocarbons																	
Acenaphthene	24.2**	na	na	na	na	na	na	na	na	na	na	9.8	0.015J	0.082	0.028J	0.024	0.067
Acenaphthylene	10.5**	na	na	na	na	na	na	na	na	na	na	0.084J	0.011J	0.009J	0.097	0.080	0.12
Anthracene	255**	na	na	na	na	na	na	na	na	na	na	18	0.029J	0.13	0.49	0.15	0.31
Benzo(a)anthracene	0.150**	na	na	na	na	na	na	na	na	na	na	23	0.066	0.27	2.0	0.71	1.1
Benzo(a)pyrene	0.015**	na	na	na	na	na	na	na	na	na	na	22	0.068	0.20	1.6	0.76	1.3
Benzo(b)fluoranthene	0.150**	na	na	na	na	na	na	na	na	na	na	25	0.080	0.28	1.8	0.93	1.6
Benzo(g, h, i)perylene	170**	na	na	na	na	na	na	na	na	na	na	14	0.046	0.17	0.83	0.51	0.87
Benzo(k)fluoranthene	1.50**	na	na	na	na	na	na	na	na	na	na	12	0.044	0.094	0.91	0.37	0.50
Chrysene	15**	na	na	na	na	na	na	na	na	na	na	22	0.086	0.46	1.8	0.7	1.2
Dibenz(a, h)anthracene	0.015**	na	na	na	na	na	na	na	na	na	na	2.7	0.016J	0.052	0.30	0.14	0.22
Fluoranthene	230**	na	na	na	na	na	na	na	na	na	na	63	0.12	0.49	3.2	1.1	1.8
Fluorene	24.2**	na	na	na	na	na	na	na	na	na	na	8.7	0.012J	0.080	0.080	0.031	0.11
Indeno(1, 2, 3-cd)pyrene	0.150**	na	na	na	na	na	na	na	na	na	na	13	0.037	0.14	0.87	0.50	0.77
Naphthalene	0.0262**	na	na	na	na	na	na	na	na	na	na	10	0.011J	0.13	0.034	0.054	0.10
Phenanthrene	170**	na	na	na	na	na	na	na	na	na	na	59	0.072	0.61	1.0	0.59	1.1
Pyrene	65.5**	na	na	na	na	na	na	na	na	na	na	46	0.16	0.45	3.1	1.0	1.9
RCRA Metals																	
Arsenic	0.39**	na	na	na	na	na	na	na	na	na	na	48.1	7.86	17.9	38.8	13.7	22.0
Barium	1,500**	na	na	na	na	na	na	na	na	na	na	163	152	152	176	150	148
Cadmium	7.00**	na	na	na	na	na	na	na	na	na	na	1.34	0.190J	nd	10.5	0.185J	0.952
Chromium (total)	0.29**	na	na	na	na	na	na	na	na	na	na	30.6	27.3	76.9	31.8	26.9	25.7
Lead	552**	na	na	na	na	na	na	na	na	na	na	230	720	1,010	1,180	281	218
Mercury	1.00**	na	na	na	na	na	na	na	na	na	na	0.884	0.0994J	0.0625J	0.728	2.24	0.734
Silver	1.19**	na	na	na	na	na	na	na	na	na	na	0.219J	nd	1.35J	7.91	0.447J	0.679J
Pesticides & Herbicides																	
Methoxychlor	31.0**	na	na	na	na	na	na	na	nd	0.0034J	nd	na	na	na	na	na	na
TCLP																	
Lead	5***	na	na	na	na	na	na	na	na	na	na	0.0127J	0.0557	0.178	0.272	0.0061J	0.0607

Notes:
All results are in milligrams per kilogram (mg/kg).
nd - below laboratory detection limit; na - not analyzed
J - estimated value
*Clean Fill requirement, as defined by 9VAC20-81-660D
**Virginia Voluntary Remediation Program, Tier II Screening Levels for Unrestricted (i.e. residential) Soil (mg/kg).
***Resource Conservation and Recovery Act Toxicity Characteristic Leaching Procedure Limit (mg/L)
Exceeds Screening Level

Table 2
Compounds Detected in Groundwater
September 26 and September 27, 2013
Robinson Terminal-South
Alexandria, Virginia

	Sample ID	BW1	BW2	BW3	BW4	BW-5	BW-6	BW7	BW8	BW9	BW10	MBW1
	Sample Date	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/26/13	9/27/13
Chemical Name	**Screening Level**	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Total Petroleum Hydrocarbons												
TPH DRO	1,000*	530	69J	1,100	28,000	460	680	75	860	63J	59J	120
TPH GRO	1,000*	nd	nd	nd	170	82	410	nd	nd	nd	45J	nd
Volatile Organic Compounds												
Xylenes (total)	10,000**	nd	nd	nd	1J	nd	nd	nd	nd	nd	nd	nd
Polyaromatic Hydrocarbons												
Acenaphthene	40**	nd	nd	4	10J	0.1J	nd	nd	nd	nd	nd	12
Acenaphthylene	8.7**	nd	nd	5	11J	0.3J	nd	nd	nd	nd	nd	2
Anthracene	130**	3J	nd	9	9J	0.1J	nd	nd	nd	nd	nd	26
Benzo(a)anthracene	0.029**	13	0.1J	23	5J	0.3J	nd	nd	nd	nd	nd	53
Benzo(a)pyrene	0.2**	14	0.2J	18	nd	0.2J	nd	nd	nd	nd	nd	47
Benzo(b)fluoranthene	0.029**	17	0.2J	23	4J	0.2J	nd	nd	nd	nd	nd	66
Benzo(g, h, i)perylene	8.7**	11	0.2J	9	nd	nd	nd	nd	nd	nd	nd	34
Benzo(k)fluoranthene	0.29**	8J	nd	10	nd	nd	nd	nd	nd	nd	nd	25
Chrysene	2.9**	16	0.2J	21	6J	0.3J	nd	nd	nd	nd	nd	52
Dibenz(a, h)anthracene	0.0029**	3J	nd	3	nd	nd	nd	nd	nd	nd	nd	9
Fluoranthene	63**	24	0.3J	49	nd	0.4J	nd	0.1J	nd	nd	nd	120
Fluorene	22**	nd	nd	5	nd	nd	nd	nd	nd	nd	nd	11
Indeno(1, 2, 3-cd)pyrene	0.029**	9J	0.1J	10	2J	nd	nd	nd	nd	nd	nd	31
Naphthalene	0.14**	nd	nd	0.4J	14	nd	nd	nd	0.1J	nd	nd	12
Phenanthrene	110**	13	0.1J	33	47	0.4J	0.2J	0.1J	0.2J	nd	nd	88
Pyrene	8.7**	22	0.3J	33	nd	0.4J	nd	0.1J	nd	nd	nd	98
RCRA Metals (results are in milligrams per liter)												
Arsenic	10**	0.287	0.0134J	0.0669	0.426	0.0616	0.0487	0.0261	0.0577	0.0406	0.0192J	0.0358
Barium	2,000**	3.85	0.275	1.11	2.85	0.583	0.488	0.238	0.5	0.367	0.2	0.793
Cadmium	5.00**	0.0195J	0.0027J	0.0038J	0.0105J	0.0029J	0.0020J	nd	0.0016J	0.00093J	0.00089J	0.008
Chromium (total)	100**	0.317	0.0198	0.0757	0.346	0.0808	0.164	0.0471	0.127	0.0570	0.0581	0.0764
Lead	15**	7.57	0.5	1.28	1.1	0.1	0.0785	0.0462	0.0636	0.0283	0.0261	0.727
Mercury	2.00**	0.0126	0.00033	0.001	0.0060	0.00031	0.00043	0.00022	0.00013J	0.00016J	nd	0.001

Notes:
nd - below laboratory detection limit
J - estimated value
*VDEQ Reporting Limit
**Virginia Voluntary Remediation Program, Tier II Screening Levels for Unrestricted (i.e. residential) Groundwater (ug/L).
Exceeds Screening Level

APPENDIX I

BORING LOGS

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. B-1
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/26/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 7'	

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-5"
	0.0				**CL/SC Fill**	Black/Brown fill material consisting of sand, clay, and organic material, bricks, moist
	0.0					
2.5	0.0					
	0.0					
5	10.0	**B1-5**				
	4.1					
	3.0				**CH/SC Fill**	Black/Brown fill material consisting of sand, clay, and organic material, bricks, saturated
7.5	0.0					
	3.5					
10	0.0	**B1-10**				
	3.1					
	0.0					
12.5	0.0					
	0.0					
15						
17.5						

This information pertains only to this boring and should not be interpreted as being indicative of the site.

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. B-2
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/26/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 8'	

This information pertains only to this boring and should not be interpreted as being indicative of the site.

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-7"
	0.0				**CL/SC Fill**	Fill material, bricks, cobbles, stone, clays, sands
	0.0					
2.5	0.0					
	9.5	**B2-4**				
5	0.0					
	0.0					
	0.0					
7.5	0.0					
	0.0	**B2-9**				
10	0.0					Wood encountered 9' to 11' bgs
12.5						
15						
17.5						

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. B-4
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/26/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 8'	

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-4"
	0.0				**CL/SC Fill**	Fill material, bricks, concrete, clays, sands, moist
	0.0					
2.5						
	0.0					
	0.0					
5	0.0					
	0.0					
	0.0					
7.5						
	0.0					
	3.8					
10	4.9	**B4-10**			**SC-SM**	Silty/Sandy/Clay
	0.0					
	0.0					
12.5						
	0.0					
	0.0	**B4-14**				
15	0.0					
17.5						

This information pertains only to this boring and should not be interpreted as being indicative of the site.

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. B-3
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/26/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 8'	

This information pertains only to this boring and should not be interpreted as being indicative of the site.

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-4"
	0.0				**CL/SC Fill**	White/Gray Fill material consisting of sand, clay, and organic material, bricks
	0.0					
2.5						
	0.0					
	0.0					
5	0.0	**B3-5**				
	0.0					
	1.0					
7.5						
	0.0				**OH/OL**	Silty Clay, decomposed organic material, Gray
	3.0	**B3-9**				
10	0.0					
	1.0					
	0.0					
12.5						
	2.0					
	0.0					
15						Wood encountered at 15' bgs
17.5						

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. B-5
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/26/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 8.5'	

This information pertains only to this boring and should not be interpreted as being indicative of the site.

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-5"
	0.0				**CL/SC**	Clayey Sand
	0.0					
2.5						
	0.0					
	0.0					
5	0.0	**B5-5**				
	0.0					
	846					
7.5	430	**B5-8**				
	0.0					
10	46					
	0.0					
	0.0					
12.5						
	0.0					
	0.0					
15	0.0					
17.5						

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. B-6
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/26/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 8'	

This information pertains only to this boring and should not be interpreted as being indicative of the site.

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-5"
	0.0				**CL/SC Fill**	Fill Material consisting of sand, clay, and organic material, bricks
	23.1					
2.5	30.3					
	875					
5	1340	**B6-5**			**CL/SC**	Clay and Sand
	860					
	430					
7.5	1366	**B6-8**				
	33.4					
10	33.5				**CH/SC**	Clayey Sand
	24.8					
	21.1					
12.5	18.3					
	15.4					
15	28.3					
17.5						

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. B-7
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/26/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 8'	

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-5"
	0.0				**CL/SC Fill**	Fill material consisting of clay, sand, and organic material
	0.0					
2.5						
	0.0					
	0.0					
5	0.0	**B7-5**				
	0.0					
	0.0					
7.5						
	0.0	**B7-8**				
	0.0					
10	0.0					
	0.0				**SC**	Sand with clay mixed in
	0.0					
12.5						
	0.0					
	0.0					
15	0.0					
17.5						

This information pertains only to this boring and should not be interpreted as being indicative of the site.

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. B-8
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:
DRILLER: Green Services, INC.	DATE DRILLED: 9/26/13 / LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 7'

This information pertains only to this boring and should not be interpreted as being indicative of the site.

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				Concrete	Concrete, 0-5"
	0.0					
	0.0					
2.5	0.0				CL/CH	Clay, Gray/Brown
	0.0					
5	0.0	B8-5				
	0.0					
	0.0					
7.5	0.0	B8-8				
	0.0				SW	Sand, Red/Brown
10	0.0					
	0.0					
12.5	0.0					
	0.0				CL	Very firm, Gray Clay
15	0.0					
17.5						

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. B-9
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/26/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 6.5'	

This information pertains only to this boring and should not be interpreted as being indicative of the site.

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-4"
	0.0				**SP Fill**	Sandy fill, loose, Gray/Brown/Red
	0.0					
2.5	0.0					
	0.0	**B9-4**			**CL**	Hard, Dense Clay, Red/Brown/Gray
5	0.0					
	0.0				**SP/SW**	Sand, Orange/Brown
	0.0	**B9-7**				
7.5	0.0					
	0.0					
10	0.0					
	0.0					
	0.0					
12.5	0.0					
	0.0					
15	0.0					
17.5						

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. B-10
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/26/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 7'	

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-4"
	0.0				**CH/SC Fill**	Fill material consisting of sand, clay, and organic materials Black/ Gray/Orange/Brown
	0.0					
2.5						
	0.0					
	0.0	**B10-4**				
5	0.0					
	0.0					
	0.0				**SC**	Clayey Sand, Dark Brown/Red, wet
7.5						
	0.0	**B10-8**				
	0.0					
10	0.0					
	0.0					
	0.0					
12.5						
	0.0					
	0.0					
15	0.0					
17.5						

This information pertains only to this boring and should not be interpreted as being indicative of the site.

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. B-11
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:
DRILLER: Green Services, INC.	DATE DRILLED: 9/27/13 / LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 7'

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-4"
	0.0				**CL/SC Fill**	Fill material consisting of clay and sand
	0.0					
2.5	24					
	286					
5	78					
	100				**SC**	Clayey Sand mixture, Gray/Brown
	2580					
7.5	1860	**B11-8**				
	124					
10	71					
	0.0					
	0.0					
12.5	0.0					
	0.0					
15	0.0					
17.5						

This information pertains only to this boring and should not be interpreted as being indicative of the site.

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. B-12
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:
DRILLER: Green Services, INC.	DATE DRILLED: 9/27/13 / LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 7.5'

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-4"
	0.0				**CL/CH Fill**	Clay based fill material
2.5	78					
	65					
	30	**B12-4**				
5	0.0					
	0.0				**SC**	Clayey Sand, firm
7.5	0.0					
	0.0					
	0.0					
10	0.0					
12.5						
15						
17.5						

This information pertains only to this boring and should not be interpreted as being indicative of the site.

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. B-13
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:
DRILLER: Green Services, INC.	DATE DRILLED: 9/27/13 / LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 7'

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-6"
	0.0				**CL/CH Fill**	Clay bases fill material, black, wood, brick
	0.0					
2.5	3.5					
	0.0					
5	0.0	**B13-5**				
	0.0				**SC**	Sand with clays, wet
	0.0					
7.5	0.0					
	0.0					
10	0.0					
12.5						
15						
17.5						

This information pertains only to this boring and should not be interpreted as being indicative of the site.

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. B-15
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/27/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 7'	

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-4"
	0.0				**CL/SC Fill**	Fill Material consisting of sand, clay, and organic material, bricks
	0.0					
2.5	0.0					
	0.0					
5	0.0					
	0.0					
7.5	240					
	448	**B15-8**				
	1200					
10	400					
	0.0					
12.5	0.0					
	0.0					
15	0.0					
17.5						

This information pertains only to this boring and should not be interpreted as being indicative of the site.

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. B-14
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/27/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 7'	

This information pertains only to this boring and should not be interpreted as being indicative of the site.

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-4"
	0.0				**CL/SC Fill**	Fill material consisting of sand and clay, stained black
	0.0					
2.5	0.0					
	44					
5	1112					
	908					
	846	**B14-7**				
7.5	901					
	846					
10	785				**SM**	Silty Sand, Gray/Brown/Red
	300					
	13.1					
12.5	11.1					
	10.1					
15	8.3					
17.5						

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. B-16
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/27/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 7.5'	

This information pertains only to this boring and should not be interpreted as being indicative of the site.

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-4"
	0.0				**CL/SC Fill**	Black fill Material consisting of sand, clay,and organic material, bricks
	0.0					
2.5	0.0					
	0.0					
5	0.0					
	31				**CH/MH**	Clay and Silts, moist
	608					
7.5	35	**B16-8**				
	0.0					
10	0.0					
12.5						
15						
17.5						

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. B-17
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/27/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 8.5'	

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-4"
	0.0				**CL/ML Fill**	
	0.0					
2.5	0.0					
	0.0					
5	0.0					Fill material consisting of silt and clay, bricks, moist
	0.0					Fill material, bricks, clay, stone. silts, moist
7.5	0.0					
	0.0					
	0.0	**B17-9**				
10	0.0					
12.5						
15						
17.5						

This information pertains only to this boring and should not be interpreted as being indicative of the site.

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. FB-1
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/27/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER:	

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-6"
	0.0				**CL/SC Fill**	Fill material consisting of clay and sand, bricks
2.5	0.0					
	0.0					
	0.0	**FB1-4**				
5	0.0					
7.5						
10						
12.5						
15						
17.5						

This information pertains only to this boring and should not be interpreted as being indicative of the site.

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. FB-2
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/27/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER:	

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-6"
	0.0				**GC Fill**	Grey/Orange/Brown fill material consisting ofclays and gravel
2.5	0.0					
	0.0	**FB2-3**				
	0.0					
5	0.0					
7.5						
10						
12.5						
15						
17.5						

This information pertains only to this boring and should not be interpreted as being indicative of the site.

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. FB-3
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/27/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER:	

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0				**Concrete**	Concrete, 0-6"
	0.0				**SC-SM Fill**	Fill material consisting of silt, sand, and clay
	0.0					
2.5	0.0	**FB3-3**				
	0.0					
5	0.0					
7.5						
10						
12.5						
15						
17.5						

This information pertains only to this boring and should not be interpreted as being indicative of the site.

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. MB-1
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/27/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 5'	

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0					
	0.0					
	0.0					
2.5	0.0					
	0.0	MB1-4				
5	0.0					
	0.0					
	0.0					
7.5	0.0	MB1-8			CL/SC Fill	Fill Material consisting of sand, clay, and organic material, bricks
	0.0					
10	0.0					
	0.0					
	0.0					
12.5	0.0					
	0.0					
15	0.0					
17.5						

This information pertains only to this boring and should not be interpreted as being indicative of the site.

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. MB-2
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/27/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 4'	

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0					
	0.0					
	0.0					
2.5	0.0					
	0.0	MB2-4				
5	0.0					
	0.0					
	0.0					
7.5	0.0	MB2-8			CL/SC Fill	Grey/Brown fill Material consisting of sand, clay, and organic material, bricks
	0.0					
10	0.0					
	0.0					
	0.0					
12.5	0.0					
	0.0					
15	0.0					
17.5						

This information pertains only to this boring and should not be interpreted as being indicative of the site.

PROJECT: Robinson Terminal - South
CLIENT: EYA

BORING NUM. MB-3
PROJECT NO. 21983

LOCATION: See Figure	ELEVATION:	
DRILLER: Green Services, INC.	DATE DRILLED: 9/27/13	LOGGED BY: JDH
DRILL RIG: Geoprobe Direct Push	DEPTH TO WATER: 5'	

Elevation/ Depth (Ft)	PID Reading	Sample Number	Sample Recovery (in/in)	Graphic Log	Soil Classification	SOIL DESCRIPTION
0	0.0					
	0.0					
	0.0					
2.5						
	0.0					
	0.0					
5	0.0	MB3-5				
	0.0					
	0.0					
7.5					CL/SC Fill	
	0.0	MB3-8				Grey/Brown fill Material consisting of sand clay, and organic material, loose, moist
	0.0					
10	0.0					
	0.0					
	0.0					
12.5						
	0.0					
	0.0					
15	0.0					
17.5						

This information pertains only to this boring and should not be interpreted as being indicative of the site.

APPENDIX II

LABORATORY REPORTS

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

October 11, 2013

Project: Robinson Terminal

Submittal Date: 10/07/2013
Group Number: 1424417
PO Number: 21983
State of Sample Origin: VA

Client Sample Description	Lancaster Labs (LL) #
MB1-3-4 Grab Soil	7227662
MB1-7-8 Grab Soil	7227663
MB2-3-4 Grab Soil	7227664
MB2-7-8 Grab Soil	7227665
MB3-4-5 Grab Soil	7227666
MB3-7-8 Grab Soil	7227667
B1-5' Grab Soil	7227668
B2-4' Grab Soil	7227669
B2-9' Grab Soil	7227670
B4-10' Grab Soil	7227671
B5-5' Grab Soil	7227672

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Engineering Consulting Service Attn: Mike Johnson

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: MB1-3-4 Grab Soil
TCLP Non-volatile Extraction
Robinson Terminal South

LL Sample # TL 7227662
LL Group # 1424417
Account # 05097

Project Name: Robinson Terminal

Collected: 09/27/2013 12:47 by JH

Submitted: 10/07/2013 18:46
Reported: 10/11/2013 17:48

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/l**	**mg/l**	
07055	Lead	7439-92-1	0.0127 J	0.0047	1

General Sample Comments

This sample was originally submitted to the laboratory on 09/28/13 at 09:25. We received authorization for further testing on 10/07/13.

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07055	Lead	SW-846 6010B	1	132825705001	10/10/2013 09:57	Eric L Eby	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	132825705001	10/10/2013 01:00	Annamaria Stipkovits	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	13281-482-0947B	10/08/2013 14:45	Darin P Wagner	n.a.

eurofins
Lancaster Laboratories Environmental

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MB1-7-8 Grab Soil
TCLP Non-volatile Extraction
Robinson Terminal South

LL Sample # TL 7227663
LL Group # 1424417
Account # 05097

Project Name: Robinson Terminal

Collected: 09/27/2013 12:50 by JH

Submitted: 10/07/2013 18:46
Reported: 10/11/2013 17:48

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/l**	**mg/l**	
07055	Lead	7439-92-1	0.0557	0.0047	1

General Sample Comments

This sample was originally submitted to the laboratory on 09/28/13 at 09:25. We received authorization for further testing on 10/07/13.

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07055	Lead	SW-846 6010B	1	132825705001	10/10/2013 10:43	Eric L Eby	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	132825705001	10/10/2013 01:00	Annamaria Stipkovits	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	13281-482-0947B	10/08/2013 14:45	Darin P Wagner	n.a.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: MB2-3-4 Grab Soil
TCLP Non-volatile Extraction
Robinson Terminal South

LL Sample # TL 7227664
LL Group # 1424417
Account # 05097

Project Name: Robinson Terminal

Collected: 09/27/2013 13:20 by JH

Submitted: 10/07/2013 18:46
Reported: 10/11/2013 17:48

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/l**	**mg/l**	
07055	Lead	7439-92-1	0.178	0.0047	1

General Sample Comments

This sample was originally submitted to the laboratory on 09/28/13 at 09:25. We received authorization for further testing on 10/07/13.

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07055	Lead	SW-846 6010B	1	132825705001	10/10/2013 10:47	Eric L Eby	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	132825705001	10/10/2013 01:00	Annamaria Stipkovits	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	13281-482-0947B	10/08/2013 14:45	Darin P Wagner	n.a.

eurofins
Lancaster Laboratories Environmental

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MB2-7-8 Grab Soil
TCLP Non-volatile Extraction
Robinson Terminal South

LL Sample # TL 7227665
LL Group # 1424417
Account # 05097

Project Name: Robinson Terminal

Collected: 09/27/2013 13:25 by JH

Submitted: 10/07/2013 18:46
Reported: 10/11/2013 17:48

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/l**	**mg/l**	
07055	Lead	7439-92-1	0.272	0.0047	1

General Sample Comments

This sample was originally submitted to the laboratory on 09/28/13 at 09:25. We received authorization for further testing on 10/07/13.

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07055	Lead	SW-846 6010B	1	132825705001	10/10/2013 10:52	Eric L Eby	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	132825705001	10/10/2013 01:00	Annamaria Stipkovits	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	13281-482-0947B	10/08/2013 14:45	Darin P Wagner	n.a.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: MB3-4-5 Grab Soil
TCLP Non-volatile Extraction
Robinson Terminal South

LL Sample # TL 7227666
LL Group # 1424417
Account # 05097

Project Name: Robinson Terminal

Collected: 09/27/2013 13:32 by JH

Submitted: 10/07/2013 18:46
Reported: 10/11/2013 17:48

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/l**	**mg/l**	
07055	Lead	7439-92-1	0.0061 J	0.0047	1

General Sample Comments

This sample was originally submitted to the laboratory on 09/28/13 at 09:25. We received authorization for further testing on 10/07/13.

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07055	Lead	SW-846 6010B	1	132825705001	10/10/2013 10:56	Eric L Eby	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	132825705001	10/10/2013 01:00	Annamaria Stipkovits	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	13281-482-0947B	10/08/2013 14:45	Darin P Wagner	n.a.

eurofins
Lancaster Laboratories Environmental

Analysis Report

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: MB3-7-8 Grab Soil
TCLP Non-volatile Extraction
Robinson Terminal South

LL Sample # TL 7227667
LL Group # 1424417
Account # 05097

Project Name: Robinson Terminal

Collected: 09/27/2013 13:36 by JH

Submitted: 10/07/2013 18:46
Reported: 10/11/2013 17:48

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/l**	**mg/l**	
07055	Lead	7439-92-1	0.0607	0.0047	1

General Sample Comments

This sample was originally submitted to the laboratory on 09/28/13 at 09:25. We received authorization for further testing on 10/07/13.

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07055	Lead	SW-846 6010B	1	132825705001	10/10/2013 10:59	Eric L Eby	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	132825705001	10/10/2013 01:00	Annamaria Stipkovits	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	13281-482-0947B	10/08/2013 14:45	Darin P Wagner	n.a.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B1-5' Grab Soil
TCLP Non-volatile Extraction
Robinson Terminal South

LL Sample # TL 7227668
LL Group # 1424417
Account # 05097

Project Name: Robinson Terminal

Collected: 09/26/2013 08:06 by JH

Submitted: 10/07/2013 18:46
Reported: 10/11/2013 17:48

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/l**	**mg/l**	
07055	Lead	7439-92-1	N.D.	0.0047	1

General Sample Comments

This sample was originally submitted to the laboratory on 09/27/13 at 16:35. We received authorization for further testing on 10/07/13.

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07055	Lead	SW-846 6010B	1	132825705001	10/10/2013 11:03	Eric L Eby	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	132825705001	10/10/2013 01:00	Annamaria Stipkovits	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	13281-482-0947B	10/08/2013 14:45	Darin P Wagner	n.a.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B2-4' Grab Soil
TCLP Non-volatile Extraction
Robinson Terminal South

LL Sample # TL 7227669
LL Group # 1424417
Account # 05097

Project Name: Robinson Terminal

Collected: 09/26/2013 08:45 by JH

Submitted: 10/07/2013 18:46
Reported: 10/11/2013 17:48

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/l**	**mg/l**	
07055	Lead	7439-92-1	0.0547	0.0047	1

General Sample Comments

This sample was originally submitted to the laboratory on 09/27/13 at 16:35. We received authorization for further testing on 10/07/13.

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07055	Lead	SW-846 6010B	1	132825705001	10/10/2013 11:08	Eric L Eby	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	132825705001	10/10/2013 01:00	Annamaria Stipkovits	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	13281-482-0947B	10/08/2013 14:45	Darin P Wagner	n.a.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B2-9' Grab Soil
TCLP Non-volatile Extraction
Robinson Terminal South

LL Sample # TL 7227670
LL Group # 1424417
Account # 05097

Project Name: Robinson Terminal

Collected: 09/26/2013 15:15 by JH

Submitted: 10/07/2013 18:46
Reported: 10/11/2013 17:48

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/l**	**mg/l**	
07055	Lead	7439-92-1	0.0053 J	0.0047	1

General Sample Comments

This sample was originally submitted to the laboratory on 09/27/13 at 16:35. We received authorization for further testing on 10/07/13.
This sample was originally submitted to the laboratory on 09/27/13 at 16:35. We received authorization for further testing on 10/07/13.

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07055	Lead	SW-846 6010B	1	132825705001	10/10/2013 11:12	Eric L Eby	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	132825705001	10/10/2013 01:00	Annamaria Stipkovits	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	13281-482-0947B	10/08/2013 14:45	Darin P Wagner	n.a.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B4-10' Grab Soil
TCLP Non-volatile Extraction
Robinson Terminal South

LL Sample # TL 7227671
LL Group # 1424417
Account # 05097

Project Name: Robinson Terminal

Collected: 09/26/2013 09:55 by JH

Submitted: 10/07/2013 18:46
Reported: 10/11/2013 17:48

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/l**	**mg/l**	
07055	Lead	7439-92-1	0.0277	0.0047	1

General Sample Comments

This sample was originally submitted to the laboratory on 09/27/13 at 16:35. We received authorization for further testing on 10/07/13.

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07055	Lead	SW-846 6010B	1	132825705001	10/10/2013 11:23	Eric L Eby	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	132825705001	10/10/2013 01:00	Annamaria Stipkovits	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	13281-482-0947B	10/08/2013 14:45	Darin P Wagner	n.a.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B5-5' Grab Soil
TCLP Non-volatile Extraction
Robinson Terminal South

LL Sample # TL 7227672
LL Group # 1424417
Account # 05097

Project Name: Robinson Terminal

Collected: 09/26/2013 11:10 by JH

Submitted: 10/07/2013 18:46
Reported: 10/11/2013 17:48

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals		**SW-846 6010B**	**mg/l**	**mg/l**	
07055	Lead	7439-92-1	2.87	0.0047	1

General Sample Comments

This sample was originally submitted to the laboratory on 09/27/13 at 16:35. We received authorization for further testing on 10/07/13.

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07055	Lead	SW-846 6010B	1	132825705001	10/10/2013 11:27	Eric L Eby	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	132825705001	10/10/2013 01:00	Annamaria Stipkovits	1
00947	TCLP Non-volatile Extraction	SW-846 1311	1	13281-482-0947B	10/08/2013 14:45	Darin P Wagner	n.a.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Quality Control Summary

Client Name: Engineering Consulting Service
Reported: 10/11/13 at 05:48 PM

Group Number: 1424417

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 132825705001	Sample number(s): 7227662-7227672							
Lead	N.D.	0.0047	mg/l	96		80-120		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 132825705001	Sample number(s): 7227662-7227672 UNSPK: 7227662 BKG: 7227662								
Lead	86	86	75-125	0	20	0.0127 J	0.0124 J	2 (1)	20

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only
Acct. # 105097 Group # ~~1423318~~ Sample # ~~7216880-96~~ 7227662-72
Instructions on reverse side correspond with circled numbers.

COC # 335116

1 Client Information

Client: ECS Mid-Atlantic
Acct. #:
Project Name/#: 21983
PWSID #:
Project Manager: Mike Johnson
P.O. #:
Sampler: Jon Horner
Quote #:
Name of state where samples were collected: VA

4 Matrix: Sediment ☐ Soil ☒ Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐ Other: ____

5 Analysis Requested — Preservation Codes

2 Sample Identification | Collected Date | Time | 3 Grab | Composite | Total # of Containers | GRO | VOCs | DRO | PAHs | Metals | Herbicides | Pesticides | 6 Remarks

Sample Identification	Date	Time	Grab	Composite	Soil	Water	Other	Total # of Containers	GRO	VOCs	DRO	PAHs	Metals	Herbicides	Pesticides	Remarks
MBW-1	9/27/13	1310	X			Water		10	X	X	X	X	X			use extra water in Amber
MB1-3-4		1247			X			3	X	X	X	X	X			
MB1-7-8		1250			X			3	X	X	X	X	X			
MB2-3-4		1320			X			3	X	X	X	X	X			
MB2-7-8		1325			X			3	X	X	X	X	X			
MB3-4-5		1332			X			3	X	X	X	X	X			
MB3-7-8		1336			X			3	X	X	X	X	X			
~~MB4~~ FB3-2-3		1415			X			2						X	X	
~~MB4~~ FB2-2-3		1410			X			2						X	X	
FB1-3-4	9/27	1400			X			2						X	X	

For Lab Use Only
FSC:
SCR#: 145368

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

7 Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)
Date results are needed: ~~10/10~~ 10/01/13
E-mail address: mjohnson@ecslimited.com

8 Data Package Options (circle if required)
Type I (Validation/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) TX TRRP-13
Type IV (CLP SOW) MA MCP CT RCP

9

Relinquished by	Date	Time	Received by	Date	Time
Angela S. Montgomery	9/13/13	1503			
	9/27/13	1700			

EDD Required? Yes No
If yes, format:
Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____
Temperature upon receipt 2.1 °C

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 5097 For Eurofins Lancaster Laboratories Environmental use only Group # ~~1422318~~ Sample # ~~7216880-96~~ 1424417 7227662-72 re-entry

Instructions on reverse side correspond with circled numbers.

COC # 335117

1 Client Information

Client: SAME AS

Acct. #:

Project Name/#:

PWSID #:

Project Manager: list

P.O. #:

Sampler:

Quote #:

Name of state where samples were collected:

4 Matrix

Sediment ☐ Soil ☐ Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☐ Other: ____

5 Analysis Requested

Preservation Codes

2 Sample Identification / 3

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Water	Other	Total # of Containers	DRO	GRO	VOCs	Remarks
B11-7-8	9/27	0940	x		x			3	x	x	x	
B12-3-4		0950	x		x			3	x	x	x	
B13-4-5		1005	x		x			3	x	x	x	
B14-6-7		1024	x		x			2	x	x	x	
B15-7-8		1105	x		x			2	x	x	x	
B16-7-8		1120	x		x			2	x	x	x	
B17-8-9	9/27	1132	x		x			2	x	x	x	

For Lab Use Only

FSC:

SCR#: 145368

Preservation Codes

H=HCl T=Thiosulfate

N=HNO_3 B=NaOH

S=H_2SO_4 O=Other

6 Remarks

7 Turnaround Time (TAT) Requested (please circle)

Standard Rush 2 day

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: 10/1/13

E-mail address: mjohnson@ecslimited.com

8 Data Package Options (circle if required)

Type I (Validation/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) TX TRRP-13

Type IV (CLP SOW) MA MCP CT RCP

9

Relinquished by	Date	Time	Received by	Date	Time
Angela S. Montgomery	9/13/13	1503			
	9/27/13	1700			

EDD Required? Yes No

If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature upon receipt 2.1 °C

Environmental Analysis Request/Chain of Custody

eurofins

Lancaster Laboratories Environmental

Acct. # 5097

For Eurofins Lancaster Laboratories Environmental use only
Group # ~~1422243~~ 1424417 Sample # ~~7216489-518~~ 7227062-72
Instructions on reverse side correspond with circled numbers.

JM 10/2/13 re-entry

COC # 335798

1 Client Information

Client: ECS Mid-Atlantic	Acct. #:
Project Name/#: Robinson Terminal South	PWSID #:
Project Manager: Mike Johnson	P.O. #: 21983
Sampler: John Horner	Quote #: 210052-A

Name of state where samples were collected: Virginia

For Lab Use Only
FSC:
SCR#:

4 Matrix

5 Analysis Requested / Preservation Codes

2 Sample Identification / 3 Collected

Sample Identification	Date	Time	Grab	Composite	Soil	Water: Ground	Water: Potable	Water: Surface	Water: NPDES	Sediment	Other:	Total # of Containers	TPH DRO	TPH GRO	VOCs	PAHs (8270 SIM)	RCRA Metals						6 Remarks
B1 5'	9/26	0806	X		X							4	X	X	X	X	X						
B1 10'	9/26	0815	X		X							4	X	X	X	X	X						
B2 4'	9/26	0845	X		X							4	X	X	X	X	X						
B2 9'	9/26	1515	X		X							4	X	X	X	X	X						
B3 5'	9/26	0820	X		X							4	X	X	X	X	X						
B3 9'	9/26	0826	X		X							4	X	X	X	X	X						
B3 10'	9/26	0955	X		X							4	X	X	X	X	X						
B4 14'	9/26	1000	X		X							4	X	X	X	X	X						
B5 5'	9/26	1110	X		X							4	X	X	X	X	X						
B5 8'	9/26	1115	X		X							4	X	X	X	X	X						

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

7 Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: 2-day turnaround

E-mail address: mjohnson@ecslimited.com

8 Data Package Options (circle if required)

Type I (Validation/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) TX TRRP-13

Type IV (CLP SOW) MA MCP CT RCP

9

Relinquished by	Date	Time	Received by	Date	Time
John Horner			[signature]	9/27	0800
[signature]	9/27	1000	to courier		
			[signature]	9/27/13	1635

EDD Required? Yes No
If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx ____ Other Courier

Temperature upon receipt 0.9-2.2 °C

Environmental Analysis Request/Chain of Custody

eurofins

Lancaster Laboratories Environmental

Acct. # 5097 For Eurofins Lancaster Laboratories Environmental use only Group # ~~1422243~~ 1424415 Sample # ~~72176789-518~~ 72276662-72 JM 10/2/13 8 re-entry

Instructions on reverse side correspond with circled numbers.

COC # 335799

1 Client Information

Client: ECS Mid-Atlantic	Acct. #:
Project Name/#: Robinson Terminal South	PWSID #:
Project Manager: Mike Johnson	P.O. #: 21983
Sampler: John Horner	Quote #: 210052-A

Name of state where samples were collected:

4 Matrix

Sediment ☐ Ground ☐ Surface ☐ Potable ☐ NPDES ☐ Soil ☒ Water Other: ____

5 Analysis Requested

Preservation Codes

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

6 Remarks

2 Sample Identification / 3

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Water	Other	Total # of Containers	TPH DRO	TPH GRO	VOCs	PAHs (8270 SIM)	RCRA Metals						
B6 5'	9/26	1230	X		X			4	X	X	X	X	X						
B6 8'	9/26	1235	X		X			4	X	X	X	X	X						
B7 5'	9/26	1035	X		X			4	X	X	X	X	X						
B7 8'	9/26	1039	X		X			4	X	X	X	X	X						
B8 5'	9/26	1255	X		X			4	X	X	X	X	X						
B8 8'	9/26	1300	X		X			4	X	X	X	X	X						
B9 4'	9/26	1332	X		X			4	X	X	X	X	X						
B9 7'	9/26	1335	X		X			4	X	X	X	X	X						
B10 4'	9/26	1435	X		X			4	X	X	X	X	X						
B10 8'	9/26	1440	X		X			4	X	X	X	X	X						

7 Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: 2-day turnaround

E-mail address: mjohnson@ecslimited.com

8 Data Package Options (circle if required)

Type I (Validation/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) TX TRRP-13

Type IV (CLP SOW) MA MCP CT RCP

9

Relinquished by	Date	Time	Received by	Date	Time
John Horner			[signature]	9/27	0800
[signature]	9/27	1600	to courier		
			[signature]	9/27/13	1635

EDD Required? Yes No

If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS ____ FedEx ____ Other Courier

Temperature upon receipt 0.9-2.2°C

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories

Acct. # 5097 For Eurofins Lancaster Laboratories use only Group # ~~1422243~~ 1424413 Sample # ~~7216489-518~~ 7227662-22 TK 10/7/13 re-entry

Instructions on reverse side correspond with circled numbers.

COC # 334141

1 Client Information

Client: ECS Mid-Atlantic	Acct. #:
Project Name/#: Robinson Terminal South	PWSID #:
Project Manager: Mike Johnson	P.O. #: 21983
Sampler: John Horner	Quote #: 210052-A

Name of state where samples were collected:

For Lab Use Only
FSC:
SCR#:

Preservation Codes: H=HCl, T=Thiosulfate, N=HNO_3, B=NaOH, S=H_2SO_4, O=Other

2 Sample Identification / 3 Collected / 4 Matrix / 5 Analysis Requested

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Sediment	Potable	Ground	Surface	NPDES	Water	Other:	Total # of Containers	TPH DRO	TPH GRO	VOCs	SVOCs (8270SIM)	RCRA Metals	6 Remarks
BW-1	9/26	0825	X								X			X	X	X	X	X	
BW-2	9/26	0905	X								X			X	X	X	X	X	
BW-3	9/26	0930	X								X			X	X	X	X	X	
BW-4	9/26	1005	X								X			X	X	X	X	X	
BW-5	9/26	1120	X								X			X	X	X	X	X	
BW-6	9/26	1245	X								X			X	X	X	X	X	
BW-7	9/26	1050	X								X			X	X	X	X	X	
BW-8	9/26	1310	X								X			X	X	X	X	X	
BW-9	9/26	1355	X								X			X	X	X	X	X	
BW-10	9/26	1445	X								X			X	X	X	X	X	

7 Turnaround Time (TAT) Requested (please circle)

Standard **Rush**

(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: 2-day turnaround

E-mail address: mjohnson@ecslimited.com

8 Data Package Options (circle if required)

Type I (Validation/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) TX TRRP-13

Type IV (CLP SOW) MA MCP CT RCP

9

Relinquished by	Date	Time	Received by	Date	Time
John Horner			[signature]	9/27	0800
[signature]	9/27	1000	to courier		
			[signature]	9/27/13	1635

EDD Required? Yes **No**
If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes **No**
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx ____ Other courier

Temperature upon receipt 2.3-14.0 °C

eurofins | Lancaster Laboratories Environmental

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	**B**	Value is <CRDL, but ≥IDL
B	Analyte was also detected in the blank	**E**	Estimated due to interference
C	Pesticide result confirmed by GC/MS	**M**	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	**N**	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	**S**	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	**U**	Compound was not detected
P	Concentration difference between primary and confirmation columns >25%	**W**	Post digestion spike out of control limits
U	Compound was not detected	*****	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	**+**	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

October 02, 2013

Project: Robinson Terminal South

Submittal Date: 09/27/2013
Group Number: 1422243
PO Number: 21983
State of Sample Origin: VA

Client Sample Description	Lancaster Labs (LL) #
BW-1 Grab Water	7216489
BW-2 Grab Water	7216490
BW-3 Grab Water	7216491
BW-4 Grab Water	7216492
BW-5 Grab Water	7216493
BW-6 Grab Water	7216494
BW-7 Grab Water	7216495
BW-8 Grab Water	7216496
BW-9 Grab Water	7216497
BW-10 Grab Water	7216498
B1 5' Grab Soil	7216499
B1 10' Grab Soil	7216500
B2 4' Grab Soil	7216501
B2 9' Grab Soil	7216502
B3 5' Grab Soil	7216503
B3 9' Grab Soil	7216504
B4 10' Grab Soil	7216505
B4 14' Grab Soil	7216506
B5 5' Grab Soil	7216507
B5 8' Grab Soil	7216508
B6 5' Grab Soil	7216509
B6 8' Grab Soil	7216510
B7 5' Grab Soil	7216511
B7 8' Grab Soil	7216512
B8 5' Grab Soil	7216513
B8 8' Grab Soil	7216514
B9 4' Grab Soil	7216515
B9 7' Grab Soil	7216516
B10 4' Grab Soil	7216517
B10 8' Grab Soil	7216518

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Engineering Consulting Service Attn: Mike Johnson

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-1 Grab Water
Robinson Terminal South

LL Sample # WW 7216489
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:25 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB1

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	
10335	Acetone	67-64-1	N.D.		6	1
10335	Benzene	71-43-2	N.D.		0.5	1
10335	Bromodichloromethane	75-27-4	N.D.		1	1
10335	Bromoform	75-25-2	N.D.		1	1
10335	Bromomethane	74-83-9	N.D.		1	1
10335	2-Butanone	78-93-3	N.D.		3	1
10335	Carbon Disulfide	75-15-0	N.D.		1	1
10335	Carbon Tetrachloride	56-23-5	N.D.		1	1
10335	Chlorobenzene	108-90-7	N.D.		0.8	1
10335	Chloroethane	75-00-3	N.D.		1	1
10335	Chloroform	67-66-3	N.D.		0.8	1
10335	Chloromethane	74-87-3	N.D.		1	1
10335	Dibromochloromethane	124-48-1	N.D.		1	1
10335	1,1-Dichloroethane	75-34-3	N.D.		1	1
10335	1,2-Dichloroethane	107-06-2	N.D.		1	1
10335	1,1-Dichloroethene	75-35-4	N.D.		0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.		0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.		0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.		1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		1	1
10335	Ethylbenzene	100-41-4	N.D.		0.8	1
10335	2-Hexanone	591-78-6	N.D.		3	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.		3	1
10335	Methylene Chloride	75-09-2	N.D.		2	1
10335	Styrene	100-42-5	N.D.		1	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1	1
10335	Tetrachloroethene	127-18-4	N.D.		0.8	1
10335	Toluene	108-88-3	N.D.		0.7	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.		0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	1
10335	Trichloroethene	79-01-6	N.D.		1	1
10335	Vinyl Chloride	75-01-4	N.D.		1	1
10335	Xylene (Total)	1330-20-7	N.D.		0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	
07805	Acenaphthene	83-32-9	N.D.		2	20
07805	Acenaphthylene	208-96-8	N.D.		2	20
07805	Anthracene	120-12-7	3	J	2	20
07805	Benzo(a)anthracene	56-55-3	13		2	20
07805	Benzo(a)pyrene	50-32-8	14		2	20
07805	Benzo(b)fluoranthene	205-99-2	17		2	20
07805	Benzo(g,h,i)perylene	191-24-2	11		2	20
07805	Benzo(k)fluoranthene	207-08-9	8	J	2	20
07805	Chrysene	218-01-9	16		2	20
07805	Dibenz(a,h)anthracene	53-70-3	3	J	2	20
07805	Fluoranthene	206-44-0	24		2	20
07805	Fluorene	86-73-7	N.D.		2	20
07805	Indeno(1,2,3-cd)pyrene	193-39-5	9	J	2	20
07805	Naphthalene	91-20-3	N.D.		2	20
07805	Phenanthrene	85-01-8	13		2	20

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-1 Grab Water
Robinson Terminal South

LL Sample # WW 7216489
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:25 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	
07805	Pyrene	129-00-0	22	2	20
Reporting limits were raised due to interference from the sample matrix.					
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01635	TPH-GRO water C6-C10	n.a.	N.D.	20	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**ug/l**	**ug/l**	
12858	DRO C10-C28	n.a.	530	45	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.287	0.0340	5
07046	Barium	7440-39-3	3.85	0.00033	1
07049	Cadmium	7440-43-9	0.0195 J	0.0038	5
07051	Chromium	7440-47-3	0.317	0.0016	1
07055	Lead	7439-92-1	7.57	0.0235	5
07036	Selenium	7782-49-2	N.D.	0.0420	5
07066	Silver	7440-22-4	N.D.	0.0105	5
	SW-846 7470A		**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.0126	0.00030	1

General Sample Comments

The temperature of the temperature blank bottle(s) for SVOCs upon receipt at the lab was 14.5 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 12.3-14.0 C.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	PPL/TCL VOCs - water	SW-846 8260B	1	T132731AA	09/30/2013 12:15	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T132731AA	09/30/2013 12:15	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	13271WAJ026	09/30/2013 15:23	Chad A Moline	20
07807	BNA Water Extraction	SW-846 3510C	1	13271WAJ026	09/29/2013 13:00	David S Schrum	1
01635	TPH-GRO water C6-C10	SW-846 8015B	1	13273A53A	09/30/2013 15:07	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13273A53A	09/30/2013 15:07	Marie D Beamenderfer	1
12858	TPH-DRO Water C20-C28	SW-846 8015B	1	132710028A	09/30/2013 12:40	Tracy A Cole	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	132710028A	09/29/2013 10:50	David V Hershey Jr	1
07035	Arsenic	SW-846 6010B	1	132711848001	09/30/2013 12:37	Eric L Eby	5
07046	Barium	SW-846 6010B	1	132711848001	09/30/2013 11:44	Eric L Eby	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-1 Grab Water
Robinson Terminal South

LL Sample # WW 7216489
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:25 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07049	Cadmium	SW-846 6010B	1	132711848001	09/30/2013 12:37	Eric L Eby	5
07051	Chromium	SW-846 6010B	1	132711848001	09/30/2013 11:44	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132711848001	09/30/2013 12:37	Eric L Eby	5
07036	Selenium	SW-846 6010B	1	132711848001	09/30/2013 12:37	Eric L Eby	5
07066	Silver	SW-846 6010B	1	132711848001	09/30/2013 12:37	Eric L Eby	5
00259	Mercury	SW-846 7470A	1	132735713001	10/01/2013 06:52	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132711848001	09/29/2013 22:30	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132735713001	09/30/2013 16:30	Nelli S Markaryan	1

Sample Description: BW-2 Grab Water
Robinson Terminal South

LL Sample # WW 7216490
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 09:05 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB2

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	
10335	Acetone	67-64-1	N.D.		6	1
10335	Benzene	71-43-2	N.D.		0.5	1
10335	Bromodichloromethane	75-27-4	N.D.		1	1
10335	Bromoform	75-25-2	N.D.		1	1
10335	Bromomethane	74-83-9	N.D.		1	1
10335	2-Butanone	78-93-3	N.D.		3	1
10335	Carbon Disulfide	75-15-0	N.D.		1	1
10335	Carbon Tetrachloride	56-23-5	N.D.		1	1
10335	Chlorobenzene	108-90-7	N.D.		0.8	1
10335	Chloroethane	75-00-3	N.D.		1	1
10335	Chloroform	67-66-3	N.D.		0.8	1
10335	Chloromethane	74-87-3	N.D.		1	1
10335	Dibromochloromethane	124-48-1	N.D.		1	1
10335	1,1-Dichloroethane	75-34-3	N.D.		1	1
10335	1,2-Dichloroethane	107-06-2	N.D.		1	1
10335	1,1-Dichloroethene	75-35-4	N.D.		0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.		0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.		0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.		1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		1	1
10335	Ethylbenzene	100-41-4	N.D.		0.8	1
10335	2-Hexanone	591-78-6	N.D.		3	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.		3	1
10335	Methylene Chloride	75-09-2	N.D.		2	1
10335	Styrene	100-42-5	N.D.		1	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1	1
10335	Tetrachloroethene	127-18-4	N.D.		0.8	1
10335	Toluene	108-88-3	N.D.		0.7	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.		0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	1
10335	Trichloroethene	79-01-6	N.D.		1	1
10335	Vinyl Chloride	75-01-4	N.D.		1	1
10335	Xylene (Total)	1330-20-7	N.D.		0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	
07805	Acenaphthene	83-32-9	N.D.		0.1	1
07805	Acenaphthylene	208-96-8	N.D.		0.1	1
07805	Anthracene	120-12-7	N.D.		0.1	1
07805	Benzo(a)anthracene	56-55-3	0.1	J	0.1	1
07805	Benzo(a)pyrene	50-32-8	0.2	J	0.1	1
07805	Benzo(b)fluoranthene	205-99-2	0.2	J	0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	0.2	J	0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.		0.1	1
07805	Chrysene	218-01-9	0.2	J	0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		0.1	1
07805	Fluoranthene	206-44-0	0.3	J	0.1	1
07805	Fluorene	86-73-7	N.D.		0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	0.1	J	0.1	1
07805	Naphthalene	91-20-3	N.D.		0.1	1
07805	Phenanthrene	85-01-8	0.1	J	0.1	1

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-2 Grab Water
Robinson Terminal South

LL Sample # WW 7216490
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 09:05 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	
07805	Pyrene	129-00-0	0.3 J	0.1	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01635	TPH-GRO water C6-C10	n.a.	N.D.	20	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**ug/l**	**ug/l**	
12858	DRO C10-C28	n.a.	69 J	45	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0134 J	0.0068	1
07046	Barium	7440-39-3	0.275	0.00033	1
07049	Cadmium	7440-43-9	0.0027 J	0.00076	1
07051	Chromium	7440-47-3	0.0198	0.0016	1
07055	Lead	7439-92-1	0.516	0.0047	1
07036	Selenium	7782-49-2	N.D.	0.0084	1
07066	Silver	7440-22-4	N.D.	0.0021	1
	SW-846 7470A		**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00033	0.000060	1

General Sample Comments

The temperature of the temperature blank bottle(s) for SVOCs upon receipt at the lab was 14.5 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 12.3-14.0 C.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	PPL/TCL VOCs - water	SW-846 8260B	1	T132731AA	09/30/2013 12:39	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T132731AA	09/30/2013 12:39	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	13271WAJ026	09/30/2013 15:52	Chad A Moline	1
07807	BNA Water Extraction	SW-846 3510C	1	13271WAJ026	09/29/2013 13:00	David S Schrum	1
01635	TPH-GRO water C6-C10	SW-846 8015B	1	13273A53A	09/30/2013 15:34	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13273A53A	09/30/2013 15:34	Marie D Beamenderfer	1
12858	TPH-DRO Water C20-C28	SW-846 8015B	1	132710028A	09/30/2013 13:03	Tracy A Cole	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	132710028A	09/29/2013 10:50	David V Hershey Jr	1
07035	Arsenic	SW-846 6010B	1	132711848001	09/30/2013 11:22	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132711848001	09/30/2013 11:22	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132711848001	09/30/2013 11:22	Eric L Eby	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-2 Grab Water
Robinson Terminal South

LL Sample # WW 7216490
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 09:05 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB2

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	132711848001	09/30/2013 11:22	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132711848001	09/30/2013 11:22	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132711848001	09/30/2013 11:22	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132711848001	09/30/2013 11:22	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132735713001	10/01/2013 06:54	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132711848001	09/29/2013 22:30	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132735713001	09/30/2013 16:30	Nelli S Markaryan	1

Sample Description: BW-3 Grab Water
Robinson Terminal South

LL Sample # WW 7216491
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 09:30 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	1	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.8	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Styrene	100-42-5	N.D.	1	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.7	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	Xylene (Total)	1330-20-7	N.D.	0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	
07805	Acenaphthene	83-32-9	4	0.1	1
07805	Acenaphthylene	208-96-8	5	0.1	1
07805	Anthracene	120-12-7	9	0.1	1
07805	Benzo(a)anthracene	56-55-3	23	0.1	1
07805	Benzo(a)pyrene	50-32-8	18	0.1	1
07805	Benzo(b)fluoranthene	205-99-2	23	0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	9	0.1	1
07805	Benzo(k)fluoranthene	207-08-9	10	0.1	1
07805	Chrysene	218-01-9	21	0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	3	0.1	1
07805	Fluoranthene	206-44-0	49	0.1	1
07805	Fluorene	86-73-7	5	0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	10	0.1	1
07805	Naphthalene	91-20-3	0.4 J	0.1	1
07805	Phenanthrene	85-01-8	33	0.1	1

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-3 Grab Water
Robinson Terminal South

LL Sample # WW 7216491
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 09:30 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	
07805	Pyrene	129-00-0	33	0.1	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01635	TPH-GRO water C6-C10	n.a.	N.D.	20	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**ug/l**	**ug/l**	
12858	DRO C10-C28	n.a.	1,100	45	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0669	0.0068	1
07046	Barium	7440-39-3	1.11	0.00033	1
07049	Cadmium	7440-43-9	0.0038 J	0.00076	1
07051	Chromium	7440-47-3	0.0757	0.0016	1
07055	Lead	7439-92-1	1.28	0.0047	1
07036	Selenium	7782-49-2	N.D.	0.0084	1
07066	Silver	7440-22-4	N.D.	0.0021	1
	SW-846 7470A		**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.0012	0.000060	1

General Sample Comments

The temperature of the temperature blank bottle(s) for SVOCs upon receipt at the lab was 14.5 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 12.3-14.0 C.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	PPL/TCL VOCs - water	SW-846 8260B	1	T132731AA	09/30/2013 13:04	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T132731AA	09/30/2013 13:04	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	13271WAJ026	09/30/2013 16:21	Chad A Moline	1
07807	BNA Water Extraction	SW-846 3510C	1	13271WAJ026	09/29/2013 13:00	David S Schrum	1
01635	TPH-GRO water C6-C10	SW-846 8015B	1	13273A53A	09/30/2013 16:01	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13273A53A	09/30/2013 16:01	Marie D Beamenderfer	1
12858	TPH-DRO Water C20-C28	SW-846 8015B	1	132710028A	09/30/2013 13:25	Tracy A Cole	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	132710028A	09/29/2013 10:50	David V Hershey Jr	1
07035	Arsenic	SW-846 6010B	1	132711848001	09/30/2013 11:48	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132711848001	09/30/2013 11:48	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132711848001	09/30/2013 11:48	Eric L Eby	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-3 Grab Water
Robinson Terminal South

LL Sample # WW 7216491
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 09:30 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB3

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	132711848001	09/30/2013 11:48	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132711848001	09/30/2013 11:48	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132711848001	09/30/2013 11:48	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132711848001	09/30/2013 11:48	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132735713001	10/01/2013 06:56	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132711848001	09/29/2013 22:30	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132735713001	09/30/2013 16:30	Nelli S Markaryan	1

Sample Description: BW-4 Grab Water
Robinson Terminal South

LL Sample # WW 7216492
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 10:05 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB4

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	
10335	Acetone	67-64-1	N.D.		6	1
10335	Benzene	71-43-2	N.D.		0.5	1
10335	Bromodichloromethane	75-27-4	N.D.		1	1
10335	Bromoform	75-25-2	N.D.		1	1
10335	Bromomethane	74-83-9	N.D.		1	1
10335	2-Butanone	78-93-3	N.D.		3	1
10335	Carbon Disulfide	75-15-0	N.D.		1	1
10335	Carbon Tetrachloride	56-23-5	N.D.		1	1
10335	Chlorobenzene	108-90-7	N.D.		0.8	1
10335	Chloroethane	75-00-3	N.D.		1	1
10335	Chloroform	67-66-3	N.D.		0.8	1
10335	Chloromethane	74-87-3	N.D.		1	1
10335	Dibromochloromethane	124-48-1	N.D.		1	1
10335	1,1-Dichloroethane	75-34-3	N.D.		1	1
10335	1,2-Dichloroethane	107-06-2	N.D.		1	1
10335	1,1-Dichloroethene	75-35-4	N.D.		0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.		0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.		0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.		1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		1	1
10335	Ethylbenzene	100-41-4	N.D.		0.8	1
10335	2-Hexanone	591-78-6	N.D.		3	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.		3	1
10335	Methylene Chloride	75-09-2	N.D.		2	1
10335	Styrene	100-42-5	N.D.		1	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1	1
10335	Tetrachloroethene	127-18-4	N.D.		0.8	1
10335	Toluene	108-88-3	N.D.		0.7	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.		0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	1
10335	Trichloroethene	79-01-6	N.D.		1	1
10335	Vinyl Chloride	75-01-4	N.D.		1	1
10335	Xylene (Total)	1330-20-7	1	J	0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	
07805	Acenaphthene	83-32-9	10	J	2	20
07805	Acenaphthylene	208-96-8	11	J	2	20
07805	Anthracene	120-12-7	9	J	2	20
07805	Benzo(a)anthracene	56-55-3	5	J	2	20
07805	Benzo(a)pyrene	50-32-8	N.D.		2	20
07805	Benzo(b)fluoranthene	205-99-2	4	J	2	20
07805	Benzo(g,h,i)perylene	191-24-2	N.D.		2	20
07805	Benzo(k)fluoranthene	207-08-9	N.D.		2	20
07805	Chrysene	218-01-9	6	J	2	20
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		2	20
07805	Fluoranthene	206-44-0	N.D.		2	20
07805	Fluorene	86-73-7	N.D.		2	20
07805	Indeno(1,2,3-cd)pyrene	193-39-5	2	J	2	20
07805	Naphthalene	91-20-3	14		2	20
07805	Phenanthrene	85-01-8	47		2	20

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-4 Grab Water
Robinson Terminal South

LL Sample # WW 7216492
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 10:05 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	
07805	Pyrene	129-00-0	N.D.	2	20
Reporting limits were raised due to interference from the sample matrix.					
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01635	TPH-GRO water C6-C10	n.a.	170	20	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**ug/l**	**ug/l**	
12858	DRO C10-C28	n.a.	28,000	45	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.426	0.0340	5
07046	Barium	7440-39-3	2.85	0.00033	1
07049	Cadmium	7440-43-9	0.0105 J	0.0038	5
07051	Chromium	7440-47-3	0.346	0.0016	1
07055	Lead	7439-92-1	1.10	0.0235	5
07036	Selenium	7782-49-2	N.D.	0.0420	5
07066	Silver	7440-22-4	N.D.	0.0105	5
	SW-846 7470A		**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.0060	0.00015	2.5

General Sample Comments

The temperature of the temperature blank bottle(s) for SVOCs upon receipt at the lab was 14.5 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 12.3-14.0 C.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	PPL/TCL VOCs - water	SW-846 8260B	1	T132731AA	09/30/2013 13:28	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T132731AA	09/30/2013 13:28	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	13271WAJ026	09/30/2013 16:49	Chad A Moline	20
07807	BNA Water Extraction	SW-846 3510C	1	13271WAJ026	09/29/2013 13:00	David S Schrum	1
01635	TPH-GRO water C6-C10	SW-846 8015B	1	13273A53A	09/30/2013 16:55	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13273A53A	09/30/2013 16:55	Marie D Beamenderfer	1
12858	TPH-DRO Water C20-C28	SW-846 8015B	1	132710028A	09/30/2013 13:48	Tracy A Cole	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	132710028A	09/29/2013 10:50	David V Hershey Jr	1
07035	Arsenic	SW-846 6010B	1	132711848001	09/30/2013 12:41	Eric L Eby	5
07046	Barium	SW-846 6010B	1	132711848001	09/30/2013 12:00	Eric L Eby	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-4 Grab Water
Robinson Terminal South

LL Sample # WW 7216492
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 10:05 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB4

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07049	Cadmium	SW-846 6010B	1	132711848001	09/30/2013 12:41	Eric L Eby	5
07051	Chromium	SW-846 6010B	1	132711848001	09/30/2013 12:00	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132711848001	09/30/2013 12:41	Eric L Eby	5
07036	Selenium	SW-846 6010B	1	132711848001	09/30/2013 12:41	Eric L Eby	5
07066	Silver	SW-846 6010B	1	132711848001	09/30/2013 12:41	Eric L Eby	5
00259	Mercury	SW-846 7470A	1	132735713001	10/01/2013 07:43	Damary Valentin	2.5
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132711848001	09/29/2013 22:30	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132735713001	09/30/2013 16:30	Nelli S Markaryan	1

Sample Description: BW-5 Grab Water
Robinson Terminal South

LL Sample # WW 7216493
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 11:20 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB5

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	
10335	Acetone	67-64-1	N.D.		6	1
10335	Benzene	71-43-2	N.D.		0.5	1
10335	Bromodichloromethane	75-27-4	N.D.		1	1
10335	Bromoform	75-25-2	N.D.		1	1
10335	Bromomethane	74-83-9	N.D.		1	1
10335	2-Butanone	78-93-3	N.D.		3	1
10335	Carbon Disulfide	75-15-0	N.D.		1	1
10335	Carbon Tetrachloride	56-23-5	N.D.		1	1
10335	Chlorobenzene	108-90-7	N.D.		0.8	1
10335	Chloroethane	75-00-3	N.D.		1	1
10335	Chloroform	67-66-3	N.D.		0.8	1
10335	Chloromethane	74-87-3	N.D.		1	1
10335	Dibromochloromethane	124-48-1	N.D.		1	1
10335	1,1-Dichloroethane	75-34-3	N.D.		1	1
10335	1,2-Dichloroethane	107-06-2	N.D.		1	1
10335	1,1-Dichloroethene	75-35-4	N.D.		0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.		0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.		0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.		1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		1	1
10335	Ethylbenzene	100-41-4	N.D.		0.8	1
10335	2-Hexanone	591-78-6	N.D.		3	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.		3	1
10335	Methylene Chloride	75-09-2	N.D.		2	1
10335	Styrene	100-42-5	N.D.		1	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1	1
10335	Tetrachloroethene	127-18-4	N.D.		0.8	1
10335	Toluene	108-88-3	N.D.		0.7	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.		0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	1
10335	Trichloroethene	79-01-6	N.D.		1	1
10335	Vinyl Chloride	75-01-4	N.D.		1	1
10335	Xylene (Total)	1330-20-7	N.D.		0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	
07805	Acenaphthene	83-32-9	0.1	J	0.1	1
07805	Acenaphthylene	208-96-8	0.3	J	0.1	1
07805	Anthracene	120-12-7	0.1	J	0.1	1
07805	Benzo(a)anthracene	56-55-3	0.3	J	0.1	1
07805	Benzo(a)pyrene	50-32-8	0.2	J	0.1	1
07805	Benzo(b)fluoranthene	205-99-2	0.2	J	0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.		0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.		0.1	1
07805	Chrysene	218-01-9	0.3	J	0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		0.1	1
07805	Fluoranthene	206-44-0	0.4	J	0.1	1
07805	Fluorene	86-73-7	N.D.		0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.1	1
07805	Naphthalene	91-20-3	N.D.		0.1	1
07805	Phenanthrene	85-01-8	0.4	J	0.1	1

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-5 Grab Water
Robinson Terminal South

LL Sample # WW 7216493
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 11:20 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB5

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	
07805	Pyrene	129-00-0	0.4 J	0.1	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01635	TPH-GRO water C6-C10	n.a.	82	20	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**ug/l**	**ug/l**	
12858	DRO C10-C28	n.a.	460	45	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0616	0.0068	1
07046	Barium	7440-39-3	0.583	0.00033	1
07049	Cadmium	7440-43-9	0.0029 J	0.00076	1
07051	Chromium	7440-47-3	0.0808	0.0016	1
07055	Lead	7439-92-1	0.0932	0.0047	1
07036	Selenium	7782-49-2	N.D.	0.0084	1
07066	Silver	7440-22-4	N.D.	0.0021	1
	SW-846 7470A		**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00031	0.000060	1

General Sample Comments

The temperature of the temperature blank bottle(s) for SVOCs upon receipt at the lab was 14.5 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 12.3-14.0 C.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	PPL/TCL VOCs - water	SW-846 8260B	1	T132731AA	09/30/2013 13:52	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T132731AA	09/30/2013 13:52	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	13271WAJ026	09/30/2013 17:18	Chad A Moline	1
07807	BNA Water Extraction	SW-846 3510C	1	13271WAJ026	09/29/2013 13:00	David S Schrum	1
01635	TPH-GRO water C6-C10	SW-846 8015B	1	13273A53A	09/30/2013 17:21	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13273A53A	09/30/2013 17:21	Marie D Beamenderfer	1
12858	TPH-DRO Water C20-C28	SW-846 8015B	1	132710028A	09/30/2013 14:11	Tracy A Cole	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	132710028A	09/29/2013 10:50	David V Hershey Jr	1
07035	Arsenic	SW-846 6010B	1	132711848001	09/30/2013 12:04	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132711848001	09/30/2013 12:04	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132711848001	09/30/2013 12:04	Eric L Eby	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-5 Grab Water
Robinson Terminal South

LL Sample # WW 7216493
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 11:20 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB5

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	132711848001	09/30/2013 12:04	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132711848001	09/30/2013 12:04	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132711848001	09/30/2013 12:04	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132711848001	09/30/2013 12:04	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132735713001	10/01/2013 07:07	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132711848001	09/29/2013 22:30	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132735713001	09/30/2013 16:30	Nelli S Markaryan	1

Sample Description: BW-6 Grab Water
Robinson Terminal South

LL Sample # WW 7216494
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 12:45 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB6

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	1	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.8	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Styrene	100-42-5	N.D.	1	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.7	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	Xylene (Total)	1330-20-7	N.D.	0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	
07805	Acenaphthene	83-32-9	N.D.	0.1	1
07805	Acenaphthylene	208-96-8	N.D.	0.1	1
07805	Anthracene	120-12-7	N.D.	0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.	0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.	0.1	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	1
07805	Chrysene	218-01-9	N.D.	0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	1
07805	Fluoranthene	206-44-0	N.D.	0.1	1
07805	Fluorene	86-73-7	N.D.	0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	1
07805	Naphthalene	91-20-3	N.D.	0.1	1
07805	Phenanthrene	85-01-8	0.2 J	0.1	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-6 Grab Water
Robinson Terminal South

LL Sample # WW 7216494
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 12:45 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB6

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	
07805	Pyrene	129-00-0	N.D.	0.1	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01635	TPH-GRO water C6-C10	n.a.	410	20	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**ug/l**	**ug/l**	
12858	DRO C10-C28	n.a.	680	45	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0487	0.0068	1
07046	Barium	7440-39-3	0.488	0.00033	1
07049	Cadmium	7440-43-9	0.0020 J	0.00076	1
07051	Chromium	7440-47-3	0.164	0.0016	1
07055	Lead	7439-92-1	0.0785	0.0047	1
07036	Selenium	7782-49-2	N.D.	0.0084	1
07066	Silver	7440-22-4	N.D.	0.0021	1
	SW-846 7470A		**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00043	0.000060	1

General Sample Comments

The temperature of the temperature blank bottle(s) for SVOCs upon receipt at the lab was 14.5 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 12.3-14.0 C.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	PPL/TCL VOCs - water	SW-846 8260B	1	T132731AA	09/30/2013 14:16	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T132731AA	09/30/2013 14:16	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	13271WAJ026	09/30/2013 17:46	Chad A Moline	1
07807	BNA Water Extraction	SW-846 3510C	1	13271WAJ026	09/29/2013 13:00	David S Schrum	1
01635	TPH-GRO water C6-C10	SW-846 8015B	1	13273A53A	09/30/2013 17:48	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13273A53A	09/30/2013 17:48	Marie D Beamenderfer	1
12858	TPH-DRO Water C20-C28	SW-846 8015B	1	132710028A	09/30/2013 14:34	Tracy A Cole	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	132710028A	09/29/2013 10:50	David V Hershey Jr	1
07035	Arsenic	SW-846 6010B	1	132711848001	09/30/2013 12:08	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132711848001	09/30/2013 12:08	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132711848001	09/30/2013 12:08	Eric L Eby	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-6 Grab Water
Robinson Terminal South

LL Sample # WW 7216494
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 12:45 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB6

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	132711848001	09/30/2013 12:08	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132711848001	09/30/2013 12:08	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132711848001	09/30/2013 12:08	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132711848001	09/30/2013 12:08	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132735713001	10/01/2013 07:09	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132711848001	09/29/2013 22:30	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132735713001	09/30/2013 16:30	Nelli S Markaryan	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-7 Grab Water
Robinson Terminal South

LL Sample # WW 7216495
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 10:50 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB7

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	
10335	Acetone	67-64-1	N.D.		6	1
10335	Benzene	71-43-2	N.D.		0.5	1
10335	Bromodichloromethane	75-27-4	N.D.		1	1
10335	Bromoform	75-25-2	N.D.		1	1
10335	Bromomethane	74-83-9	N.D.		1	1
10335	2-Butanone	78-93-3	N.D.		3	1
10335	Carbon Disulfide	75-15-0	N.D.		1	1
10335	Carbon Tetrachloride	56-23-5	N.D.		1	1
10335	Chlorobenzene	108-90-7	N.D.		0.8	1
10335	Chloroethane	75-00-3	N.D.		1	1
10335	Chloroform	67-66-3	N.D.		0.8	1
10335	Chloromethane	74-87-3	N.D.		1	1
10335	Dibromochloromethane	124-48-1	N.D.		1	1
10335	1,1-Dichloroethane	75-34-3	N.D.		1	1
10335	1,2-Dichloroethane	107-06-2	N.D.		1	1
10335	1,1-Dichloroethene	75-35-4	N.D.		0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.		0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.		0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.		1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		1	1
10335	Ethylbenzene	100-41-4	N.D.		0.8	1
10335	2-Hexanone	591-78-6	N.D.		3	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.		3	1
10335	Methylene Chloride	75-09-2	N.D.		2	1
10335	Styrene	100-42-5	N.D.		1	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1	1
10335	Tetrachloroethene	127-18-4	N.D.		0.8	1
10335	Toluene	108-88-3	N.D.		0.7	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.		0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	1
10335	Trichloroethene	79-01-6	N.D.		1	1
10335	Vinyl Chloride	75-01-4	N.D.		1	1
10335	Xylene (Total)	1330-20-7	N.D.		0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	
07805	Acenaphthene	83-32-9	N.D.		0.1	1
07805	Acenaphthylene	208-96-8	N.D.		0.1	1
07805	Anthracene	120-12-7	N.D.		0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.		0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.		0.1	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.		0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.		0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.		0.1	1
07805	Chrysene	218-01-9	N.D.		0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		0.1	1
07805	Fluoranthene	206-44-0	0.1	J	0.1	1
07805	Fluorene	86-73-7	N.D.		0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.1	1
07805	Naphthalene	91-20-3	N.D.		0.1	1
07805	Phenanthrene	85-01-8	0.1	J	0.1	1

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-7 Grab Water
Robinson Terminal South

LL Sample # WW 7216495
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 10:50 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB7

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	
07805	Pyrene	129-00-0	0.1 J	0.1	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01635	TPH-GRO water C6-C10	n.a.	N.D.	20	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**ug/l**	**ug/l**	
12858	DRO C10-C28	n.a.	75 J	45	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0261	0.0068	1
07046	Barium	7440-39-3	0.238	0.00033	1
07049	Cadmium	7440-43-9	N.D.	0.00076	1
07051	Chromium	7440-47-3	0.0471	0.0016	1
07055	Lead	7439-92-1	0.0462	0.0047	1
07036	Selenium	7782-49-2	N.D.	0.0084	1
07066	Silver	7440-22-4	N.D.	0.0021	1
	SW-846 7470A		**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00022	0.000060	1

General Sample Comments

The temperature of the temperature blank bottle(s) for SVOCs upon receipt at the lab was 14.5 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 12.3-14.0 C.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	PPL/TCL VOCs - water	SW-846 8260B	1	T132731AA	09/30/2013 14:41	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T132731AA	09/30/2013 14:41	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	13271WAJ026	09/30/2013 18:15	Chad A Moline	1
07807	BNA Water Extraction	SW-846 3510C	1	13271WAJ026	09/29/2013 13:00	David S Schrum	1
01635	TPH-GRO water C6-C10	SW-846 8015B	1	13273A53A	09/30/2013 18:15	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13273A53A	09/30/2013 18:15	Marie D Beamenderfer	1
12858	TPH-DRO Water C20-C28	SW-846 8015B	1	132710028A	09/30/2013 14:56	Tracy A Cole	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	132710028A	09/29/2013 10:50	David V Hershey Jr	1
07035	Arsenic	SW-846 6010B	1	132711848001	09/30/2013 12:11	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132711848001	09/30/2013 12:11	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132711848001	09/30/2013 12:11	Eric L Eby	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-7 Grab Water
Robinson Terminal South

LL Sample # WW 7216495
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 10:50 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB7

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	132711848001	09/30/2013 12:11	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132711848001	09/30/2013 12:11	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132711848001	09/30/2013 12:11	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132711848001	09/30/2013 12:11	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132735713001	10/01/2013 07:11	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132711848001	09/29/2013 22:30	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132735713001	09/30/2013 16:30	Nelli S Markaryan	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-8 Grab Water
Robinson Terminal South

LL Sample # WW 7216496
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 13:10 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB8

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	
10335	Acetone	67-64-1	N.D.		6	1
10335	Benzene	71-43-2	N.D.		0.5	1
10335	Bromodichloromethane	75-27-4	N.D.		1	1
10335	Bromoform	75-25-2	N.D.		1	1
10335	Bromomethane	74-83-9	N.D.		1	1
10335	2-Butanone	78-93-3	N.D.		3	1
10335	Carbon Disulfide	75-15-0	N.D.		1	1
10335	Carbon Tetrachloride	56-23-5	N.D.		1	1
10335	Chlorobenzene	108-90-7	N.D.		0.8	1
10335	Chloroethane	75-00-3	N.D.		1	1
10335	Chloroform	67-66-3	N.D.		0.8	1
10335	Chloromethane	74-87-3	N.D.		1	1
10335	Dibromochloromethane	124-48-1	N.D.		1	1
10335	1,1-Dichloroethane	75-34-3	N.D.		1	1
10335	1,2-Dichloroethane	107-06-2	N.D.		1	1
10335	1,1-Dichloroethene	75-35-4	N.D.		0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.		0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.		0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.		1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.		1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.		1	1
10335	Ethylbenzene	100-41-4	N.D.		0.8	1
10335	2-Hexanone	591-78-6	N.D.		3	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.		3	1
10335	Methylene Chloride	75-09-2	N.D.		2	1
10335	Styrene	100-42-5	N.D.		1	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1	1
10335	Tetrachloroethene	127-18-4	N.D.		0.8	1
10335	Toluene	108-88-3	N.D.		0.7	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.		0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.		0.8	1
10335	Trichloroethene	79-01-6	N.D.		1	1
10335	Vinyl Chloride	75-01-4	N.D.		1	1
10335	Xylene (Total)	1330-20-7	N.D.		0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	
07805	Acenaphthene	83-32-9	N.D.		0.1	1
07805	Acenaphthylene	208-96-8	N.D.		0.1	1
07805	Anthracene	120-12-7	N.D.		0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.		0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.		0.1	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.		0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.		0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.		0.1	1
07805	Chrysene	218-01-9	N.D.		0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.		0.1	1
07805	Fluoranthene	206-44-0	N.D.		0.1	1
07805	Fluorene	86-73-7	N.D.		0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.1	1
07805	Naphthalene	91-20-3	0.1	J	0.1	1
07805	Phenanthrene	85-01-8	0.2	J	0.1	1

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-8 Grab Water
Robinson Terminal South

LL Sample # WW 7216496
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 13:10 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB8

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles		**SW-846 8270C**		**ug/l**	**ug/l**	
07805	Pyrene		129-00-0	N.D.	0.1	1
GC Volatiles		**SW-846 8015B**		**ug/l**	**ug/l**	
01635	TPH-GRO water C6-C10		n.a.	N.D.	20	1
GC Petroleum Hydrocarbons		**SW-846 8015B**		**ug/l**	**ug/l**	
12858	DRO C10-C28		n.a.	860	45	1
Metals		**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic		7440-38-2	0.0577	0.0068	1
07046	Barium		7440-39-3	0.477	0.00033	1
07049	Cadmium		7440-43-9	0.0016 J	0.00076	1
07051	Chromium		7440-47-3	0.127	0.0016	1
07055	Lead		7439-92-1	0.0636	0.0047	1
07036	Selenium		7782-49-2	N.D.	0.0084	1
07066	Silver		7440-22-4	N.D.	0.0021	1
		SW-846 7470A		**mg/l**	**mg/l**	
00259	Mercury		7439-97-6	0.00013 J	0.000060	1

General Sample Comments

The temperature of the temperature blank bottle(s) for SVOCs upon receipt at the lab was 14.5 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 12.3-14.0 C.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	PPL/TCL VOCs - water	SW-846 8260B	1	T132731AA	09/30/2013 15:05	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T132731AA	09/30/2013 15:05	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	13271WAJ026	09/30/2013 18:43	Chad A Moline	1
07807	BNA Water Extraction	SW-846 3510C	1	13271WAJ026	09/29/2013 13:00	David S Schrum	1
01635	TPH-GRO water C6-C10	SW-846 8015B	1	13273A53A	09/30/2013 18:41	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13273A53A	09/30/2013 18:41	Marie D Beamenderfer	1
12858	TPH-DRO Water C20-C28	SW-846 8015B	1	132710028A	09/30/2013 15:19	Tracy A Cole	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	132710028A	09/29/2013 10:50	David V Hershey Jr	1
07035	Arsenic	SW-846 6010B	1	132711848001	09/30/2013 12:15	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132711848001	09/30/2013 12:15	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132711848001	09/30/2013 12:15	Eric L Eby	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-8 Grab Water
Robinson Terminal South

LL Sample # WW 7216496
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 13:10 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB8

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	132711848001	09/30/2013 12:15	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132711848001	09/30/2013 12:15	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132711848001	09/30/2013 12:15	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132711848001	09/30/2013 12:15	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132735713001	10/01/2013 07:17	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132711848001	09/29/2013 22:30	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132735713001	09/30/2013 16:30	Nelli S Markaryan	1

Sample Description: BW-9 Grab Water
Robinson Terminal South

LL Sample # WW 7216497
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 13:55 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB9

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	1	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.8	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Styrene	100-42-5	N.D.	1	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.7	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	Xylene (Total)	1330-20-7	N.D.	0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	
07805	Acenaphthene	83-32-9	N.D.	0.1	1
07805	Acenaphthylene	208-96-8	N.D.	0.1	1
07805	Anthracene	120-12-7	N.D.	0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.	0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.	0.1	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	1
07805	Chrysene	218-01-9	N.D.	0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	1
07805	Fluoranthene	206-44-0	N.D.	0.1	1
07805	Fluorene	86-73-7	N.D.	0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	1
07805	Naphthalene	91-20-3	N.D.	0.1	1
07805	Phenanthrene	85-01-8	N.D.	0.1	1

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-9 Grab Water
Robinson Terminal South

LL Sample # WW 7216497
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 13:55 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB9

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	
07805	Pyrene	129-00-0	N.D.	0.1	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01635	TPH-GRO water C6-C10	n.a.	N.D.	20	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**ug/l**	**ug/l**	
12858	DRO C10-C28	n.a.	63 J	45	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0406	0.0068	1
07046	Barium	7440-39-3	0.367	0.00033	1
07049	Cadmium	7440-43-9	0.00093 J	0.00076	1
07051	Chromium	7440-47-3	0.0570	0.0016	1
07055	Lead	7439-92-1	0.0283	0.0047	1
07036	Selenium	7782-49-2	N.D.	0.0084	1
07066	Silver	7440-22-4	N.D.	0.0021	1
	SW-846 7470A		**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.00016 J	0.000060	1

General Sample Comments

The temperature of the temperature blank bottle(s) for SVOCs upon receipt at the lab was 14.5 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 12.3-14.0 C.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	PPL/TCL VOCs - water	SW-846 8260B	1	T132731AA	09/30/2013 15:30	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T132731AA	09/30/2013 15:30	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	13271WAJ026	09/30/2013 19:12	Chad A Moline	1
07807	BNA Water Extraction	SW-846 3510C	1	13271WAJ026	09/29/2013 13:00	David S Schrum	1
01635	TPH-GRO water C6-C10	SW-846 8015B	1	13273A53A	09/30/2013 19:08	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13273A53A	09/30/2013 19:08	Marie D Beamenderfer	1
12858	TPH-DRO Water C20-C28	SW-846 8015B	1	132710028A	09/30/2013 15:42	Tracy A Cole	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	132710028A	09/29/2013 10:50	David V Hershey Jr	1
07035	Arsenic	SW-846 6010B	1	132711848001	09/30/2013 12:19	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132711848001	09/30/2013 12:19	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132711848001	09/30/2013 12:19	Eric L Eby	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-9 Grab Water
Robinson Terminal South

LL Sample # WW 7216497
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 13:55 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBTB9

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	132711848001	09/30/2013 12:19	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132711848001	09/30/2013 12:19	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132711848001	09/30/2013 12:19	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132711848001	09/30/2013 12:19	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132735713001	10/01/2013 07:19	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132711848001	09/29/2013 22:30	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132735713001	09/30/2013 16:30	Nelli S Markaryan	1

Sample Description: BW-10 Grab Water
Robinson Terminal South

LL Sample # WW 7216498
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 14:45 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	1	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.8	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Styrene	100-42-5	N.D.	1	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.7	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	Xylene (Total)	1330-20-7	N.D.	0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	
07805	Acenaphthene	83-32-9	N.D.	0.1	1
07805	Acenaphthylene	208-96-8	N.D.	0.1	1
07805	Anthracene	120-12-7	N.D.	0.1	1
07805	Benzo(a)anthracene	56-55-3	N.D.	0.1	1
07805	Benzo(a)pyrene	50-32-8	N.D.	0.1	1
07805	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	1
07805	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	1
07805	Chrysene	218-01-9	N.D.	0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	1
07805	Fluoranthene	206-44-0	N.D.	0.1	1
07805	Fluorene	86-73-7	N.D.	0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	1
07805	Naphthalene	91-20-3	N.D.	0.1	1
07805	Phenanthrene	85-01-8	N.D.	0.1	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-10 Grab Water
Robinson Terminal South

LL Sample # WW 7216498
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 14:45 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT10

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	
07805	Pyrene	129-00-0	N.D.		0.1	1
GC Volatiles	**SW-846 8015B**		**ug/l**		**ug/l**	
01635	TPH-GRO water C6-C10	n.a.	45	J	20	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**ug/l**		**ug/l**	
12858	DRO C10-C28	n.a.	59	J	45	1
Metals	**SW-846 6010B**		**mg/l**		**mg/l**	
07035	Arsenic	7440-38-2	0.0192	J	0.0068	1
07046	Barium	7440-39-3	0.204		0.00033	1
07049	Cadmium	7440-43-9	0.00089	J	0.00076	1
07051	Chromium	7440-47-3	0.0581		0.0016	1
07055	Lead	7439-92-1	0.0261		0.0047	1
07036	Selenium	7782-49-2	N.D.		0.0084	1
07066	Silver	7440-22-4	N.D.		0.0021	1
	SW-846 7470A		**mg/l**		**mg/l**	
00259	Mercury	7439-97-6	N.D.		0.000060	1

General Sample Comments

The temperature of the temperature blank bottle(s) for SVOCs upon receipt at the lab was 14.5 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 12.3-14.0 C.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10335	PPL/TCL VOCs - water	SW-846 8260B	1	T132731AA	09/30/2013	15:54	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T132731AA	09/30/2013	15:54	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	13271WAJ026	09/30/2013	19:41	Chad A Moline	1
07807	BNA Water Extraction	SW-846 3510C	1	13271WAJ026	09/29/2013	13:00	David S Schrum	1
01635	TPH-GRO water C6-C10	SW-846 8015B	1	13273A53A	09/30/2013	19:35	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13273A53A	09/30/2013	19:35	Marie D Beamenderfer	1
12858	TPH-DRO Water C20-C28	SW-846 8015B	1	132710028A	09/30/2013	16:04	Tracy A Cole	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	132710028A	09/29/2013	10:50	David V Hershey Jr	1
07035	Arsenic	SW-846 6010B	1	132711848001	09/30/2013	12:22	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132711848001	09/30/2013	12:22	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132711848001	09/30/2013	12:22	Eric L Eby	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: BW-10 Grab Water
Robinson Terminal South

LL Sample # WW 7216498
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 14:45 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07051	Chromium	SW-846 6010B	1	132711848001	09/30/2013 12:22	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132711848001	09/30/2013 12:22	Eric L Eby	1
07036	Selenium	SW-846 6010B	1	132711848001	09/30/2013 12:22	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132711848001	09/30/2013 12:22	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132735713001	10/01/2013 07:21	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132711848001	09/29/2013 22:30	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132735713001	09/30/2013 16:30	Nelli S Markaryan	1

Sample Description: B1 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216499
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:06 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT11

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	0.012	J	0.008	0.97
10237	Benzene	71-43-2	N.D.		0.0006	0.97
10237	Bromodichloromethane	75-27-4	N.D.		0.001	0.97
10237	Bromoform	75-25-2	N.D.		0.001	0.97
10237	Bromomethane	74-83-9	N.D.		0.002	0.97
10237	2-Butanone	78-93-3	N.D.		0.004	0.97
10237	Carbon Disulfide	75-15-0	N.D.		0.001	0.97
10237	Carbon Tetrachloride	56-23-5	N.D.		0.001	0.97
10237	Chlorobenzene	108-90-7	N.D.		0.001	0.97
10237	Chloroethane	75-00-3	N.D.		0.002	0.97
10237	Chloroform	67-66-3	N.D.		0.001	0.97
10237	Chloromethane	74-87-3	N.D.		0.002	0.97
10237	Dibromochloromethane	124-48-1	N.D.		0.001	0.97
10237	1,1-Dichloroethane	75-34-3	N.D.		0.001	0.97
10237	1,2-Dichloroethane	107-06-2	N.D.		0.001	0.97
10237	1,1-Dichloroethene	75-35-4	N.D.		0.001	0.97
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.001	0.97
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.001	0.97
10237	1,2-Dichloropropane	78-87-5	N.D.		0.001	0.97
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.001	0.97
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.001	0.97
10237	Ethylbenzene	100-41-4	N.D.		0.001	0.97
10237	2-Hexanone	591-78-6	N.D.		0.003	0.97
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.003	0.97
10237	Methylene Chloride	75-09-2	0.009		0.002	0.97
10237	Styrene	100-42-5	N.D.		0.001	0.97
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.001	0.97
10237	Tetrachloroethene	127-18-4	N.D.		0.001	0.97
10237	Toluene	108-88-3	N.D.		0.001	0.97
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.001	0.97
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.001	0.97
10237	Trichloroethene	79-01-6	N.D.		0.001	0.97
10237	Vinyl Chloride	75-01-4	N.D.		0.001	0.97
10237	Xylene (Total)	1330-20-7	N.D.		0.001	0.97
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	N.D.		0.004	1
07804	Acenaphthylene	208-96-8	0.006	J	0.004	1
07804	Anthracene	120-12-7	0.009	J	0.004	1
07804	Benzo(a)anthracene	56-55-3	0.043		0.004	1
07804	Benzo(a)pyrene	50-32-8	0.047		0.004	1
07804	Benzo(b)fluoranthene	205-99-2	0.062		0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	0.029		0.004	1
07804	Benzo(k)fluoranthene	207-08-9	0.025		0.004	1
07804	Chrysene	218-01-9	0.053		0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	0.010	J	0.004	1
07804	Fluoranthene	206-44-0	0.080		0.004	1
07804	Fluorene	86-73-7	0.007	J	0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.028		0.004	1
07804	Naphthalene	91-20-3	0.005	J	0.004	1
07804	Phenanthrene	85-01-8	0.059		0.004	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B1 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216499
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:06 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	0.068	0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	N.D.	0.2	25.18
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	N.D.	4.6	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	10.4 J	3.92	5
	Reporting limits were raised due to interference from the sample matrix.				
06946	Barium	7440-39-3	104	0.0369	1
06949	Cadmium	7440-43-9	N.D.	0.0851	1
06951	Chromium	7440-47-3	16.4	0.179	1
06955	Lead	7439-92-1	254	0.560	1
06936	Selenium	7782-49-2	N.D.	0.895	1
06966	Silver	7440-22-4	0.374 J	0.190	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0419 J	0.0109	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	12.4	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/29/2013 23:55	Andrea E Lando	0.97
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:36	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:36	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/27/2013 23:55	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	09/30/2013 14:32	Linda M Hartenstine	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/29/2013 17:36	Laura M Krieger	25.18

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B1 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216499
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:06 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/27/2013 23:55	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013 16:54	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013 07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 15:57	Katlin N Cataldi	5
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 14:51	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 14:51	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 14:51	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 14:51	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 14:51	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 14:51	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 05:09	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004A	09/30/2013 22:18	Scott W Freisher	1

Sample Description: B1 10' Grab Soil
Robinson Terminal South

LL Sample # SW 7216500
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:15 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT12

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	0.048		0.01	1.1
10237	Benzene	71-43-2	N.D.		0.0007	1.1
10237	Bromodichloromethane	75-27-4	N.D.		0.001	1.1
10237	Bromoform	75-25-2	N.D.		0.001	1.1
10237	Bromomethane	74-83-9	N.D.		0.003	1.1
10237	2-Butanone	78-93-3	0.01	J	0.006	1.1
10237	Carbon Disulfide	75-15-0	N.D.		0.001	1.1
10237	Carbon Tetrachloride	56-23-5	N.D.		0.001	1.1
10237	Chlorobenzene	108-90-7	N.D.		0.001	1.1
10237	Chloroethane	75-00-3	N.D.		0.003	1.1
10237	Chloroform	67-66-3	N.D.		0.001	1.1
10237	Chloromethane	74-87-3	N.D.		0.003	1.1
10237	Dibromochloromethane	124-48-1	N.D.		0.001	1.1
10237	1,1-Dichloroethane	75-34-3	N.D.		0.001	1.1
10237	1,2-Dichloroethane	107-06-2	N.D.		0.001	1.1
10237	1,1-Dichloroethene	75-35-4	N.D.		0.001	1.1
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.001	1.1
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.001	1.1
10237	1,2-Dichloropropane	78-87-5	N.D.		0.001	1.1
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.001	1.1
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.001	1.1
10237	Ethylbenzene	100-41-4	N.D.		0.001	1.1
10237	2-Hexanone	591-78-6	N.D.		0.004	1.1
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.004	1.1
10237	Methylene Chloride	75-09-2	0.014		0.003	1.1
10237	Styrene	100-42-5	N.D.		0.001	1.1
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.001	1.1
10237	Tetrachloroethene	127-18-4	N.D.		0.001	1.1
10237	Toluene	108-88-3	N.D.		0.001	1.1
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.001	1.1
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.001	1.1
10237	Trichloroethene	79-01-6	N.D.		0.001	1.1
10237	Vinyl Chloride	75-01-4	N.D.		0.001	1.1
10237	Xylene (Total)	1330-20-7	N.D.		0.001	1.1
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	0.014	J	0.004	1
07804	Acenaphthylene	208-96-8	0.014	J	0.004	1
07804	Anthracene	120-12-7	0.021	J	0.004	1
07804	Benzo(a)anthracene	56-55-3	0.088		0.004	1
07804	Benzo(a)pyrene	50-32-8	0.079		0.004	1
07804	Benzo(b)fluoranthene	205-99-2	0.12		0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	0.048		0.004	1
07804	Benzo(k)fluoranthene	207-08-9	0.044		0.004	1
07804	Chrysene	218-01-9	0.087		0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	0.014	J	0.004	1
07804	Fluoranthene	206-44-0	0.13		0.004	1
07804	Fluorene	86-73-7	0.011	J	0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.044		0.004	1
07804	Naphthalene	91-20-3	0.008	J	0.004	1
07804	Phenanthrene	85-01-8	0.060		0.004	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B1 10' Grab Soil
Robinson Terminal South

LL Sample # SW 7216500
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:15 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	0.13	0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	2.2	0.2	24.32
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	280	5.0	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	10.0	0.849	1
06946	Barium	7440-39-3	145	0.0400	1
06949	Cadmium	7440-43-9	N.D.	0.0922	1
06951	Chromium	7440-47-3	18.1	0.194	1
06955	Lead	7439-92-1	36.0	0.606	1
06936	Selenium	7782-49-2	N.D.	0.970	1
06966	Silver	7440-22-4	N.D.	0.206	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0416 J	0.0121	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	20.7	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/29/2013 20:30	Andrea E Lando	1.1
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:37	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:37	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/27/2013 23:59	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	09/30/2013 15:48	Linda M Hartenstine	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/29/2013 18:12	Laura M Krieger	24.32

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B1 10' Grab Soil
Robinson Terminal South

LL Sample # SW 7216500
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:15 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT12

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:00	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013 18:54	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013 07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 14:55	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 14:55	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 14:55	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 14:55	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 14:55	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 14:55	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 14:55	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 05:11	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004A	09/30/2013 22:18	Scott W Freisher	1

Sample Description: B2 4' Grab Soil
Robinson Terminal South

LL Sample # SW 7216501
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:45 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT21

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	0.009	J	0.007	0.92
10237	Benzene	71-43-2	N.D.		0.0005	0.92
10237	Bromodichloromethane	75-27-4	N.D.		0.001	0.92
10237	Bromoform	75-25-2	N.D.		0.001	0.92
10237	Bromomethane	74-83-9	N.D.		0.002	0.92
10237	2-Butanone	78-93-3	N.D.		0.004	0.92
10237	Carbon Disulfide	75-15-0	N.D.		0.001	0.92
10237	Carbon Tetrachloride	56-23-5	N.D.		0.001	0.92
10237	Chlorobenzene	108-90-7	N.D.		0.001	0.92
10237	Chloroethane	75-00-3	N.D.		0.002	0.92
10237	Chloroform	67-66-3	N.D.		0.001	0.92
10237	Chloromethane	74-87-3	N.D.		0.002	0.92
10237	Dibromochloromethane	124-48-1	N.D.		0.001	0.92
10237	1,1-Dichloroethane	75-34-3	N.D.		0.001	0.92
10237	1,2-Dichloroethane	107-06-2	N.D.		0.001	0.92
10237	1,1-Dichloroethene	75-35-4	N.D.		0.001	0.92
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.001	0.92
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.001	0.92
10237	1,2-Dichloropropane	78-87-5	N.D.		0.001	0.92
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.001	0.92
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.001	0.92
10237	Ethylbenzene	100-41-4	N.D.		0.001	0.92
10237	2-Hexanone	591-78-6	N.D.		0.003	0.92
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.003	0.92
10237	Methylene Chloride	75-09-2	0.013		0.002	0.92
10237	Styrene	100-42-5	N.D.		0.001	0.92
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.001	0.92
10237	Tetrachloroethene	127-18-4	N.D.		0.001	0.92
10237	Toluene	108-88-3	N.D.		0.001	0.92
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.001	0.92
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.001	0.92
10237	Trichloroethene	79-01-6	N.D.		0.001	0.92
10237	Vinyl Chloride	75-01-4	N.D.		0.001	0.92
10237	Xylene (Total)	1330-20-7	N.D.		0.001	0.92
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	0.017	J	0.004	1
07804	Acenaphthylene	208-96-8	0.10		0.004	1
07804	Anthracene	120-12-7	0.11		0.004	1
07804	Benzo(a)anthracene	56-55-3	0.35		0.004	1
07804	Benzo(a)pyrene	50-32-8	0.32		0.004	1
07804	Benzo(b)fluoranthene	205-99-2	0.46		0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	0.24		0.004	1
07804	Benzo(k)fluoranthene	207-08-9	0.18		0.004	1
07804	Chrysene	218-01-9	0.37		0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	0.054		0.004	1
07804	Fluoranthene	206-44-0	0.56		0.004	1
07804	Fluorene	86-73-7	0.052		0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.21		0.004	1
07804	Naphthalene	91-20-3	0.16		0.004	1
07804	Phenanthrene	85-01-8	0.48		0.004	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B2 4' Grab Soil
Robinson Terminal South

LL Sample # SW 7216501
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:45 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT21

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Pyrene	129-00-0	0.57		0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**		**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	0.4	J	0.2	25.88
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	36		4.6	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06935	Arsenic	7440-38-2	8.06		0.786	1
06946	Barium	7440-39-3	165		0.0371	1
06949	Cadmium	7440-43-9	0.194	J	0.0853	1
06951	Chromium	7440-47-3	14.2		0.180	1
06955	Lead	7439-92-1	212		0.562	1
06936	Selenium	7782-49-2	N.D.		0.898	1
06966	Silver	7440-22-4	0.274	J	0.191	1
	SW-846 7471A		**mg/kg**		**mg/kg**	
00159	Mercury	7439-97-6	0.590		0.0110	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	
00111	Moisture	n.a.	12.7		0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/30/2013 00:18	Andrea E Lando	0.92
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:37	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:37	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:03	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	09/30/2013 16:13	Linda M Hartenstine	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/29/2013 18:48	Laura M Krieger	25.88

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B2 4' Grab Soil
Robinson Terminal South

LL Sample # SW 7216501
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:45 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT21

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:04	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013 19:36	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013 07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 14:58	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 14:58	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 14:58	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 14:58	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 14:58	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 14:58	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 14:58	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 05:13	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004A	09/30/2013 22:18	Scott W Freisher	1

Sample Description: B2 9' Grab Soil
Robinson Terminal South

LL Sample # SW 7216502
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 15:15 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT22

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	0.041		0.008	0.99
10237	Benzene	71-43-2	N.D.		0.0006	0.99
10237	Bromodichloromethane	75-27-4	N.D.		0.001	0.99
10237	Bromoform	75-25-2	N.D.		0.001	0.99
10237	Bromomethane	74-83-9	N.D.		0.002	0.99
10237	2-Butanone	78-93-3	0.007	J	0.005	0.99
10237	Carbon Disulfide	75-15-0	N.D.		0.001	0.99
10237	Carbon Tetrachloride	56-23-5	N.D.		0.001	0.99
10237	Chlorobenzene	108-90-7	N.D.		0.001	0.99
10237	Chloroethane	75-00-3	N.D.		0.002	0.99
10237	Chloroform	67-66-3	N.D.		0.001	0.99
10237	Chloromethane	74-87-3	N.D.		0.002	0.99
10237	Dibromochloromethane	124-48-1	N.D.		0.001	0.99
10237	1,1-Dichloroethane	75-34-3	N.D.		0.001	0.99
10237	1,2-Dichloroethane	107-06-2	N.D.		0.001	0.99
10237	1,1-Dichloroethene	75-35-4	N.D.		0.001	0.99
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.001	0.99
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.001	0.99
10237	1,2-Dichloropropane	78-87-5	N.D.		0.001	0.99
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.001	0.99
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.001	0.99
10237	Ethylbenzene	100-41-4	N.D.		0.001	0.99
10237	2-Hexanone	591-78-6	N.D.		0.004	0.99
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.004	0.99
10237	Methylene Chloride	75-09-2	0.01		0.002	0.99
10237	Styrene	100-42-5	N.D.		0.001	0.99
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.001	0.99
10237	Tetrachloroethene	127-18-4	N.D.		0.001	0.99
10237	Toluene	108-88-3	N.D.		0.001	0.99
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.001	0.99
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.001	0.99
10237	Trichloroethene	79-01-6	N.D.		0.001	0.99
10237	Vinyl Chloride	75-01-4	N.D.		0.001	0.99
10237	Xylene (Total)	1330-20-7	N.D.		0.001	0.99
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	0.005	J	0.004	1
07804	Acenaphthylene	208-96-8	0.005	J	0.004	1
07804	Anthracene	120-12-7	0.010	J	0.004	1
07804	Benzo(a)anthracene	56-55-3	0.009	J	0.004	1
07804	Benzo(a)pyrene	50-32-8	0.013	J	0.004	1
07804	Benzo(b)fluoranthene	205-99-2	0.016	J	0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	0.014	J	0.004	1
07804	Benzo(k)fluoranthene	207-08-9	0.007	J	0.004	1
07804	Chrysene	218-01-9	0.014	J	0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	0.005	J	0.004	1
07804	Fluoranthene	206-44-0	0.012	J	0.004	1
07804	Fluorene	86-73-7	0.021		0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.01	J	0.004	1
07804	Naphthalene	91-20-3	0.008	J	0.004	1
07804	Phenanthrene	85-01-8	0.014	J	0.004	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B2 9' Grab Soil
Robinson Terminal South

LL Sample # SW 7216502
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 15:15 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT22

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	0.019 J	0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	0.4 J	0.3	26.18
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	71	4.8	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	24.1	4.20	5
	Reporting limits were raised due to interference from the sample matrix.				
06946	Barium	7440-39-3	125	0.0396	1
06949	Cadmium	7440-43-9	9.14	0.0912	1
06951	Chromium	7440-47-3	22.5	0.192	1
06955	Lead	7439-92-1	455	0.600	1
06936	Selenium	7782-49-2	N.D.	0.960	1
06966	Silver	7440-22-4	3.93	0.204	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.333	0.0120	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	17.5	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/29/2013 21:16	Andrea E Lando	0.99
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:37	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:37	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:07	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	09/30/2013 16:39	Linda M Hartenstine	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/29/2013 19:24	Laura M Krieger	26.18

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B2 9' Grab Soil
Robinson Terminal South

LL Sample # SW 7216502
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 15:15 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT22

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:07	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013 19:15	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013 07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 16:08	Katlin N Cataldi	5
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 15:02	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 15:02	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 15:02	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 15:02	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 15:02	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 15:02	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 05:15	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004A	09/30/2013 22:18	Scott W Freisher	1

Sample Description: B3 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216503
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:20 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT31

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	0.043		0.009	1.06
10237	Benzene	71-43-2	N.D.		0.0006	1.06
10237	Bromodichloromethane	75-27-4	N.D.		0.001	1.06
10237	Bromoform	75-25-2	N.D.		0.001	1.06
10237	Bromomethane	74-83-9	N.D.		0.003	1.06
10237	2-Butanone	78-93-3	N.D.		0.005	1.06
10237	Carbon Disulfide	75-15-0	N.D.		0.001	1.06
10237	Carbon Tetrachloride	56-23-5	N.D.		0.001	1.06
10237	Chlorobenzene	108-90-7	N.D.		0.001	1.06
10237	Chloroethane	75-00-3	N.D.		0.003	1.06
10237	Chloroform	67-66-3	N.D.		0.001	1.06
10237	Chloromethane	74-87-3	N.D.		0.003	1.06
10237	Dibromochloromethane	124-48-1	N.D.		0.001	1.06
10237	1,1-Dichloroethane	75-34-3	N.D.		0.001	1.06
10237	1,2-Dichloroethane	107-06-2	N.D.		0.001	1.06
10237	1,1-Dichloroethene	75-35-4	N.D.		0.001	1.06
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.001	1.06
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.001	1.06
10237	1,2-Dichloropropane	78-87-5	N.D.		0.001	1.06
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.001	1.06
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.001	1.06
10237	Ethylbenzene	100-41-4	N.D.		0.001	1.06
10237	2-Hexanone	591-78-6	N.D.		0.004	1.06
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.004	1.06
10237	Methylene Chloride	75-09-2	0.013		0.003	1.06
10237	Styrene	100-42-5	N.D.		0.001	1.06
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.001	1.06
10237	Tetrachloroethene	127-18-4	N.D.		0.001	1.06
10237	Toluene	108-88-3	N.D.		0.001	1.06
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.001	1.06
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.001	1.06
10237	Trichloroethene	79-01-6	N.D.		0.001	1.06
10237	Vinyl Chloride	75-01-4	N.D.		0.001	1.06
10237	Xylene (Total)	1330-20-7	N.D.		0.001	1.06
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	0.009	J	0.004	1
07804	Acenaphthylene	208-96-8	N.D.		0.004	1
07804	Anthracene	120-12-7	N.D.		0.004	1
07804	Benzo(a)anthracene	56-55-3	0.01	J	0.004	1
07804	Benzo(a)pyrene	50-32-8	0.011	J	0.004	1
07804	Benzo(b)fluoranthene	205-99-2	0.017	J	0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	0.01	J	0.004	1
07804	Benzo(k)fluoranthene	207-08-9	0.007	J	0.004	1
07804	Chrysene	218-01-9	0.012	J	0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	N.D.		0.004	1
07804	Fluoranthene	206-44-0	0.015	J	0.004	1
07804	Fluorene	86-73-7	N.D.		0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.007	J	0.004	1
07804	Naphthalene	91-20-3	N.D.		0.004	1
07804	Phenanthrene	85-01-8	0.012	J	0.004	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B3 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216503
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:20 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT31

CAT No.	Analysis Name		CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles		**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene		129-00-0	0.017 J	0.004	1
GC Volatiles		**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10		n.a.	N.D.	0.2	25.69
GC Petroleum Hydrocarbons		**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28		n.a.	N.D.	4.8	1
Metals		**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic		7440-38-2	7.69	0.841	1
06946	Barium		7440-39-3	101	0.0397	1
06949	Cadmium		7440-43-9	N.D.	0.0913	1
06951	Chromium		7440-47-3	22.6	0.192	1
06955	Lead		7439-92-1	23.0	0.601	1
06936	Selenium		7782-49-2	N.D.	0.961	1
06966	Silver		7440-22-4	N.D.	0.204	1
		SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury		7439-97-6	0.0602 J	0.0115	1
Wet Chemistry		**SM 2540 G-1997**		**%**	**%**	
00111	Moisture		n.a.	17.6	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/29/2013 21:39	Andrea E Lando	1.06
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:37	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:37	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:10	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	09/30/2013 17:04	Linda M Hartenstine	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/29/2013 20:00	Laura M Krieger	25.69

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B3 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216503
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:20 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT31

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:10	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013 15:33	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013 07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 15:06	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 15:06	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 15:06	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 15:06	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 15:06	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 15:06	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 15:06	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 05:17	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004A	09/30/2013 22:18	Scott W Freisher	1

Sample Description: B3 9' Grab Soil
Robinson Terminal South

LL Sample # SW 7216504
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:26 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT32

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	0.039		0.009	0.98
10237	Benzene	71-43-2	N.D.		0.0006	0.98
10237	Bromodichloromethane	75-27-4	N.D.		0.001	0.98
10237	Bromoform	75-25-2	N.D.		0.001	0.98
10237	Bromomethane	74-83-9	N.D.		0.003	0.98
10237	2-Butanone	78-93-3	0.007	J	0.005	0.98
10237	Carbon Disulfide	75-15-0	N.D.		0.001	0.98
10237	Carbon Tetrachloride	56-23-5	N.D.		0.001	0.98
10237	Chlorobenzene	108-90-7	N.D.		0.001	0.98
10237	Chloroethane	75-00-3	N.D.		0.003	0.98
10237	Chloroform	67-66-3	N.D.		0.001	0.98
10237	Chloromethane	74-87-3	N.D.		0.003	0.98
10237	Dibromochloromethane	124-48-1	N.D.		0.001	0.98
10237	1,1-Dichloroethane	75-34-3	N.D.		0.001	0.98
10237	1,2-Dichloroethane	107-06-2	N.D.		0.001	0.98
10237	1,1-Dichloroethene	75-35-4	N.D.		0.001	0.98
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.001	0.98
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.001	0.98
10237	1,2-Dichloropropane	78-87-5	N.D.		0.001	0.98
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.001	0.98
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.001	0.98
10237	Ethylbenzene	100-41-4	N.D.		0.001	0.98
10237	2-Hexanone	591-78-6	N.D.		0.004	0.98
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.004	0.98
10237	Methylene Chloride	75-09-2	0.012		0.003	0.98
10237	Styrene	100-42-5	N.D.		0.001	0.98
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.001	0.98
10237	Tetrachloroethene	127-18-4	N.D.		0.001	0.98
10237	Toluene	108-88-3	N.D.		0.001	0.98
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.001	0.98
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.001	0.98
10237	Trichloroethene	79-01-6	N.D.		0.001	0.98
10237	Vinyl Chloride	75-01-4	N.D.		0.001	0.98
10237	Xylene (Total)	1330-20-7	N.D.		0.001	0.98
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	0.005	J	0.004	1
07804	Acenaphthylene	208-96-8	0.008	J	0.004	1
07804	Anthracene	120-12-7	0.007	J	0.004	1
07804	Benzo(a)anthracene	56-55-3	0.037		0.004	1
07804	Benzo(a)pyrene	50-32-8	0.044		0.004	1
07804	Benzo(b)fluoranthene	205-99-2	0.074		0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	0.044		0.004	1
07804	Benzo(k)fluoranthene	207-08-9	0.026		0.004	1
07804	Chrysene	218-01-9	0.044		0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	0.012	J	0.004	1
07804	Fluoranthene	206-44-0	0.073		0.004	1
07804	Fluorene	86-73-7	0.005	J	0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.036		0.004	1
07804	Naphthalene	91-20-3	0.006	J	0.004	1
07804	Phenanthrene	85-01-8	0.038		0.004	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B3 9' Grab Soil
Robinson Terminal South

LL Sample # SW 7216504
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:26 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT32

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	0.066	0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	N.D.	0.2	23.67
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	N.D.	5.1	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	6.39	0.886	1
06946	Barium	7440-39-3	128	0.0417	1
06949	Cadmium	7440-43-9	N.D.	0.0961	1
06951	Chromium	7440-47-3	23.9	0.202	1
06955	Lead	7439-92-1	81.1	0.633	1
06936	Selenium	7782-49-2	N.D.	1.01	1
06966	Silver	7440-22-4	N.D.	0.215	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.302	0.0125	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	22.5	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/29/2013 22:01	Andrea E Lando	0.98
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:37	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:37	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:14	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	09/30/2013 17:29	Linda M Hartenstine	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/29/2013 20:36	Laura M Krieger	23.67

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B3 9' Grab Soil
Robinson Terminal South

LL Sample # SW 7216504
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 08:26 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT32

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:13	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013 14:32	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013 07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 15:09	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 15:09	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 15:09	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 15:09	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 15:09	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 15:09	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 15:09	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 05:19	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004A	09/30/2013 22:18	Scott W Freisher	1

Sample Description: B4 10' Grab Soil
Robinson Terminal South

LL Sample # SW 7216505
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 09:55 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT41

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	0.091		0.008	0.99
10237	Benzene	71-43-2	N.D.		0.0006	0.99
10237	Bromodichloromethane	75-27-4	N.D.		0.001	0.99
10237	Bromoform	75-25-2	N.D.		0.001	0.99
10237	Bromomethane	74-83-9	N.D.		0.002	0.99
10237	2-Butanone	78-93-3	0.009	J	0.005	0.99
10237	Carbon Disulfide	75-15-0	N.D.		0.001	0.99
10237	Carbon Tetrachloride	56-23-5	N.D.		0.001	0.99
10237	Chlorobenzene	108-90-7	N.D.		0.001	0.99
10237	Chloroethane	75-00-3	N.D.		0.002	0.99
10237	Chloroform	67-66-3	N.D.		0.001	0.99
10237	Chloromethane	74-87-3	N.D.		0.002	0.99
10237	Dibromochloromethane	124-48-1	N.D.		0.001	0.99
10237	1,1-Dichloroethane	75-34-3	N.D.		0.001	0.99
10237	1,2-Dichloroethane	107-06-2	N.D.		0.001	0.99
10237	1,1-Dichloroethene	75-35-4	N.D.		0.001	0.99
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.001	0.99
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.001	0.99
10237	1,2-Dichloropropane	78-87-5	N.D.		0.001	0.99
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.001	0.99
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.001	0.99
10237	Ethylbenzene	100-41-4	N.D.		0.001	0.99
10237	2-Hexanone	591-78-6	N.D.		0.003	0.99
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.003	0.99
10237	Methylene Chloride	75-09-2	0.012		0.002	0.99
10237	Styrene	100-42-5	N.D.		0.001	0.99
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.001	0.99
10237	Tetrachloroethene	127-18-4	N.D.		0.001	0.99
10237	Toluene	108-88-3	N.D.		0.001	0.99
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.001	0.99
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.001	0.99
10237	Trichloroethene	79-01-6	N.D.		0.001	0.99
10237	Vinyl Chloride	75-01-4	N.D.		0.001	0.99
10237	Xylene (Total)	1330-20-7	N.D.		0.001	0.99
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	0.10		0.019	5
07804	Acenaphthylene	208-96-8	0.20		0.019	5
07804	Anthracene	120-12-7	0.14		0.019	5
07804	Benzo(a)anthracene	56-55-3	0.16		0.019	5
07804	Benzo(a)pyrene	50-32-8	0.14		0.019	5
07804	Benzo(b)fluoranthene	205-99-2	0.17		0.019	5
07804	Benzo(g,h,i)perylene	191-24-2	0.090	J	0.019	5
07804	Benzo(k)fluoranthene	207-08-9	0.089	J	0.019	5
07804	Chrysene	218-01-9	0.17		0.019	5
07804	Dibenz(a,h)anthracene	53-70-3	0.035	J	0.019	5
07804	Fluoranthene	206-44-0	0.24		0.019	5
07804	Fluorene	86-73-7	0.11		0.019	5
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.073	J	0.019	5
07804	Naphthalene	91-20-3	0.16		0.019	5
07804	Phenanthrene	85-01-8	0.75		0.019	5

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B4 10' Grab Soil
Robinson Terminal South

LL Sample # SW 7216505
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 09:55 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT41

CAT No.	Analysis Name		CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles		**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Pyrene		129-00-0	0.33		0.019	5
GC Volatiles		**SW-846 8015B**		**mg/kg**		**mg/kg**	
01637	TPH-GRO soil C6-C10		n.a.	3.1		0.2	24.02
GC Petroleum Hydrocarbons		**SW-846 8015B**		**mg/kg**		**mg/kg**	
08270	TPH-DRO soil C10-C28		n.a.	41		4.6	1
Metals		**SW-846 6010B**		**mg/kg**		**mg/kg**	
06935	Arsenic		7440-38-2	8.86		0.808	1
06946	Barium		7440-39-3	205		0.0381	1
06949	Cadmium		7440-43-9	0.148	J	0.0877	1
06951	Chromium		7440-47-3	17.2		0.185	1
06955	Lead		7439-92-1	222		0.577	1
06936	Selenium		7782-49-2	N.D.		0.923	1
06966	Silver		7440-22-4	0.268	J	0.196	1
		SW-846 7471A		**mg/kg**		**mg/kg**	
00159	Mercury		7439-97-6	1.41		0.0569	5
Wet Chemistry		**SM 2540 G-1997**		**%**		**%**	
00111	Moisture		n.a.	14.2		0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/30/2013 02:35	Andrea E Lando	0.99
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:37	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:37	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:18	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	09/30/2013 17:55	Linda M Hartenstine	5
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/30/2013 13:00	Laura M Krieger	24.02

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B4 10' Grab Soil
Robinson Terminal South

LL Sample # SW 7216505
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 09:55 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT41

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:17	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013 14:53	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013 07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 15:13	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 15:13	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 15:13	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 15:13	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 15:13	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 15:13	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 15:13	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 05:44	Damary Valentin	5
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004A	09/30/2013 22:18	Scott W Freisher	1

Sample Description: B4 14' Grab Soil
Robinson Terminal South

LL Sample # SW 7216506
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 10:00 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT42

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**	**mg/kg**	
10237	Acetone	67-64-1	0.028	0.008	0.97
10237	Benzene	71-43-2	N.D.	0.0006	0.97
10237	Bromodichloromethane	75-27-4	N.D.	0.001	0.97
10237	Bromoform	75-25-2	N.D.	0.001	0.97
10237	Bromomethane	74-83-9	N.D.	0.002	0.97
10237	2-Butanone	78-93-3	N.D.	0.005	0.97
10237	Carbon Disulfide	75-15-0	N.D.	0.001	0.97
10237	Carbon Tetrachloride	56-23-5	N.D.	0.001	0.97
10237	Chlorobenzene	108-90-7	N.D.	0.001	0.97
10237	Chloroethane	75-00-3	N.D.	0.002	0.97
10237	Chloroform	67-66-3	N.D.	0.001	0.97
10237	Chloromethane	74-87-3	N.D.	0.002	0.97
10237	Dibromochloromethane	124-48-1	N.D.	0.001	0.97
10237	1,1-Dichloroethane	75-34-3	N.D.	0.001	0.97
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.97
10237	1,1-Dichloroethene	75-35-4	N.D.	0.001	0.97
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.001	0.97
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.001	0.97
10237	1,2-Dichloropropane	78-87-5	N.D.	0.001	0.97
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	0.97
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	0.97
10237	Ethylbenzene	100-41-4	N.D.	0.001	0.97
10237	2-Hexanone	591-78-6	N.D.	0.004	0.97
10237	4-Methyl-2-pentanone	108-10-1	N.D.	0.004	0.97
10237	Methylene Chloride	75-09-2	0.014	0.002	0.97
10237	Styrene	100-42-5	N.D.	0.001	0.97
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	0.97
10237	Tetrachloroethene	127-18-4	N.D.	0.001	0.97
10237	Toluene	108-88-3	N.D.	0.001	0.97
10237	1,1,1-Trichloroethane	71-55-6	N.D.	0.001	0.97
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.001	0.97
10237	Trichloroethene	79-01-6	N.D.	0.001	0.97
10237	Vinyl Chloride	75-01-4	N.D.	0.001	0.97
10237	Xylene (Total)	1330-20-7	N.D.	0.001	0.97
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Acenaphthene	83-32-9	N.D.	0.004	1
07804	Acenaphthylene	208-96-8	N.D.	0.004	1
07804	Anthracene	120-12-7	N.D.	0.004	1
07804	Benzo(a)anthracene	56-55-3	N.D.	0.004	1
07804	Benzo(a)pyrene	50-32-8	0.005 J	0.004	1
07804	Benzo(b)fluoranthene	205-99-2	N.D.	0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	N.D.	0.004	1
07804	Benzo(k)fluoranthene	207-08-9	N.D.	0.004	1
07804	Chrysene	218-01-9	N.D.	0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	N.D.	0.004	1
07804	Fluoranthene	206-44-0	N.D.	0.004	1
07804	Fluorene	86-73-7	N.D.	0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.004	1
07804	Naphthalene	91-20-3	N.D.	0.004	1
07804	Phenanthrene	85-01-8	N.D.	0.004	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B4 14' Grab Soil
Robinson Terminal South

LL Sample # SW 7216506
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 10:00 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT42

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	N.D.	0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	N.D.	0.2	23.41
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	9.6 J	4.9	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	5.23	0.847	1
06946	Barium	7440-39-3	92.0	0.0399	1
06949	Cadmium	7440-43-9	N.D.	0.0920	1
06951	Chromium	7440-47-3	19.4	0.194	1
06955	Lead	7439-92-1	12.7	0.605	1
06936	Selenium	7782-49-2	N.D.	0.968	1
06966	Silver	7440-22-4	N.D.	0.206	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0316 J	0.0118	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	19.0	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/29/2013 22:24	Andrea E Lando	0.97
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:37	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:37	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:20	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	09/30/2013 18:20	Linda M Hartenstine	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/29/2013 21:13	Laura M Krieger	23.41

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B4 14' Grab Soil
Robinson Terminal South

LL Sample # SW 7216506
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 10:00 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT42

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:21	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013 13:52	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013 07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 15:25	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 15:25	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 15:25	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 15:25	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 15:25	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 15:25	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 15:25	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 05:23	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004A	09/30/2013 22:18	Scott W Freisher	1

Sample Description: B5 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216507
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 11:10 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT51

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	0.12		0.008	0.97
10237	Benzene	71-43-2	N.D.		0.0006	0.97
10237	Bromodichloromethane	75-27-4	N.D.		0.001	0.97
10237	Bromoform	75-25-2	N.D.		0.001	0.97
10237	Bromomethane	74-83-9	N.D.		0.002	0.97
10237	2-Butanone	78-93-3	0.017		0.005	0.97
10237	Carbon Disulfide	75-15-0	0.001	J	0.001	0.97
10237	Carbon Tetrachloride	56-23-5	N.D.		0.001	0.97
10237	Chlorobenzene	108-90-7	N.D.		0.001	0.97
10237	Chloroethane	75-00-3	N.D.		0.002	0.97
10237	Chloroform	67-66-3	N.D.		0.001	0.97
10237	Chloromethane	74-87-3	N.D.		0.002	0.97
10237	Dibromochloromethane	124-48-1	N.D.		0.001	0.97
10237	1,1-Dichloroethane	75-34-3	N.D.		0.001	0.97
10237	1,2-Dichloroethane	107-06-2	N.D.		0.001	0.97
10237	1,1-Dichloroethene	75-35-4	N.D.		0.001	0.97
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.001	0.97
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.001	0.97
10237	1,2-Dichloropropane	78-87-5	N.D.		0.001	0.97
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.001	0.97
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.001	0.97
10237	Ethylbenzene	100-41-4	N.D.		0.001	0.97
10237	2-Hexanone	591-78-6	N.D.		0.004	0.97
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.004	0.97
10237	Methylene Chloride	75-09-2	0.015		0.002	0.97
10237	Styrene	100-42-5	N.D.		0.001	0.97
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.001	0.97
10237	Tetrachloroethene	127-18-4	N.D.		0.001	0.97
10237	Toluene	108-88-3	N.D.		0.001	0.97
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.001	0.97
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.001	0.97
10237	Trichloroethene	79-01-6	N.D.		0.001	0.97
10237	Vinyl Chloride	75-01-4	N.D.		0.001	0.97
10237	Xylene (Total)	1330-20-7	N.D.		0.001	0.97
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	0.080	J	0.020	5
07804	Acenaphthylene	208-96-8	0.27		0.020	5
07804	Anthracene	120-12-7	0.25		0.020	5
07804	Benzo(a)anthracene	56-55-3	1.6		0.020	5
07804	Benzo(a)pyrene	50-32-8	1.5		0.020	5
07804	Benzo(b)fluoranthene	205-99-2	2.5		0.020	5
07804	Benzo(g,h,i)perylene	191-24-2	1.3		0.020	5
07804	Benzo(k)fluoranthene	207-08-9	1.0		0.020	5
07804	Chrysene	218-01-9	1.6		0.020	5
07804	Dibenz(a,h)anthracene	53-70-3	0.34		0.020	5
07804	Fluoranthene	206-44-0	2.8		0.020	5
07804	Fluorene	86-73-7	0.11		0.020	5
07804	Indeno(1,2,3-cd)pyrene	193-39-5	1.3		0.020	5
07804	Naphthalene	91-20-3	0.26		0.020	5
07804	Phenanthrene	85-01-8	1.6		0.020	5

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B5 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216507
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 11:10 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT51

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	2.3	0.020	5
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	4.3	0.2	24.68
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	100	4.8	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	16.4	0.838	1
06946	Barium	7440-39-3	235	0.0395	1
06949	Cadmium	7440-43-9	1.14	0.0910	1
06951	Chromium	7440-47-3	22.5	0.192	1
06955	Lead	7439-92-1	926	0.599	1
06936	Selenium	7782-49-2	N.D.	0.958	1
06966	Silver	7440-22-4	0.658	0.204	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	2.40	0.118	10
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	17.3	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/30/2013 02:58	Andrea E Lando	0.97
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:37	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:25	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	09/30/2013 18:45	Linda M Hartenstine	5
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/30/2013 13:36	Laura M Krieger	24.68

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B5 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216507
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 11:10 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT51

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:24	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013 20:19	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013 07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 15:28	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 15:28	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 15:28	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 15:28	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 15:28	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 15:28	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 15:28	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 05:46	Damary Valentin	10
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004A	09/30/2013 22:18	Scott W Freisher	1

Sample Description: B5 8' Grab Soil
Robinson Terminal South

LL Sample # SW 7216508
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 11:15 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT52

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	N.D.		0.46	51.98
10237	Benzene	71-43-2	N.D.		0.033	51.98
10237	Bromodichloromethane	75-27-4	N.D.		0.065	51.98
10237	Bromoform	75-25-2	N.D.		0.065	51.98
10237	Bromomethane	74-83-9	N.D.		0.13	51.98
10237	2-Butanone	78-93-3	N.D.		0.26	51.98
10237	Carbon Disulfide	75-15-0	N.D.		0.065	51.98
10237	Carbon Tetrachloride	56-23-5	N.D.		0.065	51.98
10237	Chlorobenzene	108-90-7	N.D.		0.065	51.98
10237	Chloroethane	75-00-3	N.D.		0.13	51.98
10237	Chloroform	67-66-3	N.D.		0.065	51.98
10237	Chloromethane	74-87-3	N.D.		0.13	51.98
10237	Dibromochloromethane	124-48-1	N.D.		0.065	51.98
10237	1,1-Dichloroethane	75-34-3	N.D.		0.065	51.98
10237	1,2-Dichloroethane	107-06-2	N.D.		0.065	51.98
10237	1,1-Dichloroethene	75-35-4	N.D.		0.065	51.98
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.065	51.98
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.065	51.98
10237	1,2-Dichloropropane	78-87-5	N.D.		0.065	51.98
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.065	51.98
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.065	51.98
10237	Ethylbenzene	100-41-4	N.D.		0.065	51.98
10237	2-Hexanone	591-78-6	N.D.		0.20	51.98
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.20	51.98
10237	Methylene Chloride	75-09-2	N.D.		0.13	51.98
10237	Styrene	100-42-5	N.D.		0.065	51.98
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.065	51.98
10237	Tetrachloroethene	127-18-4	N.D.		0.065	51.98
10237	Toluene	108-88-3	N.D.		0.065	51.98
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.065	51.98
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.065	51.98
10237	Trichloroethene	79-01-6	N.D.		0.065	51.98
10237	Vinyl Chloride	75-01-4	N.D.		0.065	51.98
10237	Xylene (Total)	1330-20-7	0.18	J	0.065	51.98
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	0.089		0.004	1
07804	Acenaphthylene	208-96-8	0.058		0.004	1
07804	Anthracene	120-12-7	0.063		0.004	1
07804	Benzo(a)anthracene	56-55-3	0.16		0.004	1
07804	Benzo(a)pyrene	50-32-8	0.15		0.004	1
07804	Benzo(b)fluoranthene	205-99-2	0.21		0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	0.12		0.004	1
07804	Benzo(k)fluoranthene	207-08-9	0.070		0.004	1
07804	Chrysene	218-01-9	0.15		0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	0.029		0.004	1
07804	Fluoranthene	206-44-0	0.26		0.004	1
07804	Fluorene	86-73-7	0.086		0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.10		0.004	1
07804	Naphthalene	91-20-3	0.090		0.004	1
07804	Phenanthrene	85-01-8	0.28		0.004	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B5 8' Grab Soil
Robinson Terminal South

LL Sample # SW 7216508
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 11:15 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT52

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	0.25	0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	400	50	4926.11
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	270	5.0	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	6.79	0.863	1
06946	Barium	7440-39-3	95.0	0.0407	1
06949	Cadmium	7440-43-9	0.413 J	0.0937	1
06951	Chromium	7440-47-3	17.1	0.197	1
06955	Lead	7439-92-1	34.6	0.617	1
06936	Selenium	7782-49-2	N.D.	0.987	1
06966	Silver	7440-22-4	N.D.	0.210	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.277	0.0123	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	20.5	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	Q132721AA	09/29/2013 22:42	Sarah A Guill	51.98
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:28	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	09/30/2013 19:11	Linda M Hartenstine	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/30/2013 04:27	Laura M Krieger	4926.11

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B5 8' Grab Soil
Robinson Terminal South

LL Sample # SW 7216508
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 11:15 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT52

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:27	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013 15:53	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013 07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 15:32	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 15:32	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 15:32	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 15:32	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 15:32	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 15:32	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 15:32	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 05:31	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004A	09/30/2013 22:18	Scott W Freisher	1

Sample Description: B6 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216509
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 12:30 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT61

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	0.19		0.008	0.96
10237	Benzene	71-43-2	N.D.		0.0006	0.96
10237	Bromodichloromethane	75-27-4	N.D.		0.001	0.96
10237	Bromoform	75-25-2	N.D.		0.001	0.96
10237	Bromomethane	74-83-9	N.D.		0.002	0.96
10237	2-Butanone	78-93-3	0.021		0.004	0.96
10237	Carbon Disulfide	75-15-0	N.D.		0.001	0.96
10237	Carbon Tetrachloride	56-23-5	N.D.		0.001	0.96
10237	Chlorobenzene	108-90-7	N.D.		0.001	0.96
10237	Chloroethane	75-00-3	N.D.		0.002	0.96
10237	Chloroform	67-66-3	N.D.		0.001	0.96
10237	Chloromethane	74-87-3	N.D.		0.002	0.96
10237	Dibromochloromethane	124-48-1	N.D.		0.001	0.96
10237	1,1-Dichloroethane	75-34-3	N.D.		0.001	0.96
10237	1,2-Dichloroethane	107-06-2	N.D.		0.001	0.96
10237	1,1-Dichloroethene	75-35-4	N.D.		0.001	0.96
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.001	0.96
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.001	0.96
10237	1,2-Dichloropropane	78-87-5	N.D.		0.001	0.96
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.001	0.96
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.001	0.96
10237	Ethylbenzene	100-41-4	N.D.		0.001	0.96
10237	2-Hexanone	591-78-6	N.D.		0.003	0.96
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.003	0.96
10237	Methylene Chloride	75-09-2	0.006		0.002	0.96
10237	Styrene	100-42-5	N.D.		0.001	0.96
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.001	0.96
10237	Tetrachloroethene	127-18-4	N.D.		0.001	0.96
10237	Toluene	108-88-3	N.D.		0.001	0.96
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.001	0.96
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.001	0.96
10237	Trichloroethene	79-01-6	N.D.		0.001	0.96
10237	Vinyl Chloride	75-01-4	N.D.		0.001	0.96
10237	Xylene (Total)	1330-20-7	N.D.		0.001	0.96
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	N.D.		0.004	1
07804	Acenaphthylene	208-96-8	N.D.		0.004	1
07804	Anthracene	120-12-7	N.D.		0.004	1
07804	Benzo(a)anthracene	56-55-3	0.007	J	0.004	1
07804	Benzo(a)pyrene	50-32-8	0.012	J	0.004	1
07804	Benzo(b)fluoranthene	205-99-2	0.014	J	0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	0.01	J	0.004	1
07804	Benzo(k)fluoranthene	207-08-9	0.009	J	0.004	1
07804	Chrysene	218-01-9	0.009	J	0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	N.D.		0.004	1
07804	Fluoranthene	206-44-0	0.013	J	0.004	1
07804	Fluorene	86-73-7	0.004	J	0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.009	J	0.004	1
07804	Naphthalene	91-20-3	0.026		0.004	1
07804	Phenanthrene	85-01-8	0.013	J	0.004	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B6 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216509
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 12:30 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT61

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	0.012 J	0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	1.6	0.2	24.7
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	580	4.6	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	5.18	0.811	1
06946	Barium	7440-39-3	47.9	0.0382	1
06949	Cadmium	7440-43-9	N.D.	0.0880	1
06951	Chromium	7440-47-3	12.1	0.185	1
06955	Lead	7439-92-1	45.8	0.579	1
06936	Selenium	7782-49-2	N.D.	0.926	1
06966	Silver	7440-22-4	N.D.	0.197	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.380	0.0112	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	14.5	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/30/2013 03:21	Andrea E Lando	0.96
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:57	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	09/30/2013 19:36	Linda M Hartenstine	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/30/2013 14:12	Laura M Krieger	24.7

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B6 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216509
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 12:30 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT61

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:58	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013 14:12	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013 07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 15:36	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 15:36	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 15:36	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 15:36	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 15:36	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 15:36	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 15:36	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 05:34	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004A	09/30/2013 22:18	Scott W Freisher	1

Sample Description: B6 8' Grab Soil
Robinson Terminal South

LL Sample # SW 7216510
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 12:35 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT62

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	N.D.		0.45	53.3
10237	Benzene	71-43-2	N.D.		0.032	53.3
10237	Bromodichloromethane	75-27-4	N.D.		0.064	53.3
10237	Bromoform	75-25-2	N.D.		0.064	53.3
10237	Bromomethane	74-83-9	N.D.		0.13	53.3
10237	2-Butanone	78-93-3	N.D.		0.26	53.3
10237	Carbon Disulfide	75-15-0	N.D.		0.064	53.3
10237	Carbon Tetrachloride	56-23-5	N.D.		0.064	53.3
10237	Chlorobenzene	108-90-7	N.D.		0.064	53.3
10237	Chloroethane	75-00-3	N.D.		0.13	53.3
10237	Chloroform	67-66-3	N.D.		0.064	53.3
10237	Chloromethane	74-87-3	N.D.		0.13	53.3
10237	Dibromochloromethane	124-48-1	N.D.		0.064	53.3
10237	1,1-Dichloroethane	75-34-3	N.D.		0.064	53.3
10237	1,2-Dichloroethane	107-06-2	N.D.		0.064	53.3
10237	1,1-Dichloroethene	75-35-4	N.D.		0.064	53.3
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.064	53.3
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.064	53.3
10237	1,2-Dichloropropane	78-87-5	N.D.		0.064	53.3
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.064	53.3
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.064	53.3
10237	Ethylbenzene	100-41-4	N.D.		0.064	53.3
10237	2-Hexanone	591-78-6	N.D.		0.19	53.3
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.19	53.3
10237	Methylene Chloride	75-09-2	N.D.		0.13	53.3
10237	Styrene	100-42-5	N.D.		0.064	53.3
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.064	53.3
10237	Tetrachloroethene	127-18-4	N.D.		0.064	53.3
10237	Toluene	108-88-3	N.D.		0.064	53.3
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.064	53.3
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.064	53.3
10237	Trichloroethene	79-01-6	N.D.		0.064	53.3
10237	Vinyl Chloride	75-01-4	N.D.		0.064	53.3
10237	Xylene (Total)	1330-20-7	N.D.		0.064	53.3

Reporting limits were raised due to interference from the sample matrix.

GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	0.004	J	0.004	1
07804	Acenaphthylene	208-96-8	0.018	J	0.004	1
07804	Anthracene	120-12-7	N.D.		0.004	1
07804	Benzo(a)anthracene	56-55-3	0.006	J	0.004	1
07804	Benzo(a)pyrene	50-32-8	0.005	J	0.004	1
07804	Benzo(b)fluoranthene	205-99-2	0.009	J	0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	0.005	J	0.004	1
07804	Benzo(k)fluoranthene	207-08-9	N.D.		0.004	1
07804	Chrysene	218-01-9	0.011	J	0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	N.D.		0.004	1
07804	Fluoranthene	206-44-0	0.008	J	0.004	1
07804	Fluorene	86-73-7	0.027		0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.004	1
07804	Naphthalene	91-20-3	N.D.		0.004	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B6 8' Grab Soil
Robinson Terminal South

LL Sample # SW 7216510
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 12:35 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT62

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Phenanthrene	85-01-8	0.047	0.004	1
07804	Pyrene	129-00-0	0.007 J	0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	130	24	2512.56
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	330	4.8	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	5.23	0.830	1
06946	Barium	7440-39-3	61.1	0.0391	1
06949	Cadmium	7440-43-9	N.D.	0.0901	1
06951	Chromium	7440-47-3	16.5	0.190	1
06955	Lead	7439-92-1	12.9	0.593	1
06936	Selenium	7782-49-2	N.D.	0.948	1
06966	Silver	7440-22-4	N.D.	0.202	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0379 J	0.0116	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	17.3	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	Q132721AA	09/29/2013 23:05	Sarah A Guill	53.3
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:59	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	09/30/2013 20:01	Linda M Hartenstine	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/30/2013 05:40	Laura M Krieger	2512.56

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B6 8' Grab Soil
Robinson Terminal South

LL Sample # SW 7216510
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 12:35 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT62

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 00:59	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013 12:50	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013 07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 15:39	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 15:39	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 15:39	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 15:39	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 15:39	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 15:39	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 15:39	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 05:36	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004A	09/30/2013 22:18	Scott W Freisher	1

Sample Description: B7 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216511
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 10:35 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT71

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	0.14		0.008	1.02
10237	Benzene	71-43-2	N.D.		0.0006	1.02
10237	Bromodichloromethane	75-27-4	N.D.		0.001	1.02
10237	Bromoform	75-25-2	N.D.		0.001	1.02
10237	Bromomethane	74-83-9	N.D.		0.002	1.02
10237	2-Butanone	78-93-3	0.023		0.005	1.02
10237	Carbon Disulfide	75-15-0	N.D.		0.001	1.02
10237	Carbon Tetrachloride	56-23-5	N.D.		0.001	1.02
10237	Chlorobenzene	108-90-7	N.D.		0.001	1.02
10237	Chloroethane	75-00-3	N.D.		0.002	1.02
10237	Chloroform	67-66-3	N.D.		0.001	1.02
10237	Chloromethane	74-87-3	N.D.		0.002	1.02
10237	Dibromochloromethane	124-48-1	N.D.		0.001	1.02
10237	1,1-Dichloroethane	75-34-3	N.D.		0.001	1.02
10237	1,2-Dichloroethane	107-06-2	N.D.		0.001	1.02
10237	1,1-Dichloroethene	75-35-4	N.D.		0.001	1.02
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.001	1.02
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.001	1.02
10237	1,2-Dichloropropane	78-87-5	N.D.		0.001	1.02
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.001	1.02
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.001	1.02
10237	Ethylbenzene	100-41-4	N.D.		0.001	1.02
10237	2-Hexanone	591-78-6	N.D.		0.004	1.02
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.004	1.02
10237	Methylene Chloride	75-09-2	0.01		0.002	1.02
10237	Styrene	100-42-5	N.D.		0.001	1.02
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.001	1.02
10237	Tetrachloroethene	127-18-4	N.D.		0.001	1.02
10237	Toluene	108-88-3	N.D.		0.001	1.02
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.001	1.02
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.001	1.02
10237	Trichloroethene	79-01-6	N.D.		0.001	1.02
10237	Vinyl Chloride	75-01-4	N.D.		0.001	1.02
10237	Xylene (Total)	1330-20-7	N.D.		0.001	1.02
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	N.D.		0.004	1
07804	Acenaphthylene	208-96-8	N.D.		0.004	1
07804	Anthracene	120-12-7	0.005	J	0.004	1
07804	Benzo(a)anthracene	56-55-3	0.007	J	0.004	1
07804	Benzo(a)pyrene	50-32-8	0.007	J	0.004	1
07804	Benzo(b)fluoranthene	205-99-2	0.009	J	0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	0.008	J	0.004	1
07804	Benzo(k)fluoranthene	207-08-9	0.005	J	0.004	1
07804	Chrysene	218-01-9	0.007	J	0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	0.006	J	0.004	1
07804	Fluoranthene	206-44-0	0.007	J	0.004	1
07804	Fluorene	86-73-7	0.004	J	0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.008	J	0.004	1
07804	Naphthalene	91-20-3	N.D.		0.004	1
07804	Phenanthrene	85-01-8	0.009	J	0.004	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B7 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216511
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 10:35 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT71

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	0.01 J	0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	N.D.	0.2	24.15
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	33	4.7	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	4.90	0.816	1
06946	Barium	7440-39-3	33.1	0.0385	1
06949	Cadmium	7440-43-9	N.D.	0.0886	1
06951	Chromium	7440-47-3	7.57	0.187	1
06955	Lead	7439-92-1	10.9	0.583	1
06936	Selenium	7782-49-2	N.D.	0.933	1
06966	Silver	7440-22-4	N.D.	0.198	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0391 J	0.0113	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	15.1	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/29/2013 22:47	Andrea E Lando	1.02
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:05	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	09/30/2013 20:26	Linda M Hartenstine	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/29/2013 21:49	Laura M Krieger	24.15

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B7 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216511
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 10:35 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT71

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:03	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013 18:12	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013 07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 15:43	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 15:43	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 15:43	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 15:43	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 15:43	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 15:43	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 15:43	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 05:38	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004A	09/30/2013 22:18	Scott W Freisher	1

Sample Description: B7 8' Grab Soil
Robinson Terminal South

LL Sample # SW 7216512
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 10:39 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT72

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	0.040		0.008	1.03
10237	Benzene	71-43-2	N.D.		0.0006	1.03
10237	Bromodichloromethane	75-27-4	N.D.		0.001	1.03
10237	Bromoform	75-25-2	N.D.		0.001	1.03
10237	Bromomethane	74-83-9	N.D.		0.002	1.03
10237	2-Butanone	78-93-3	0.006	J	0.005	1.03
10237	Carbon Disulfide	75-15-0	N.D.		0.001	1.03
10237	Carbon Tetrachloride	56-23-5	N.D.		0.001	1.03
10237	Chlorobenzene	108-90-7	N.D.		0.001	1.03
10237	Chloroethane	75-00-3	N.D.		0.002	1.03
10237	Chloroform	67-66-3	N.D.		0.001	1.03
10237	Chloromethane	74-87-3	N.D.		0.002	1.03
10237	Dibromochloromethane	124-48-1	N.D.		0.001	1.03
10237	1,1-Dichloroethane	75-34-3	N.D.		0.001	1.03
10237	1,2-Dichloroethane	107-06-2	N.D.		0.001	1.03
10237	1,1-Dichloroethene	75-35-4	N.D.		0.001	1.03
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.001	1.03
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.001	1.03
10237	1,2-Dichloropropane	78-87-5	N.D.		0.001	1.03
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.001	1.03
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.001	1.03
10237	Ethylbenzene	100-41-4	N.D.		0.001	1.03
10237	2-Hexanone	591-78-6	N.D.		0.004	1.03
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.004	1.03
10237	Methylene Chloride	75-09-2	0.011		0.002	1.03
10237	Styrene	100-42-5	N.D.		0.001	1.03
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.001	1.03
10237	Tetrachloroethene	127-18-4	N.D.		0.001	1.03
10237	Toluene	108-88-3	N.D.		0.001	1.03
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.001	1.03
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.001	1.03
10237	Trichloroethene	79-01-6	N.D.		0.001	1.03
10237	Vinyl Chloride	75-01-4	N.D.		0.001	1.03
10237	Xylene (Total)	1330-20-7	N.D.		0.001	1.03
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	N.D.		0.004	1
07804	Acenaphthylene	208-96-8	N.D.		0.004	1
07804	Anthracene	120-12-7	N.D.		0.004	1
07804	Benzo(a)anthracene	56-55-3	0.005	J	0.004	1
07804	Benzo(a)pyrene	50-32-8	0.005	J	0.004	1
07804	Benzo(b)fluoranthene	205-99-2	0.007	J	0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	N.D.		0.004	1
07804	Benzo(k)fluoranthene	207-08-9	0.005	J	0.004	1
07804	Chrysene	218-01-9	0.005	J	0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	N.D.		0.004	1
07804	Fluoranthene	206-44-0	N.D.		0.004	1
07804	Fluorene	86-73-7	N.D.		0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.004	1
07804	Naphthalene	91-20-3	N.D.		0.004	1
07804	Phenanthrene	85-01-8	N.D.		0.004	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B7 8' Grab Soil
Robinson Terminal South

LL Sample # SW 7216512
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 10:39 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT72

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	N.D.	0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	N.D.	0.2	25.46
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	N.D.	4.6	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	5.56	0.773	1
06946	Barium	7440-39-3	50.5	0.0364	1
06949	Cadmium	7440-43-9	N.D.	0.0839	1
06951	Chromium	7440-47-3	11.4	0.177	1
06955	Lead	7439-92-1	12.4	0.552	1
06936	Selenium	7782-49-2	N.D.	0.883	1
06966	Silver	7440-22-4	N.D.	0.188	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0480 J	0.0110	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	12.9	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/29/2013 23:10	Andrea E Lando	1.03
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:09	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	10/01/2013 03:33	Holly Berry	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/29/2013 22:25	Laura M Krieger	25.46
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:07	Scott W Freisher	n.a.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B7 8' Grab Soil
Robinson Terminal South

LL Sample # SW 7216512
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 10:39 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT72

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013	13:11	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013	07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013	15:46	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013	15:46	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013	15:46	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013	15:46	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013	15:46	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013	15:46	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013	15:46	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013	05:40	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013	20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013	22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004A	09/30/2013	22:18	Scott W Freisher	1

Sample Description: B8 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216513
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 12:55 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT81

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**	**mg/kg**	
10237	Acetone	67-64-1	N.D.	0.009	1.03
10237	Benzene	71-43-2	N.D.	0.0006	1.03
10237	Bromodichloromethane	75-27-4	N.D.	0.001	1.03
10237	Bromoform	75-25-2	N.D.	0.001	1.03
10237	Bromomethane	74-83-9	N.D.	0.002	1.03
10237	2-Butanone	78-93-3	N.D.	0.005	1.03
10237	Carbon Disulfide	75-15-0	N.D.	0.001	1.03
10237	Carbon Tetrachloride	56-23-5	N.D.	0.001	1.03
10237	Chlorobenzene	108-90-7	N.D.	0.001	1.03
10237	Chloroethane	75-00-3	N.D.	0.002	1.03
10237	Chloroform	67-66-3	N.D.	0.001	1.03
10237	Chloromethane	74-87-3	N.D.	0.002	1.03
10237	Dibromochloromethane	124-48-1	N.D.	0.001	1.03
10237	1,1-Dichloroethane	75-34-3	N.D.	0.001	1.03
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	1.03
10237	1,1-Dichloroethene	75-35-4	N.D.	0.001	1.03
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.001	1.03
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.001	1.03
10237	1,2-Dichloropropane	78-87-5	N.D.	0.001	1.03
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	1.03
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	1.03
10237	Ethylbenzene	100-41-4	N.D.	0.001	1.03
10237	2-Hexanone	591-78-6	N.D.	0.004	1.03
10237	4-Methyl-2-pentanone	108-10-1	N.D.	0.004	1.03
10237	Methylene Chloride	75-09-2	0.009	0.002	1.03
10237	Styrene	100-42-5	N.D.	0.001	1.03
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	1.03
10237	Tetrachloroethene	127-18-4	N.D.	0.001	1.03
10237	Toluene	108-88-3	N.D.	0.001	1.03
10237	1,1,1-Trichloroethane	71-55-6	N.D.	0.001	1.03
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.001	1.03
10237	Trichloroethene	79-01-6	N.D.	0.001	1.03
10237	Vinyl Chloride	75-01-4	N.D.	0.001	1.03
10237	Xylene (Total)	1330-20-7	N.D.	0.001	1.03
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Acenaphthene	83-32-9	N.D.	0.004	1
07804	Acenaphthylene	208-96-8	N.D.	0.004	1
07804	Anthracene	120-12-7	N.D.	0.004	1
07804	Benzo(a)anthracene	56-55-3	N.D.	0.004	1
07804	Benzo(a)pyrene	50-32-8	N.D.	0.004	1
07804	Benzo(b)fluoranthene	205-99-2	N.D.	0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	N.D.	0.004	1
07804	Benzo(k)fluoranthene	207-08-9	N.D.	0.004	1
07804	Chrysene	218-01-9	N.D.	0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	N.D.	0.004	1
07804	Fluoranthene	206-44-0	N.D.	0.004	1
07804	Fluorene	86-73-7	N.D.	0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.004	1
07804	Naphthalene	91-20-3	N.D.	0.004	1
07804	Phenanthrene	85-01-8	N.D.	0.004	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B8 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216513
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 12:55 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT81

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	N.D.	0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	N.D.	0.2	25.64
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	N.D.	4.8	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	6.28	0.829	1
06946	Barium	7440-39-3	64.9	0.0391	1
06949	Cadmium	7440-43-9	1.17	0.0900	1
06951	Chromium	7440-47-3	13.8	0.189	1
06955	Lead	7439-92-1	4.58	0.592	1
06936	Selenium	7782-49-2	N.D.	0.947	1
06966	Silver	7440-22-4	0.514 J	0.201	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0154 J	0.0118	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	17.2	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/29/2013 23:33	Andrea E Lando	1.03
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:12	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	10/01/2013 03:58	Holly Berry	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/29/2013 23:01	Laura M Krieger	25.64
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:11	Scott W Freisher	n.a.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B8 5' Grab Soil
Robinson Terminal South

LL Sample # SW 7216513
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 12:55 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT81

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013	11:50	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013	07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708002	09/30/2013	08:39	Eric L Eby	1
06946	Barium	SW-846 6010B	1	132715708002	09/30/2013	08:39	Eric L Eby	1
06949	Cadmium	SW-846 6010B	1	132715708002	09/30/2013	08:39	Eric L Eby	1
06951	Chromium	SW-846 6010B	1	132715708002	09/30/2013	08:39	Eric L Eby	1
06955	Lead	SW-846 6010B	1	132715708002	09/30/2013	08:39	Eric L Eby	1
06936	Selenium	SW-846 6010B	1	132715708002	09/30/2013	08:39	Eric L Eby	1
06966	Silver	SW-846 6010B	1	132715708002	09/30/2013	08:39	Eric L Eby	1
00159	Mercury	SW-846 7471A	1	132715711002	09/30/2013	05:56	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708002	09/29/2013	20:11	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711002	09/29/2013	22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004A	09/30/2013	22:18	Scott W Freisher	1

Sample Description: B8 8' Grab Soil
Robinson Terminal South

LL Sample # SW 7216514
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 13:00 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT82

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	N.D.		0.008	0.98
10237	Benzene	71-43-2	N.D.		0.0006	0.98
10237	Bromodichloromethane	75-27-4	N.D.		0.001	0.98
10237	Bromoform	75-25-2	N.D.		0.001	0.98
10237	Bromomethane	74-83-9	N.D.		0.002	0.98
10237	2-Butanone	78-93-3	N.D.		0.005	0.98
10237	Carbon Disulfide	75-15-0	N.D.		0.001	0.98
10237	Carbon Tetrachloride	56-23-5	N.D.		0.001	0.98
10237	Chlorobenzene	108-90-7	N.D.		0.001	0.98
10237	Chloroethane	75-00-3	N.D.		0.002	0.98
10237	Chloroform	67-66-3	N.D.		0.001	0.98
10237	Chloromethane	74-87-3	N.D.		0.002	0.98
10237	Dibromochloromethane	124-48-1	N.D.		0.001	0.98
10237	1,1-Dichloroethane	75-34-3	N.D.		0.001	0.98
10237	1,2-Dichloroethane	107-06-2	N.D.		0.001	0.98
10237	1,1-Dichloroethene	75-35-4	N.D.		0.001	0.98
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.001	0.98
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.001	0.98
10237	1,2-Dichloropropane	78-87-5	N.D.		0.001	0.98
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.001	0.98
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.001	0.98
10237	Ethylbenzene	100-41-4	N.D.		0.001	0.98
10237	2-Hexanone	591-78-6	N.D.		0.004	0.98
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.004	0.98
10237	Methylene Chloride	75-09-2	0.009		0.002	0.98
10237	Styrene	100-42-5	N.D.		0.001	0.98
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.001	0.98
10237	Tetrachloroethene	127-18-4	N.D.		0.001	0.98
10237	Toluene	108-88-3	N.D.		0.001	0.98
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.001	0.98
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.001	0.98
10237	Trichloroethene	79-01-6	N.D.		0.001	0.98
10237	Vinyl Chloride	75-01-4	N.D.		0.001	0.98
10237	Xylene (Total)	1330-20-7	N.D.		0.001	0.98
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	N.D.		0.004	1
07804	Acenaphthylene	208-96-8	N.D.		0.004	1
07804	Anthracene	120-12-7	0.006	J	0.004	1
07804	Benzo(a)anthracene	56-55-3	0.009	J	0.004	1
07804	Benzo(a)pyrene	50-32-8	0.01	J	0.004	1
07804	Benzo(b)fluoranthene	205-99-2	0.011	J	0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	0.008	J	0.004	1
07804	Benzo(k)fluoranthene	207-08-9	0.011	J	0.004	1
07804	Chrysene	218-01-9	0.009	J	0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	0.005	J	0.004	1
07804	Fluoranthene	206-44-0	0.01	J	0.004	1
07804	Fluorene	86-73-7	0.004	J	0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.007	J	0.004	1
07804	Naphthalene	91-20-3	N.D.		0.004	1
07804	Phenanthrene	85-01-8	0.008	J	0.004	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B8 8' Grab Soil
Robinson Terminal South

LL Sample # SW 7216514
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 13:00 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT82

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	0.01 J	0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	N.D.	0.2	24.44
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	N.D.	4.8	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	2.77	0.840	1
06946	Barium	7440-39-3	31.8	0.0396	1
06949	Cadmium	7440-43-9	0.188 J	0.0912	1
06951	Chromium	7440-47-3	5.99	0.192	1
06955	Lead	7439-92-1	2.59	0.600	1
06936	Selenium	7782-49-2	N.D.	0.960	1
06966	Silver	7440-22-4	0.216 J	0.204	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0138 J	0.0115	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	16.7	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/30/2013 00:41	Andrea E Lando	0.98
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:15	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	10/01/2013 04:23	Holly Berry	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/30/2013 00:14	Laura M Krieger	24.44
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:14	Scott W Freisher	n.a.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B8 8' Grab Soil
Robinson Terminal South

LL Sample # SW 7216514
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 13:00 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT82

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013	12:10	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013	07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708002	09/30/2013	08:16	Eric L Eby	1
06946	Barium	SW-846 6010B	1	132715708002	09/30/2013	08:16	Eric L Eby	1
06949	Cadmium	SW-846 6010B	1	132715708002	09/30/2013	08:16	Eric L Eby	1
06951	Chromium	SW-846 6010B	1	132715708002	09/30/2013	08:16	Eric L Eby	1
06955	Lead	SW-846 6010B	1	132715708002	09/30/2013	08:16	Eric L Eby	1
06936	Selenium	SW-846 6010B	1	132715708002	09/30/2013	08:16	Eric L Eby	1
06966	Silver	SW-846 6010B	1	132715708002	09/30/2013	08:16	Eric L Eby	1
00159	Mercury	SW-846 7471A	1	132715711002	09/30/2013	05:58	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708002	09/29/2013	20:11	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711002	09/29/2013	22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004B	09/30/2013	22:18	Scott W Freisher	1

Sample Description: B9 4' Grab Soil
Robinson Terminal South

LL Sample # SW 7216515
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 13:32 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT91

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	N.D.		0.008	1
10237	Benzene	71-43-2	N.D.		0.0005	1
10237	Bromodichloromethane	75-27-4	N.D.		0.001	1
10237	Bromoform	75-25-2	N.D.		0.001	1
10237	Bromomethane	74-83-9	N.D.		0.002	1
10237	2-Butanone	78-93-3	N.D.		0.004	1
10237	Carbon Disulfide	75-15-0	N.D.		0.001	1
10237	Carbon Tetrachloride	56-23-5	N.D.		0.001	1
10237	Chlorobenzene	108-90-7	N.D.		0.001	1
10237	Chloroethane	75-00-3	N.D.		0.002	1
10237	Chloroform	67-66-3	N.D.		0.001	1
10237	Chloromethane	74-87-3	N.D.		0.002	1
10237	Dibromochloromethane	124-48-1	N.D.		0.001	1
10237	1,1-Dichloroethane	75-34-3	N.D.		0.001	1
10237	1,2-Dichloroethane	107-06-2	N.D.		0.001	1
10237	1,1-Dichloroethene	75-35-4	N.D.		0.001	1
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.001	1
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.001	1
10237	1,2-Dichloropropane	78-87-5	N.D.		0.001	1
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.001	1
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.001	1
10237	Ethylbenzene	100-41-4	N.D.		0.001	1
10237	2-Hexanone	591-78-6	N.D.		0.003	1
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.003	1
10237	Methylene Chloride	75-09-2	0.007		0.002	1
10237	Styrene	100-42-5	N.D.		0.001	1
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.001	1
10237	Tetrachloroethene	127-18-4	N.D.		0.001	1
10237	Toluene	108-88-3	N.D.		0.001	1
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.001	1
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.001	1
10237	Trichloroethene	79-01-6	N.D.		0.001	1
10237	Vinyl Chloride	75-01-4	N.D.		0.001	1
10237	Xylene (Total)	1330-20-7	N.D.		0.001	1
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	N.D.		0.004	1
07804	Acenaphthylene	208-96-8	N.D.		0.004	1
07804	Anthracene	120-12-7	0.007	J	0.004	1
07804	Benzo(a)anthracene	56-55-3	0.049		0.004	1
07804	Benzo(a)pyrene	50-32-8	0.040		0.004	1
07804	Benzo(b)fluoranthene	205-99-2	0.056		0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	0.020		0.004	1
07804	Benzo(k)fluoranthene	207-08-9	0.027		0.004	1
07804	Chrysene	218-01-9	0.052		0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	0.005	J	0.004	1
07804	Fluoranthene	206-44-0	0.094		0.004	1
07804	Fluorene	86-73-7	N.D.		0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.020		0.004	1
07804	Naphthalene	91-20-3	N.D.		0.004	1
07804	Phenanthrene	85-01-8	0.029		0.004	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B9 4' Grab Soil
Robinson Terminal South

LL Sample # SW 7216515
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 13:32 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT91

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	0.081	0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	0.3 J	0.2	25.59
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	N.D.	4.3	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	4.58	0.751	1
06946	Barium	7440-39-3	32.6	0.0354	1
06949	Cadmium	7440-43-9	0.386 J	0.0815	1
06951	Chromium	7440-47-3	7.90	0.172	1
06955	Lead	7439-92-1	30.0	0.536	1
06936	Selenium	7782-49-2	N.D.	0.858	1
06966	Silver	7440-22-4	0.267 J	0.182	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0829 J	0.0107	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	7.7	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/30/2013 01:04	Andrea E Lando	1
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:18	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	10/01/2013 04:48	Holly Berry	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/30/2013 00:50	Laura M Krieger	25.59
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:17	Scott W Freisher	n.a.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B9 4' Grab Soil
Robinson Terminal South

LL Sample # SW 7216515
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 13:32 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT91

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013	15:13	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013	07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708002	09/30/2013	08:43	Eric L Eby	1
06946	Barium	SW-846 6010B	1	132715708002	09/30/2013	08:43	Eric L Eby	1
06949	Cadmium	SW-846 6010B	1	132715708002	09/30/2013	08:43	Eric L Eby	1
06951	Chromium	SW-846 6010B	1	132715708002	09/30/2013	08:43	Eric L Eby	1
06955	Lead	SW-846 6010B	1	132715708002	09/30/2013	08:43	Eric L Eby	1
06936	Selenium	SW-846 6010B	1	132715708002	09/30/2013	08:43	Eric L Eby	1
06966	Silver	SW-846 6010B	1	132715708002	09/30/2013	08:43	Eric L Eby	1
00159	Mercury	SW-846 7471A	1	132715711002	09/30/2013	06:08	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708002	09/29/2013	20:11	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711002	09/29/2013	22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004B	09/30/2013	22:18	Scott W Freisher	1

Sample Description: B9 7' Grab Soil
Robinson Terminal South

LL Sample # SW 7216516
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 13:35 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT92

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**	**mg/kg**	
10237	Acetone	67-64-1	N.D.	0.008	0.97
10237	Benzene	71-43-2	N.D.	0.0006	0.97
10237	Bromodichloromethane	75-27-4	N.D.	0.001	0.97
10237	Bromoform	75-25-2	N.D.	0.001	0.97
10237	Bromomethane	74-83-9	N.D.	0.002	0.97
10237	2-Butanone	78-93-3	N.D.	0.005	0.97
10237	Carbon Disulfide	75-15-0	N.D.	0.001	0.97
10237	Carbon Tetrachloride	56-23-5	N.D.	0.001	0.97
10237	Chlorobenzene	108-90-7	N.D.	0.001	0.97
10237	Chloroethane	75-00-3	N.D.	0.002	0.97
10237	Chloroform	67-66-3	N.D.	0.001	0.97
10237	Chloromethane	74-87-3	N.D.	0.002	0.97
10237	Dibromochloromethane	124-48-1	N.D.	0.001	0.97
10237	1,1-Dichloroethane	75-34-3	N.D.	0.001	0.97
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.97
10237	1,1-Dichloroethene	75-35-4	N.D.	0.001	0.97
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.001	0.97
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.001	0.97
10237	1,2-Dichloropropane	78-87-5	N.D.	0.001	0.97
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	0.97
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	0.97
10237	Ethylbenzene	100-41-4	N.D.	0.001	0.97
10237	2-Hexanone	591-78-6	N.D.	0.004	0.97
10237	4-Methyl-2-pentanone	108-10-1	N.D.	0.004	0.97
10237	Methylene Chloride	75-09-2	0.014	0.002	0.97
10237	Styrene	100-42-5	N.D.	0.001	0.97
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	0.97
10237	Tetrachloroethene	127-18-4	N.D.	0.001	0.97
10237	Toluene	108-88-3	N.D.	0.001	0.97
10237	1,1,1-Trichloroethane	71-55-6	N.D.	0.001	0.97
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.001	0.97
10237	Trichloroethene	79-01-6	N.D.	0.001	0.97
10237	Vinyl Chloride	75-01-4	N.D.	0.001	0.97
10237	Xylene (Total)	1330-20-7	N.D.	0.001	0.97
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Acenaphthene	83-32-9	N.D.	0.004	1
07804	Acenaphthylene	208-96-8	N.D.	0.004	1
07804	Anthracene	120-12-7	N.D.	0.004	1
07804	Benzo(a)anthracene	56-55-3	N.D.	0.004	1
07804	Benzo(a)pyrene	50-32-8	N.D.	0.004	1
07804	Benzo(b)fluoranthene	205-99-2	N.D.	0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	N.D.	0.004	1
07804	Benzo(k)fluoranthene	207-08-9	N.D.	0.004	1
07804	Chrysene	218-01-9	N.D.	0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	N.D.	0.004	1
07804	Fluoranthene	206-44-0	N.D.	0.004	1
07804	Fluorene	86-73-7	N.D.	0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.004	1
07804	Naphthalene	91-20-3	N.D.	0.004	1
07804	Phenanthrene	85-01-8	N.D.	0.004	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B9 7' Grab Soil
Robinson Terminal South

LL Sample # SW 7216516
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 13:35 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT92

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	N.D.	0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	N.D.	0.2	23.3
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	N.D.	4.9	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	2.49	0.849	1
06946	Barium	7440-39-3	35.3	0.0400	1
06949	Cadmium	7440-43-9	0.278 J	0.0922	1
06951	Chromium	7440-47-3	5.49	0.194	1
06955	Lead	7439-92-1	3.05	0.607	1
06936	Selenium	7782-49-2	N.D.	0.971	1
06966	Silver	7440-22-4	0.252 J	0.206	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	N.D.	0.0121	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	18.4	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/30/2013 01:27	Andrea E Lando	0.97
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:21	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	10/01/2013 05:13	Holly Berry	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/30/2013 01:26	Laura M Krieger	23.3
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:20	Scott W Freisher	n.a.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B9 7' Grab Soil
Robinson Terminal South

LL Sample # SW 7216516
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 13:35 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RBT92

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013 12:30	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013 07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708002	09/30/2013 08:54	Eric L Eby	1
06946	Barium	SW-846 6010B	1	132715708002	09/30/2013 08:54	Eric L Eby	1
06949	Cadmium	SW-846 6010B	1	132715708002	09/30/2013 08:54	Eric L Eby	1
06951	Chromium	SW-846 6010B	1	132715708002	09/30/2013 08:54	Eric L Eby	1
06955	Lead	SW-846 6010B	1	132715708002	09/30/2013 08:54	Eric L Eby	1
06936	Selenium	SW-846 6010B	1	132715708002	09/30/2013 08:54	Eric L Eby	1
06966	Silver	SW-846 6010B	1	132715708002	09/30/2013 08:54	Eric L Eby	1
00159	Mercury	SW-846 7471A	1	132715711002	09/30/2013 06:10	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708002	09/29/2013 20:11	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711002	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004B	09/30/2013 22:18	Scott W Freisher	1

Sample Description: B10 4' Grab Soil
Robinson Terminal South

LL Sample # SW 7216517
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 14:35 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RB101

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	0.010	J	0.008	1
10237	Benzene	71-43-2	N.D.		0.0006	1
10237	Bromodichloromethane	75-27-4	N.D.		0.001	1
10237	Bromoform	75-25-2	N.D.		0.001	1
10237	Bromomethane	74-83-9	N.D.		0.002	1
10237	2-Butanone	78-93-3	N.D.		0.004	1
10237	Carbon Disulfide	75-15-0	N.D.		0.001	1
10237	Carbon Tetrachloride	56-23-5	N.D.		0.001	1
10237	Chlorobenzene	108-90-7	N.D.		0.001	1
10237	Chloroethane	75-00-3	N.D.		0.002	1
10237	Chloroform	67-66-3	N.D.		0.001	1
10237	Chloromethane	74-87-3	N.D.		0.002	1
10237	Dibromochloromethane	124-48-1	N.D.		0.001	1
10237	1,1-Dichloroethane	75-34-3	N.D.		0.001	1
10237	1,2-Dichloroethane	107-06-2	N.D.		0.001	1
10237	1,1-Dichloroethene	75-35-4	N.D.		0.001	1
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.001	1
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.001	1
10237	1,2-Dichloropropane	78-87-5	N.D.		0.001	1
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.001	1
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.001	1
10237	Ethylbenzene	100-41-4	N.D.		0.001	1
10237	2-Hexanone	591-78-6	N.D.		0.003	1
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.003	1
10237	Methylene Chloride	75-09-2	N.D.		0.002	1
10237	Styrene	100-42-5	N.D.		0.001	1
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.001	1
10237	Tetrachloroethene	127-18-4	N.D.		0.001	1
10237	Toluene	108-88-3	N.D.		0.001	1
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.001	1
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.001	1
10237	Trichloroethene	79-01-6	N.D.		0.001	1
10237	Vinyl Chloride	75-01-4	N.D.		0.001	1
10237	Xylene (Total)	1330-20-7	N.D.		0.001	1
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	N.D.		0.018	5
07804	Acenaphthylene	208-96-8	0.048	J	0.018	5
07804	Anthracene	120-12-7	0.022	J	0.018	5
07804	Benzo(a)anthracene	56-55-3	0.037	J	0.018	5
07804	Benzo(a)pyrene	50-32-8	0.042	J	0.018	5
07804	Benzo(b)fluoranthene	205-99-2	0.064	J	0.018	5
07804	Benzo(g,h,i)perylene	191-24-2	0.049	J	0.018	5
07804	Benzo(k)fluoranthene	207-08-9	0.027	J	0.018	5
07804	Chrysene	218-01-9	0.058	J	0.018	5
07804	Dibenz(a,h)anthracene	53-70-3	N.D.		0.018	5
07804	Fluoranthene	206-44-0	0.078	J	0.018	5
07804	Fluorene	86-73-7	N.D.		0.018	5
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.030	J	0.018	5
07804	Naphthalene	91-20-3	N.D.		0.018	5
07804	Phenanthrene	85-01-8	0.039	J	0.018	5

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B10 4' Grab Soil
Robinson Terminal South

LL Sample # SW 7216517
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 14:35 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RB101

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Pyrene	129-00-0	0.12		0.018	5
	Reporting limits were raised due to interference from the sample matrix.					
GC Volatiles	**SW-846 8015B**		**mg/kg**		**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	0.2	J	0.2	25.13
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	100		4.4	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06935	Arsenic	7440-38-2	8.43		0.766	1
06946	Barium	7440-39-3	37.0		0.0361	1
06949	Cadmium	7440-43-9	0.674		0.0831	1
06951	Chromium	7440-47-3	14.4		0.175	1
06955	Lead	7439-92-1	64.3		0.547	1
06936	Selenium	7782-49-2	N.D.		0.875	1
06966	Silver	7440-22-4	0.385	J	0.186	1
	SW-846 7471A		**mg/kg**		**mg/kg**	
00159	Mercury	7439-97-6	0.234		0.0109	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	
00111	Moisture	n.a.	9.5		0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/30/2013 01:49	Andrea E Lando	1
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:38	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:24	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	10/01/2013 05:38	Holly Berry	5
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/30/2013 02:02	Laura M Krieger	25.13

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B10 4' Grab Soil
Robinson Terminal South

LL Sample # SW 7216517
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 14:35 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RB101

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:24	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013 18:33	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013 07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708002	09/30/2013 08:58	Eric L Eby	1
06946	Barium	SW-846 6010B	1	132715708002	09/30/2013 08:58	Eric L Eby	1
06949	Cadmium	SW-846 6010B	1	132715708002	09/30/2013 08:58	Eric L Eby	1
06951	Chromium	SW-846 6010B	1	132715708002	09/30/2013 08:58	Eric L Eby	1
06955	Lead	SW-846 6010B	1	132715708002	09/30/2013 08:58	Eric L Eby	1
06936	Selenium	SW-846 6010B	1	132715708002	09/30/2013 08:58	Eric L Eby	1
06966	Silver	SW-846 6010B	1	132715708002	09/30/2013 08:58	Eric L Eby	1
00159	Mercury	SW-846 7471A	1	132715711002	09/30/2013 06:12	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708002	09/29/2013 20:11	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711002	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004B	09/30/2013 22:18	Scott W Freisher	1

Sample Description: B10 8' Grab Soil
Robinson Terminal South

LL Sample # SW 7216518
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 14:40 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RB102

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	0.036		0.008	1.02
10237	Benzene	71-43-2	N.D.		0.0006	1.02
10237	Bromodichloromethane	75-27-4	N.D.		0.001	1.02
10237	Bromoform	75-25-2	N.D.		0.001	1.02
10237	Bromomethane	74-83-9	N.D.		0.002	1.02
10237	2-Butanone	78-93-3	0.006	J	0.005	1.02
10237	Carbon Disulfide	75-15-0	N.D.		0.001	1.02
10237	Carbon Tetrachloride	56-23-5	N.D.		0.001	1.02
10237	Chlorobenzene	108-90-7	N.D.		0.001	1.02
10237	Chloroethane	75-00-3	N.D.		0.002	1.02
10237	Chloroform	67-66-3	N.D.		0.001	1.02
10237	Chloromethane	74-87-3	N.D.		0.002	1.02
10237	Dibromochloromethane	124-48-1	N.D.		0.001	1.02
10237	1,1-Dichloroethane	75-34-3	N.D.		0.001	1.02
10237	1,2-Dichloroethane	107-06-2	N.D.		0.001	1.02
10237	1,1-Dichloroethene	75-35-4	N.D.		0.001	1.02
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.001	1.02
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.001	1.02
10237	1,2-Dichloropropane	78-87-5	N.D.		0.001	1.02
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.001	1.02
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.001	1.02
10237	Ethylbenzene	100-41-4	N.D.		0.001	1.02
10237	2-Hexanone	591-78-6	N.D.		0.004	1.02
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.004	1.02
10237	Methylene Chloride	75-09-2	0.007		0.002	1.02
10237	Styrene	100-42-5	N.D.		0.001	1.02
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.001	1.02
10237	Tetrachloroethene	127-18-4	N.D.		0.001	1.02
10237	Toluene	108-88-3	N.D.		0.001	1.02
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.001	1.02
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.001	1.02
10237	Trichloroethene	79-01-6	N.D.		0.001	1.02
10237	Vinyl Chloride	75-01-4	N.D.		0.001	1.02
10237	Xylene (Total)	1330-20-7	N.D.		0.001	1.02
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	N.D.		0.004	1
07804	Acenaphthylene	208-96-8	0.004	J	0.004	1
07804	Anthracene	120-12-7	N.D.		0.004	1
07804	Benzo(a)anthracene	56-55-3	0.014	J	0.004	1
07804	Benzo(a)pyrene	50-32-8	0.021		0.004	1
07804	Benzo(b)fluoranthene	205-99-2	0.028		0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	0.018	J	0.004	1
07804	Benzo(k)fluoranthene	207-08-9	0.016	J	0.004	1
07804	Chrysene	218-01-9	0.019	J	0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	0.004	J	0.004	1
07804	Fluoranthene	206-44-0	0.036		0.004	1
07804	Fluorene	86-73-7	N.D.		0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.014	J	0.004	1
07804	Naphthalene	91-20-3	N.D.		0.004	1
07804	Phenanthrene	85-01-8	0.014	J	0.004	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B10 8' Grab Soil
Robinson Terminal South

LL Sample # SW 7216518
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 14:40 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RB102

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	0.033	0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	N.D.	0.3	27.03
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	N.D.	4.7	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	7.61	0.803	1
06946	Barium	7440-39-3	77.8	0.0379	1
06949	Cadmium	7440-43-9	0.951	0.0872	1
06951	Chromium	7440-47-3	21.1	0.184	1
06955	Lead	7439-92-1	47.1	0.574	1
06936	Selenium	7782-49-2	N.D.	0.918	1
06966	Silver	7440-22-4	0.422 J	0.195	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0449 J	0.0112	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	15.4	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132721AA	09/30/2013 02:12	Andrea E Lando	1.02
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:39	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327132550	09/28/2013 01:39	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:26	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLA026	10/01/2013 06:03	Holly Berry	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLA026	09/29/2013 07:20	Kelli M Barto	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13271A31A	09/30/2013 02:39	Laura M Krieger	27.03
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327132550	09/28/2013 01:25	Scott W Freisher	n.a.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B10 8' Grab Soil
Robinson Terminal South

LL Sample # SW 7216518
LL Group # 1422243
Account # 05097

Project Name: Robinson Terminal South

Collected: 09/26/2013 14:40 by JH

Submitted: 09/27/2013 16:35
Reported: 10/02/2013 13:56

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

RB102

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710009A	09/30/2013	13:32	Glorines Suarez-Rivera	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710009A	09/29/2013	07:20	Kelli M Barto	1
06935	Arsenic	SW-846 6010B	1	132715708002	09/30/2013	09:01	Eric L Eby	1
06946	Barium	SW-846 6010B	1	132715708002	09/30/2013	09:01	Eric L Eby	1
06949	Cadmium	SW-846 6010B	1	132715708002	09/30/2013	09:01	Eric L Eby	1
06951	Chromium	SW-846 6010B	1	132715708002	09/30/2013	09:01	Eric L Eby	1
06955	Lead	SW-846 6010B	1	132715708002	09/30/2013	09:01	Eric L Eby	1
06936	Selenium	SW-846 6010B	1	132715708002	09/30/2013	09:01	Eric L Eby	1
06966	Silver	SW-846 6010B	1	132715708002	09/30/2013	09:01	Eric L Eby	1
00159	Mercury	SW-846 7471A	1	132715711002	09/30/2013	06:19	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708002	09/29/2013	20:11	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711002	09/29/2013	22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820004B	09/30/2013	22:18	Scott W Freisher	1

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422243
Reported: 10/02/13 at 01:56 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: B132721AA	Sample number(s): 7216499-7216507,7216509,7216511-7216518							
Acetone	N.D.	0.007	mg/kg	105	105	23-171	0	30
Benzene	N.D.	0.0005	mg/kg	95	89	80-120	7	30
Bromodichloromethane	N.D.	0.001	mg/kg	91	87	75-120	5	30
Bromoform	N.D.	0.001	mg/kg	98	93	70-120	5	30
Bromomethane	N.D.	0.002	mg/kg	98	90	32-162	8	30
2-Butanone	N.D.	0.004	mg/kg	93	90	38-146	3	30
Carbon Disulfide	N.D.	0.001	mg/kg	100	92	63-128	8	30
Carbon Tetrachloride	N.D.	0.001	mg/kg	98	91	69-122	8	30
Chlorobenzene	N.D.	0.001	mg/kg	92	86	80-120	7	30
Chloroethane	N.D.	0.002	mg/kg	97	90	17-171	8	30
Chloroform	N.D.	0.001	mg/kg	97	90	80-120	7	30
Chloromethane	N.D.	0.002	mg/kg	98	93	56-120	5	30
Dibromochloromethane	N.D.	0.001	mg/kg	95	88	77-120	7	30
1,1-Dichloroethane	N.D.	0.001	mg/kg	94	87	80-120	8	30
1,2-Dichloroethane	N.D.	0.001	mg/kg	95	89	72-126	6	30
1,1-Dichloroethene	N.D.	0.001	mg/kg	100	91	73-129	10	30
cis-1,2-Dichloroethene	N.D.	0.001	mg/kg	97	91	80-120	6	30
trans-1,2-Dichloroethene	N.D.	0.001	mg/kg	103	95	79-120	8	30
1,2-Dichloropropane	N.D.	0.001	mg/kg	94	91	77-120	4	30
cis-1,3-Dichloropropene	N.D.	0.001	mg/kg	93	87	74-120	7	30
trans-1,3-Dichloropropene	N.D.	0.001	mg/kg	88	80	77-120	10	30
Ethylbenzene	N.D.	0.001	mg/kg	89	84	80-120	5	30
2-Hexanone	N.D.	0.003	mg/kg	72	69	40-129	5	30
4-Methyl-2-pentanone	N.D.	0.003	mg/kg	75	71	52-125	6	30
Methylene Chloride	N.D.	0.002	mg/kg	102	94	80-124	7	30
Styrene	N.D.	0.001	mg/kg	90	85	76-120	6	30
1,1,2,2-Tetrachloroethane	N.D.	0.001	mg/kg	89	83	71-123	7	30
Tetrachloroethene	N.D.	0.001	mg/kg	94	89	78-126	6	30
Toluene	N.D.	0.001	mg/kg	92	86	80-120	7	30
1,1,1-Trichloroethane	N.D.	0.001	mg/kg	84	78	71-125	7	30
1,1,2-Trichloroethane	N.D.	0.001	mg/kg	92	85	80-120	8	30
Trichloroethene	N.D.	0.001	mg/kg	98	89	80-120	9	30
Vinyl Chloride	N.D.	0.001	mg/kg	102	94	53-120	8	30
Xylene (Total)	N.D.	0.001	mg/kg	90	84	80-120	7	30
Batch number: Q132721AA	Sample number(s): 7216508,7216510							
Acetone	N.D.	0.35	mg/kg	71	77	23-171	7	30
Benzene	N.D.	0.025	mg/kg	91	91	80-120	0	30
Bromodichloromethane	N.D.	0.050	mg/kg	84	80	75-120	5	30
Bromoform	N.D.	0.050	mg/kg	92	91	70-120	1	30
Bromomethane	N.D.	0.10	mg/kg	114	111	32-162	3	30
2-Butanone	N.D.	0.20	mg/kg	67	73	38-146	8	30
Carbon Disulfide	N.D.	0.050	mg/kg	88	90	63-128	2	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422243
Reported: 10/02/13 at 01:56 PM

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Carbon Tetrachloride	N.D.	0.050	mg/kg	84	84	69-122	1	30
Chlorobenzene	N.D.	0.050	mg/kg	96	93	80-120	3	30
Chloroethane	N.D.	0.10	mg/kg	89	89	17-171	0	30
Chloroform	N.D.	0.050	mg/kg	85	86	80-120	2	30
Chloromethane	N.D.	0.10	mg/kg	81	89	56-120	9	30
Dibromochloromethane	N.D.	0.050	mg/kg	87	85	77-120	3	30
1,1-Dichloroethane	N.D.	0.050	mg/kg	83	87	80-120	5	30
1,2-Dichloroethane	N.D.	0.050	mg/kg	78	80	72-126	3	30
1,1-Dichloroethene	N.D.	0.050	mg/kg	88	90	73-129	2	30
cis-1,2-Dichloroethene	N.D.	0.050	mg/kg	88	92	80-120	4	30
trans-1,2-Dichloroethene	N.D.	0.050	mg/kg	92	93	79-120	1	30
1,2-Dichloropropane	N.D.	0.050	mg/kg	97	92	77-120	5	30
cis-1,3-Dichloropropene	N.D.	0.050	mg/kg	93	90	74-120	3	30
trans-1,3-Dichloropropene	N.D.	0.050	mg/kg	87	85	77-120	2	30
Ethylbenzene	N.D.	0.050	mg/kg	90	89	80-120	1	30
2-Hexanone	N.D.	0.15	mg/kg	68	67	40-129	2	30
4-Methyl-2-pentanone	N.D.	0.15	mg/kg	75	72	52-125	3	30
Methylene Chloride	N.D.	0.10	mg/kg	91	95	80-124	5	30
Styrene	N.D.	0.050	mg/kg	89	86	76-120	3	30
1,1,2,2-Tetrachloroethane	N.D.	0.050	mg/kg	90	89	71-123	0	30
Tetrachloroethene	N.D.	0.050	mg/kg	100	95	78-126	5	30
Toluene	N.D.	0.050	mg/kg	96	94	80-120	2	30
1,1,1-Trichloroethane	N.D.	0.050	mg/kg	88	91	71-125	3	30
1,1,2-Trichloroethane	N.D.	0.050	mg/kg	95	91	80-120	4	30
Trichloroethene	N.D.	0.050	mg/kg	95	90	80-120	5	30
Vinyl Chloride	N.D.	0.050	mg/kg	80	85	53-120	6	30
Xylene (Total)	N.D.	0.050	mg/kg	94	90	80-120	4	30

Batch number: T132731AA Sample number(s): 7216489-7216498

Acetone	N.D.	6.	ug/l	109	38-157
Benzene	N.D.	0.5	ug/l	99	78-120
Bromodichloromethane	N.D.	1.	ug/l	79	73-120
Bromoform	N.D.	1.	ug/l	79	61-120
Bromomethane	N.D.	1.	ug/l	93	51-120
2-Butanone	N.D.	3.	ug/l	91	58-126
Carbon Disulfide	N.D.	1.	ug/l	89	58-126
Carbon Tetrachloride	N.D.	1.	ug/l	99	74-130
Chlorobenzene	N.D.	0.8	ug/l	102	80-120
Chloroethane	N.D.	1.	ug/l	90	45-120
Chloroform	N.D.	0.8	ug/l	101	77-122
Chloromethane	N.D.	1.	ug/l	91	55-120
Dibromochloromethane	N.D.	1.	ug/l	79	72-120
1,1-Dichloroethane	N.D.	1.	ug/l	102	80-120
1,2-Dichloroethane	N.D.	1.	ug/l	99	71-130
1,1-Dichloroethene	N.D.	0.8	ug/l	108	76-124
cis-1,2-Dichloroethene	N.D.	0.8	ug/l	105	80-120
trans-1,2-Dichloroethene	N.D.	0.8	ug/l	108	80-120
1,2-Dichloropropane	N.D.	1.	ug/l	101	80-120
cis-1,3-Dichloropropene	N.D.	1.	ug/l	88	80-120
trans-1,3-Dichloropropene	N.D.	1.	ug/l	78	69-120
Ethylbenzene	N.D.	0.8	ug/l	97	79-120
2-Hexanone	N.D.	3.	ug/l	81	59-125
4-Methyl-2-pentanone	N.D.	3.	ug/l	77	59-120
Methylene Chloride	N.D.	2.	ug/l	108	80-120
Styrene	N.D.	1.	ug/l	98	80-120
1,1,2,2-Tetrachloroethane	N.D.	1.	ug/l	93	70-120

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service — Group Number: 1422243

Reported: 10/02/13 at 01:56 PM

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Tetrachloroethene	N.D.	0.8	ug/l	106		80-120		
Toluene	N.D.	0.7	ug/l	97		80-120		
1,1,1-Trichloroethane	N.D.	0.8	ug/l	100		66-126		
1,1,2-Trichloroethane	N.D.	0.8	ug/l	103		80-120		
Trichloroethene	N.D.	1.	ug/l	104		80-120		
Vinyl Chloride	N.D.	1.	ug/l	95		63-120		
Xylene (Total)	N.D.	0.8	ug/l	98		80-120		
Batch number: 13271SLA026	Sample number(s): 7216499-7216518							
Acenaphthene	N.D.	0.003	mg/kg	94		81-111		
Acenaphthylene	N.D.	0.003	mg/kg	105		82-121		
Anthracene	N.D.	0.003	mg/kg	103		73-121		
Benzo(a)anthracene	N.D.	0.003	mg/kg	104		79-115		
Benzo(a)pyrene	N.D.	0.003	mg/kg	105		82-117		
Benzo(b)fluoranthene	N.D.	0.003	mg/kg	102		79-130		
Benzo(g,h,i)perylene	N.D.	0.003	mg/kg	98		69-118		
Benzo(k)fluoranthene	N.D.	0.003	mg/kg	99		78-119		
Chrysene	N.D.	0.003	mg/kg	93		75-114		
Dibenz(a,h)anthracene	N.D.	0.003	mg/kg	102		79-118		
Fluoranthene	N.D.	0.003	mg/kg	102		78-116		
Fluorene	N.D.	0.003	mg/kg	98		84-117		
Indeno(1,2,3-cd)pyrene	N.D.	0.003	mg/kg	102		78-122		
Naphthalene	N.D.	0.003	mg/kg	92		80-109		
Phenanthrene	N.D.	0.003	mg/kg	99		70-116		
Pyrene	N.D.	0.003	mg/kg	98		84-113		
Batch number: 13271WAJ026	Sample number(s): 7216489-7216498							
Acenaphthene	N.D.	0.1	ug/l	91	92	69-122	1	30
Acenaphthylene	N.D.	0.1	ug/l	100	101	84-125	1	30
Anthracene	N.D.	0.1	ug/l	97	98	82-116	1	30
Benzo(a)anthracene	N.D.	0.1	ug/l	105	105	84-121	0	30
Benzo(a)pyrene	N.D.	0.1	ug/l	99	100	82-116	1	30
Benzo(b)fluoranthene	N.D.	0.1	ug/l	98	99	82-121	1	30
Benzo(g,h,i)perylene	N.D.	0.1	ug/l	99	102	81-121	3	30
Benzo(k)fluoranthene	N.D.	0.1	ug/l	95	97	81-122	2	30
Chrysene	N.D.	0.1	ug/l	100	99	81-120	1	30
Dibenz(a,h)anthracene	N.D.	0.1	ug/l	99	102	83-124	4	30
Fluoranthene	N.D.	0.1	ug/l	100	100	71-129	0	30
Fluorene	N.D.	0.1	ug/l	92	93	71-126	1	30
Indeno(1,2,3-cd)pyrene	N.D.	0.1	ug/l	100	101	83-121	1	30
Naphthalene	N.D.	0.1	ug/l	93	93	75-108	0	30
Phenanthrene	N.D.	0.1	ug/l	94	95	68-127	1	30
Pyrene	N.D.	0.1	ug/l	98	98	81-112	0	30
Batch number: 13271A31A	Sample number(s): 7216499-7216518							
TPH-GRO soil C6-C10	N.D.	0.2	mg/kg	83	79	67-120	5	30
Batch number: 13273A53A	Sample number(s): 7216489-7216498							
TPH-GRO water C6-C10	N.D.	20.	ug/l	102	100	75-135	1	30
Batch number: 132710009A	Sample number(s): 7216499-7216518							
TPH-DRO soil C10-C28	N.D.	4.0	mg/kg	105		76-120		
Batch number: 132710028A	Sample number(s): 7216489-7216498							
DRO C10-C28	N.D.	45.	ug/l	90	96	56-122	7	20

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service — Group Number: 1422243

Reported: 10/02/13 at 01:56 PM

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 132711848001	Sample number(s): 7216489-7216498							
Arsenic	N.D.	0.0068	mg/l	95		90-113		
Barium	N.D.	0.00033	mg/l	101		90-110		
Cadmium	N.D.	0.00076	mg/l	98		90-112		
Chromium	N.D.	0.0016	mg/l	99		90-110		
Lead	N.D.	0.0047	mg/l	96		88-110		
Selenium	N.D.	0.0084	mg/l	93		80-120		
Silver	N.D.	0.0021	mg/l	111		80-120		
Batch number: 132715708001	Sample number(s): 7216499-7216512							
Arsenic	N.D.	0.700	mg/kg	98		80-120		
Barium	N.D.	0.0330	mg/kg	99		80-120		
Cadmium	N.D.	0.0760	mg/kg	98		80-120		
Chromium	N.D.	0.160	mg/kg	102		80-120		
Lead	N.D.	0.500	mg/kg	97		80-120		
Selenium	N.D.	0.800	mg/kg	101		80-120		
Silver	N.D.	0.170	mg/kg	110		80-120		
Batch number: 132715708002	Sample number(s): 7216513-7216518							
Arsenic	N.D.	0.700	mg/kg	97		80-120		
Barium	N.D.	0.0330	mg/kg	98		80-120		
Cadmium	N.D.	0.0760	mg/kg	98		80-120		
Chromium	N.D.	0.160	mg/kg	101		80-120		
Lead	N.D.	0.500	mg/kg	101		80-120		
Selenium	0.801 J	0.800	mg/kg	106		80-120		
Silver	N.D.	0.170	mg/kg	99		80-120		
Batch number: 132715711001	Sample number(s): 7216499-7216512							
Mercury	N.D.	0.0100	mg/kg	112		80-120		
Batch number: 132715711002	Sample number(s): 7216513-7216518							
Mercury	N.D.	0.0100	mg/kg	110		80-120		
Batch number: 132735713001	Sample number(s): 7216489-7216498							
Mercury	N.D.	0.00006	mg/l	95		80-120		
		0						
Batch number: 13273820004A	Sample number(s): 7216499-7216513							
Moisture				100		99-101		
Batch number: 13273820004B	Sample number(s): 7216514-7216518							
Moisture				100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: T132731AA	Sample number(s): 7216489-7216498 UNSPK: P216766								
Acetone	96	96	35-144	0	30				
Benzene	104	106	72-134	2	30				

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422243
Reported: 10/02/13 at 01:56 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Bromodichloromethane	81	86	38-137	6	30				
Bromoform	80	81	48-118	2	30				
Bromomethane	96	95	47-129	2	30				
2-Butanone	92	90	53-124	2	30				
Carbon Disulfide	94	97	53-149	3	30				
Carbon Tetrachloride	107	109	72-135	2	30				
Chlorobenzene	107	108	87-124	1	30				
Chloroethane	95	91	51-145	5	30				
Chloroform	105	107	81-134	2	30				
Chloromethane	94	92	50-131	3	30				
Dibromochloromethane	79	83	74-116	5	30				
1,1-Dichloroethane	105	107	84-129	2	30				
1,2-Dichloroethane	101	100	68-131	0	30				
1,1-Dichloroethene	112	114	75-155	1	30				
cis-1,2-Dichloroethene	107	109	80-141	1	30				
trans-1,2-Dichloroethene	110	112	81-142	2	30				
1,2-Dichloropropane	104	108	83-124	4	30				
cis-1,3-Dichloropropene	91	92	70-116	2	30				
trans-1,3-Dichloropropene	78	82	74-119	5	30				
Ethylbenzene	104	105	71-134	0	30				
2-Hexanone	87	86	55-127	1	30				
4-Methyl-2-pentanone	84	84	63-123	1	30				
Methylene Chloride	106	109	78-133	3	30				
Styrene	100	103	78-125	3	30				
1,1,2,2-Tetrachloroethane	97	94	72-128	3	30				
Tetrachloroethene	108	113	80-128	4	30				
Toluene	104	105	80-125	1	30				
1,1,1-Trichloroethane	106	111	69-140	4	30				
1,1,2-Trichloroethane	104	106	71-141	2	30				
Trichloroethene	111	111	88-133	1	30				
Vinyl Chloride	101	99	66-133	2	30				
Xylene (Total)	103	103	79-125	0	30				
Batch number: 13271SLA026	Sample number(s): 7216499-7216518 UNSPK: 7216499								
Acenaphthene	99	100	72-110	1	30				
Acenaphthylene	108	112	73-125	4	30				
Anthracene	104	111	58-129	6	30				
Benzo(a)anthracene	99	114*	77-105	14	30				
Benzo(a)pyrene	102	118	57-126	14	30				
Benzo(b)fluoranthene	109	122	73-132	11	30				
Benzo(g,h,i)perylene	97	113	59-127	15	30				
Benzo(k)fluoranthene	93	105	75-124	11	30				
Chrysene	91	103*	74-100	13	30				
Dibenz(a,h)anthracene	101	112	65-125	10	30				
Fluoranthene	102	120*	73-112	15	30				
Fluorene	99	105	68-116	6	30				
Indeno(1,2,3-cd)pyrene	99	114	61-126	13	30				
Naphthalene	96	98	49-133	2	30				
Phenanthrene	101	114*	86-111	12	30				
Pyrene	101	119*	82-112	15	30				
Batch number: 132710009A	Sample number(s): 7216499-7216518 UNSPK: 7216499 BKG: 7216499								

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422243
Reported: 10/02/13 at 01:56 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
TPH-DRO soil C10-C28	93		30-159			N.D.	N.D.	0 (1)	20
Batch number: 132711848001	Sample number(s): 7216489-7216498 UNSPK: 7216490 BKG: 7216490								
Arsenic	102	101	81-123	1	20	0.0134 J	0.0145 J	8 (1)	20
Barium	105	106	78-118	1	20	0.275	0.272	1	20
Cadmium	100	99	83-116	1	20	0.0027 J	0.0029 J	6 (1)	20
Chromium	101	102	76-120	1	20	0.0198	0.0179	10 (1)	20
Lead	108	105	75-125	1	20	0.516	0.518	0	20
Selenium	99	94	75-125	5	20	N.D.	N.D.	0 (1)	20
Silver	116	116	75-125	0	20	N.D.	N.D.	0 (1)	20
Batch number: 132715708001	Sample number(s): 7216499-7216512 UNSPK: P216882 BKG: P216882								
Arsenic	87	93	75-125	5	20	4.51	4.28	5 (1)	20
Barium	107	111	75-125	2	20	87.0	107	21*	20
Cadmium	91	93	75-125	2	20	0.109 J	N.D.	200* (1)	20
Chromium	120	114	75-125	3	20	15.6	15.0	4	20
Lead	-2476 (2)	-1526 (2)	75-125	114*	20	412	27.7	175*	20
Selenium	94	94	75-125	0	20	N.D.	N.D.	0 (1)	20
Silver	111	112	75-125	1	20	N.D.	N.D.	0 (1)	20
Batch number: 132715708002	Sample number(s): 7216513-7216518 UNSPK: 7216514 BKG: 7216514								
Arsenic	100	99	75-125	0	20	2.31	2.11	9 (1)	20
Barium	101	102	75-125	0	20	26.5	25.0	6	20
Cadmium	96	96	75-125	0	20	0.157 J	0.147 J	7 (1)	20
Chromium	109	109	75-125	0	20	4.99	5.20	4 (1)	20
Lead	100	101	75-125	0	20	2.16	2.39	11 (1)	20
Selenium	103	103	75-125	0	20	N.D.	N.D.	0 (1)	20
Silver	96	94	75-125	2	20	0.180 J	N.D.	200* (1)	20
Batch number: 132715711001	Sample number(s): 7216499-7216512 UNSPK: P216882 BKG: P216882								
Mercury	113	105	80-120	7	20	0.0570 J	0.0728 J	24* (1)	20
Batch number: 132715711002	Sample number(s): 7216513-7216518 UNSPK: 7216514 BKG: 7216514								
Mercury	102	103	80-120	0	20	0.0115 J	N.D.	200* (1)	20
Batch number: 132735713001	Sample number(s): 7216489-7216498 UNSPK: 7216492 BKG: 7216492								
Mercury	30 (2)	56 (2)	80-120	4	20	0.0060	0.0057	5	20
Batch number: 13273820004A	Sample number(s): 7216499-7216513 BKG: 7216513								
Moisture						17.2	14.5	17*	5
Batch number: 13273820004B	Sample number(s): 7216514-7216518 BKG: 7216514								
Moisture						16.7	15.8	6*	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422243
Reported: 10/02/13 at 01:56 PM

Surrogate Quality Control

Analysis Name: PPL/TCL VOCs - soil
Batch number: B132721AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7216499	101	101	99	92
7216500	99	93	107	90
7216501	104	104	99	93
7216502	102	99	100	93
7216503	101	100	101	91
7216504	101	96	105	83
7216505	103	101	97	97
7216506	101	100	100	93
7216507	101	97	112	83
7216509	102	100	101	95
7216511	101	97	105	89
7216512	101	99	102	90
7216513	100	97	101	96
7216514	100	96	98	92
7216515	104	101	108	82
7216516	103	96	96	94
7216517	102	97	100	92
7216518	102	99	104	85
Blank	98	99	95	95
LCS	100	102	99	98
LCSD	99	102	99	96
Limits:	50-141	54-135	52-141	50-131

Analysis Name: PPL/TCL VOCs - soil
Batch number: Q132721AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7216508	76	81	87	92
7216510	77	84	82	78
Blank	93	101	96	85
LCS	87	94	94	85
LCSD	92	97	95	89
Limits:	50-141	54-135	52-141	50-131

Analysis Name: PPL/TCL VOCs - water
Batch number: T132731AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7216489	99	100	99	99
7216490	97	99	101	100
7216491	99	98	98	100
7216492	98	97	100	107
7216493	96	97	100	103
7216494	97	97	98	102
7216495	98	99	99	101
7216496	97	98	100	98
7216497	98	98	99	101
7216498	99	98	99	101
Blank	97	100	101	101

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422243
Reported: 10/02/13 at 01:56 PM

Surrogate Quality Control

LCS	98	100	100	102
MS	98	98	99	103
MSD	99	101	101	103
Limits:	80-116	77-113	80-113	78-113

Analysis Name: PAHs in Soil by GC/MS
Batch number: 13271SLA026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7216499	92	91	103
7216500	92	92	106
7216501	91	92	105
7216502	86	91	101
7216503	91	94	108
7216504	85	87	101
7216505	90	94	108
7216506	75	75	86
7216507	86	89	101
7216508	87	86	102
7216509	79	78	100
7216510	86	92	107
7216511	84	82	105
7216512	56	57	64
7216513	92	93	104
7216514	87	90	103
7216515	88	91	102
7216516	88	89	103
7216517	82	86	102
7216518	87	87	98
Blank	92	94	107
LCS	88	90	100
MS	93	93	102
MSD	94	94	105
Limits:	51-120	56-126	45-158

Analysis Name: PAHs in Water by GC/MS
Batch number: 13271WAJ026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7216489	59*	61*	43*
7216490	81	80	62
7216491	79	75	57
7216492	56*	47*	28*
7216493	80	78	59
7216494	81	77	64
7216495	84	85	83
7216496	83	84	72
7216497	85	85	74
7216498	80	82	84
Blank	84	85	98
LCS	85	86	94
LCSD	84	87	94
Limits:	60-123	63-121	47-146

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422243
Reported: 10/02/13 at 01:56 PM

Surrogate Quality Control

Analysis Name: TPH-GRO soil C6-C10
Batch number: 13271A31A

	Trifluorotoluene-F
7216499	90
7216500	85
7216501	88
7216502	88
7216503	88
7216504	88
7216505	95
7216506	87
7216507	92
7216508	177*
7216509	93
7216510	104
7216511	89
7216512	88
7216513	89
7216514	85
7216515	90
7216516	82
7216517	89
7216518	90
Blank	92
LCS	88
LCSD	86
Limits:	50-142

Analysis Name: TPH-GRO water C6-C10
Batch number: 13273A53A

	Trifluorotoluene-F
7216489	72
7216490	71
7216491	71
7216492	82
7216493	72
7216494	72
7216495	72
7216496	72
7216497	71
7216498	70
Blank	70
LCS	78
LCSD	78
Limits:	63-135

Analysis Name: TPH-DRO soil C10-C28
Batch number: 132710009A

	Orthoterphenyl
7216499	97

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422243
Reported: 10/02/13 at 01:56 PM

Surrogate Quality Control

7216500	104
7216501	111
7216502	103
7216503	102
7216504	101
7216505	102
7216506	111
7216507	115
7216508	107
7216509	113
7216510	105
7216511	106
7216512	102
7216513	103
7216514	100
7216515	101
7216516	111
7216517	105
7216518	102
Blank	106
DUP	104
LCS	107
MS	106
Limits:	52-136

Analysis Name: TPH-DRO Water C20-C28
Batch number: 132710028A

	Orthoterphenyl
7216489	52
7216490	96
7216491	75
7216492	56
7216493	84
7216494	74
7216495	89
7216496	73
7216497	99
7216498	94
Blank	102
LCS	100
LCSD	105
Limits:	50-150

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories

Acct. # 5097 For Eurofins Lancaster Laboratories use only Group # 1422243 Sample # 7216489-518
Instructions on reverse side correspond with circled numbers.

COC # 334141

1 Client Information

Client: ECS Mid-Atlantic
Acct. #:
Project Name/#: Robinson Terminal South
PWSID #:
Project Manager: Mike Johnson
P.O. #: 21983
Sampler: John Horner
Quote #: 210052-A
Name of state where samples were collected:

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

2 Sample Identification | **3 Collected** Date, Time | Grab | Composite | **4 Matrix** Soil | Sediment | Water: Potable, Ground, NPDES, Surface | Other: | Total # of Containers | **5 Analysis Requested** (Preservation Codes) TPH DRO | TPH GRO | VOCs | SVOCs (8270SIM) | RCRA Metals | **6 Remarks**

Sample Identification	Date	Time	Grab	Composite	Soil	Water	Other	Total # of Containers	TPH DRO	TPH GRO	VOCs	SVOCs (8270SIM)	RCRA Metals	Remarks
BW-1	9/26	0825	X			X			X	X	X	X	X	
BW-2	9/26	0905	X			X			X	X	X	X	X	
BW-3	9/26	0930	X			X			X	X	X	X	X	
BW-4	9/26	1005	X			X			X	X	X	X	X	
BW-5	9/26	1120	X			X			X	X	X	X	X	
BW-6	9/26	1245	X			X			X	X	X	X	X	
BW-7	9/26	1050	X			X			X	X	X	X	X	
BW-8	9/26	1310	X			X			X	X	X	X	X	
BW-9	9/26	1355	X			X			X	X	X	X	X	
BW-10	9/26	1445	X			X			X	X	X	X	X	

7 Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: 2-day turnaround

E-mail address: mjohnson@ecslimited.com

8 Data Package Options (circle if required)
Type I (Validation/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) TX TRRP-13
Type IV (CLP SOW) MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
John Horner			[signature]	9/27	0800
[signature]	9/27	1000	to courier		
			[signature]	9/27/13	1635

9

EDD Required? Yes No
If yes, format:
Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx ____ Other courier

Temperature upon receipt 2.3-14.0 °C

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only
Acct. # 5097 Group # 1422243 Sample # 7216489-518
Instructions on reverse side correspond with circled numbers.

COC # 335798

1 Client Information

Client: ECS Mid-Atlantic
Acct. #:
Project Name/#: Robinson Terminal South
PWSID #:
Project Manager: Mike Johnson
P.O. #: 21983
Sampler: John Horner
Quote #: 210052-A
Name of state where samples were collected: Virginia

4 Matrix: Sediment ☐ Soil ☒ Water: Ground ☐ Surface ☐ Potable ☐ NPDES ☐ Other: ____

5 Analysis Requested — Preservation Codes

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

2 Sample Identification	Collected Date	Collected Time	3 Grab	Composite	Total # of Containers	TPH DRO	TPH GRO	VOCs	PAHs (8270 SIM)	RCRA Metals	6 Remarks
B1 5'	9/26	0806	X	X	4	X	X	X	X	X	
B1 10'	9/26	0815	X	X	4	X	X	X	X	X	
B2 4'	9/26	0845	X		4	X	X	X	X	X	
B2 9'	9/26	1515	X		4	X	X	X	X	X	
B3 5'	9/26	0820	X		4	X	X	X	X	X	
B3 9'	9/26	0826	X		4	X	X	X	X	X	
B3 10'	9/26	0955	X		4	X	X	X	X	X	
B4 14'	9/26	1000	X		4	X	X	X	X	X	
B5 5'	9/26	1110	X		4	X	X	X	X	X	
B5 8'	9/26	1115	X		4	X	X	X	X	X	

7 Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: 2-day turnaround

E-mail address: mjohnson@ecslimited.com

8 Data Package Options (circle if required)
Type I (Validation/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) TX TRRP-13
Type IV (CLP SOW) MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
John Horner			[signature]	9/27	0800
[signature]	9/27	1000	to courier		
			[signature]	9/27/13	1635

9

EDD Required? Yes No
If yes, format:
Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx ____ Other Courier

Temperature upon receipt 0.9-2.2 °C

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 5097 For Eurofins Lancaster Laboratories Environmental use only Group # 1422243 Sample # 7216489-518
Instructions on reverse side correspond with circled numbers.

COC # 335799

1 Client Information

Client: ECS Mid-Atlantic
Acct. #:
Project Name/#: Robinson Terminal South
PWSID #:
Project Manager: Mike Johnson
P.O. #: 21983
Sampler: John Horner
Quote #: 210052-A
Name of state where samples were collected:

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

2 Sample Identification | **3 Collected** | **4 Matrix** | **5 Analysis Requested** (Preservation Codes) | **6 Remarks**

Sample Identification	Date	Time	Grab	Composite	Soil	Sediment	Water: Potable	Water: Ground	Water: NPDES	Water: Surface	Other:	Total # of Containers	TPH DRO	TPH GRO	VOCs	PAHs (8270 SIM)	RCRA Metals						Remarks
B6 5'	9/26	1230	X		X							4	X	X	X	X	X						
B6 8'	9/26	1235	X		X							4	X	X	X	X	X						
B7 5'	9/26	1035	X		X							4	X	X	X	X	X						
B7 8'	9/26	1039	X		X							4	X	X	X	X	X						
B8 5'	9/26	1255	X		X							4	X	X	X	X	X						
B8 8'	9/26	1300	X		X							4	X	X	X	X	X						
B9 4'	9/26	1332	X		X							4	X	X	X	X	X						
B9 7'	9/26	1335	X		X							4	X	X	X	X	X						
B10 4'	9/26	1435	X		X							4	X	X	X	X	X						
B10 8'	9/26	1440	X		X							4	X	X	X	X	X						

7 Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: 2-day turnaround

E-mail address: mjohnson@ecslimited.com

8 Data Package Options (circle if required)
Type I (Validation/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) TX TRRP-13
Type IV (CLP SOW) MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
John Horner			[signature]	9/27	0800
[signature]	9/27	1000	to courier		
			[signature]	9/27/13	1635

EDD Required? Yes No
If yes, format:
Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS FedEx Other Courier
Temperature upon receipt 0.9-2.2°C

9

eurofins | Lancaster Laboratories Environmental

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	**B**	Value is <CRDL, but ≥IDL
B	Analyte was also detected in the blank	**E**	Estimated due to interference
C	Pesticide result confirmed by GC/MS	**M**	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	**N**	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	**S**	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	**U**	Compound was not detected
P	Concentration difference between primary and confirmation columns >25%	**W**	Post digestion spike out of control limits
U	Compound was not detected	*****	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	**+**	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

October 02, 2013

Project: 21983

Submittal Date: 09/28/2013
Group Number: 1422318
PO Number: 21983
State of Sample Origin: VA

Client Sample Description	Lancaster Labs (LL) #
MBW-1 Grab Groundwater	7216880
MB1-3-4 Grab Soil	7216881
MB1-7-8 Grab Soil	7216882
MB2-3-4 Grab Soil	7216883
MB2-7-8 Grab Soil	7216884
MB3-4-5 Grab Soil	7216885
MB3-7-8 Grab Soil	7216886
FB3-2-3 Grab Soil	7216887
FB2-2-3 Grab Soil	7216888
FB1-3-4 Grab Soil	7216889
B11-7-8 Grab Soil	7216890
B12-3-4 Grab Soil	7216891
B13-4-5 Grab Soil	7216892
B14-6-7 Grab Soil	7216893
B15-7-8 Grab Soil	7216894
B16-7-8 Grab Soil	7216895
B17-8-9 Grab Soil	7216896

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Engineering Consulting Service Attn: Mike Johnson

Respectfully Submitted,

Nicole L. Maljovec
Principal Specialist Group Leader

(717) 556-7259

Sample Description: MBW-1 Grab Groundwater
21983

LL Sample # WW 7216880
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 13:10 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MBW-1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	N.D.	6	1
10335	Benzene	71-43-2	N.D.	0.5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	1
10335	Bromoform	75-25-2	N.D.	1	1
10335	Bromomethane	74-83-9	N.D.	1	1
10335	2-Butanone	78-93-3	N.D.	3	1
10335	Carbon Disulfide	75-15-0	N.D.	1	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	1
10335	Chloroethane	75-00-3	N.D.	1	1
10335	Chloroform	67-66-3	N.D.	0.8	1
10335	Chloromethane	74-87-3	N.D.	1	1
10335	Dibromochloromethane	124-48-1	N.D.	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	1	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.8	1
10335	2-Hexanone	591-78-6	N.D.	3	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	1
10335	Methylene Chloride	75-09-2	N.D.	2	1
10335	Styrene	100-42-5	N.D.	1	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	1
10335	Toluene	108-88-3	N.D.	0.7	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	1
10335	Trichloroethene	79-01-6	N.D.	1	1
10335	Vinyl Chloride	75-01-4	N.D.	1	1
10335	Xylene (Total)	1330-20-7	N.D.	0.8	1
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	
07805	Acenaphthene	83-32-9	12	0.1	1
07805	Acenaphthylene	208-96-8	2	0.1	1
07805	Anthracene	120-12-7	26	0.1	1
07805	Benzo(a)anthracene	56-55-3	53	0.1	1
07805	Benzo(a)pyrene	50-32-8	47	0.1	1
07805	Benzo(b)fluoranthene	205-99-2	66	0.1	1
07805	Benzo(g,h,i)perylene	191-24-2	34	0.1	1
07805	Benzo(k)fluoranthene	207-08-9	25	0.1	1
07805	Chrysene	218-01-9	52	0.1	1
07805	Dibenz(a,h)anthracene	53-70-3	9	0.1	1
07805	Fluoranthene	206-44-0	120	0.1	1
07805	Fluorene	86-73-7	11	0.1	1
07805	Indeno(1,2,3-cd)pyrene	193-39-5	31	0.1	1
07805	Naphthalene	91-20-3	12	0.1	1
07805	Phenanthrene	85-01-8	88	0.1	1

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: MBW-1 Grab Groundwater 21983

LL Sample # WW 7216880
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 13:10 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MBW-1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	
07805	Pyrene	129-00-0	98	0.1	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01635	TPH-GRO water C6-C10	n.a.	N.D.	20	1
GC Petroleum Hydrocarbons	**SW-846 8015B**		**ug/l**	**ug/l**	
12858	DRO C10-C28	n.a.	120	45	1
Metals	**SW-846 6010B**		**mg/l**	**mg/l**	
07035	Arsenic	7440-38-2	0.0358	0.0068	1
07046	Barium	7440-39-3	0.793	0.00033	1
07049	Cadmium	7440-43-9	0.0080	0.00076	1
07051	Chromium	7440-47-3	0.0764	0.0016	1
07055	Lead	7439-92-1	0.727	0.0047	1
07036	Selenium	7782-49-2	N.D.	0.0084	1
07066	Silver	7440-22-4	N.D.	0.0021	1
	SW-846 7470A		**mg/l**	**mg/l**	
00259	Mercury	7439-97-6	0.0014	0.000060	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	PPL/TCL VOCs - water	SW-846 8260B	1	T132731AA	09/30/2013 16:18	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T132731AA	09/30/2013 16:18	Linda C Pape	1
07805	PAHs in Water by GC/MS	SW-846 8270C	1	13271WAK026	09/30/2013 14:04	Linda M Hartenstine	1
07807	BNA Water Extraction	SW-846 3510C	1	13271WAK026	09/29/2013 09:50	David V Hershey Jr	1
01635	TPH-GRO water C6-C10	SW-846 8015B	1	13273A53A	09/30/2013 20:01	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	13273A53A	09/30/2013 20:01	Marie D Beamenderfer	1
12858	TPH-DRO Water C20-C28	SW-846 8015B	1	132710028A	09/30/2013 16:27	Tracy A Cole	1
12059	Microextraction - DRO (waters)	SW-846 3511	1	132710028A	09/29/2013 10:50	David V Hershey Jr	1
07035	Arsenic	SW-846 6010B	1	132711848001	09/30/2013 12:26	Eric L Eby	1
07046	Barium	SW-846 6010B	1	132711848001	09/30/2013 12:26	Eric L Eby	1
07049	Cadmium	SW-846 6010B	1	132711848001	09/30/2013 12:26	Eric L Eby	1
07051	Chromium	SW-846 6010B	1	132711848001	09/30/2013 12:26	Eric L Eby	1
07055	Lead	SW-846 6010B	1	132711848001	09/30/2013 12:26	Eric L Eby	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: MBW-1 Grab Groundwater 21983

LL Sample # WW 7216880
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 13:10 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MBW-1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
07036	Selenium	SW-846 6010B	1	132711848001	09/30/2013 12:26	Eric L Eby	1
07066	Silver	SW-846 6010B	1	132711848001	09/30/2013 12:26	Eric L Eby	1
00259	Mercury	SW-846 7470A	1	132735713001	10/01/2013 06:45	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	132711848001	09/29/2013 22:30	Annamaria Stipkovits	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	132735713001	09/30/2013 16:30	Nelli S Markaryan	1

Sample Description: MB1-3-4 Grab Soil
21983

LL Sample # SW 7216881
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 12:47 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB1-3

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**	**mg/kg**	
10237	Acetone	67-64-1	N.D.	0.009	1
10237	Benzene	71-43-2	N.D.	0.0006	1
10237	Bromodichloromethane	75-27-4	N.D.	0.001	1
10237	Bromoform	75-25-2	N.D.	0.001	1
10237	Bromomethane	74-83-9	N.D.	0.002	1
10237	2-Butanone	78-93-3	N.D.	0.005	1
10237	Carbon Disulfide	75-15-0	N.D.	0.001	1
10237	Carbon Tetrachloride	56-23-5	N.D.	0.001	1
10237	Chlorobenzene	108-90-7	N.D.	0.001	1
10237	Chloroethane	75-00-3	N.D.	0.002	1
10237	Chloroform	67-66-3	N.D.	0.001	1
10237	Chloromethane	74-87-3	N.D.	0.002	1
10237	Dibromochloromethane	124-48-1	N.D.	0.001	1
10237	1,1-Dichloroethane	75-34-3	N.D.	0.001	1
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	1
10237	1,1-Dichloroethene	75-35-4	N.D.	0.001	1
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.001	1
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.001	1
10237	1,2-Dichloropropane	78-87-5	N.D.	0.001	1
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	1
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	1
10237	Ethylbenzene	100-41-4	N.D.	0.001	1
10237	2-Hexanone	591-78-6	N.D.	0.004	1
10237	4-Methyl-2-pentanone	108-10-1	N.D.	0.004	1
10237	Methylene Chloride	75-09-2	N.D.	0.002	1
10237	Styrene	100-42-5	N.D.	0.001	1
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	1
10237	Tetrachloroethene	127-18-4	N.D.	0.001	1
10237	Toluene	108-88-3	N.D.	0.001	1
10237	1,1,1-Trichloroethane	71-55-6	N.D.	0.001	1
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.001	1
10237	Trichloroethene	79-01-6	N.D.	0.001	1
10237	Vinyl Chloride	75-01-4	N.D.	0.001	1
10237	Xylene (Total)	1330-20-7	N.D.	0.001	1
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Acenaphthene	83-32-9	9.8	0.041	10
07804	Acenaphthylene	208-96-8	0.084 J	0.041	10
07804	Anthracene	120-12-7	18	0.041	10
07804	Benzo(a)anthracene	56-55-3	23	0.041	10
07804	Benzo(a)pyrene	50-32-8	22	0.041	10
07804	Benzo(b)fluoranthene	205-99-2	25	0.041	10
07804	Benzo(g,h,i)perylene	191-24-2	14	0.041	10
07804	Benzo(k)fluoranthene	207-08-9	12	0.041	10
07804	Chrysene	218-01-9	22	0.041	10
07804	Dibenz(a,h)anthracene	53-70-3	2.7	0.041	10
07804	Fluoranthene	206-44-0	63	0.083	20
07804	Fluorene	86-73-7	8.7	0.041	10
07804	Indeno(1,2,3-cd)pyrene	193-39-5	13	0.041	10
07804	Naphthalene	91-20-3	10	0.041	10
07804	Phenanthrene	85-01-8	59	0.083	20

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: MB1-3-4 Grab Soil
21983

LL Sample # SW 7216881
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 12:47 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB1-3

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	46	0.041	10
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	N.D.	0.3	25.35
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	49	5.0	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	48.1	0.863	1
06946	Barium	7440-39-3	163	0.0407	1
06949	Cadmium	7440-43-9	1.34	0.0937	1
06951	Chromium	7440-47-3	30.6	0.197	1
06955	Lead	7439-92-1	230	0.616	1
06936	Selenium	7782-49-2	N.D.	0.986	1
06966	Silver	7440-22-4	0.219 J	0.210	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.884	0.0122	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	19.7	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132731AA	09/30/2013 16:22	Chelsea B Stong	1
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/29/2013 00:26	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327232563	09/29/2013 00:26	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:12	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLE026	10/01/2013 02:39	Holly Berry	10
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLE026	10/01/2013 10:18	Linda M Hartenstine	20
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLE026	09/29/2013 06:05	JoElla L Rice	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13273A16A	09/30/2013 20:39	Laura M Krieger	25.35

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: MB1-3-4 Grab Soil
21983

LL Sample # SW 7216881
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 12:47 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB1-3

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:11	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710027A	10/01/2013 21:13	Michele D Hamilton	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710027A	09/29/2013 06:05	JoElla L Rice	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 14:23	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 14:23	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 14:23	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 14:23	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 14:23	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 14:23	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 14:23	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 04:44	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820001B	09/30/2013 19:28	Scott W Freisher	1

Sample Description: MB1-7-8 Grab Soil
21983

LL Sample # SW 7216882
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 12:50 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB1-7

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	0.21		0.012	0.97
10237	Benzene	71-43-2	N.D.		0.0008	0.97
10237	Bromodichloromethane	75-27-4	N.D.		0.002	0.97
10237	Bromoform	75-25-2	N.D.		0.002	0.97
10237	Bromomethane	74-83-9	N.D.		0.003	0.97
10237	2-Butanone	78-93-3	0.047		0.007	0.97
10237	Carbon Disulfide	75-15-0	0.002	J	0.002	0.97
10237	Carbon Tetrachloride	56-23-5	N.D.		0.002	0.97
10237	Chlorobenzene	108-90-7	N.D.		0.002	0.97
10237	Chloroethane	75-00-3	N.D.		0.003	0.97
10237	Chloroform	67-66-3	N.D.		0.002	0.97
10237	Chloromethane	74-87-3	N.D.		0.003	0.97
10237	Dibromochloromethane	124-48-1	N.D.		0.002	0.97
10237	1,1-Dichloroethane	75-34-3	N.D.		0.002	0.97
10237	1,2-Dichloroethane	107-06-2	N.D.		0.002	0.97
10237	1,1-Dichloroethene	75-35-4	N.D.		0.002	0.97
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.002	0.97
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.002	0.97
10237	1,2-Dichloropropane	78-87-5	N.D.		0.002	0.97
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.002	0.97
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.002	0.97
10237	Ethylbenzene	100-41-4	N.D.		0.002	0.97
10237	2-Hexanone	591-78-6	N.D.		0.005	0.97
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.005	0.97
10237	Methylene Chloride	75-09-2	0.004	J	0.003	0.97
10237	Styrene	100-42-5	N.D.		0.002	0.97
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.002	0.97
10237	Tetrachloroethene	127-18-4	N.D.		0.002	0.97
10237	Toluene	108-88-3	N.D.		0.002	0.97
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.002	0.97
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.002	0.97
10237	Trichloroethene	79-01-6	N.D.		0.002	0.97
10237	Vinyl Chloride	75-01-4	N.D.		0.002	0.97
10237	Xylene (Total)	1330-20-7	N.D.		0.002	0.97
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	0.015	J	0.006	1
07804	Acenaphthylene	208-96-8	0.011	J	0.006	1
07804	Anthracene	120-12-7	0.029	J	0.006	1
07804	Benzo(a)anthracene	56-55-3	0.066		0.006	1
07804	Benzo(a)pyrene	50-32-8	0.068		0.006	1
07804	Benzo(b)fluoranthene	205-99-2	0.080		0.006	1
07804	Benzo(g,h,i)perylene	191-24-2	0.046		0.006	1
07804	Benzo(k)fluoranthene	207-08-9	0.044		0.006	1
07804	Chrysene	218-01-9	0.086		0.006	1
07804	Dibenz(a,h)anthracene	53-70-3	0.016	J	0.006	1
07804	Fluoranthene	206-44-0	0.12		0.006	1
07804	Fluorene	86-73-7	0.012	J	0.006	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.037		0.006	1
07804	Naphthalene	91-20-3	0.011	J	0.006	1
07804	Phenanthrene	85-01-8	0.072		0.006	1

Sample Description: MB1-7-8 Grab Soil
21983

LL Sample # SW 7216882
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 12:50 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB1-7

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	0.16	0.006	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	N.D.	0.3	23.99
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	140	7.0	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	7.86	1.19	1
06946	Barium	7440-39-3	152	0.0559	1
06949	Cadmium	7440-43-9	0.190 J	0.129	1
06951	Chromium	7440-47-3	27.3	0.271	1
06955	Lead	7439-92-1	720	0.847	1
06936	Selenium	7782-49-2	N.D.	1.36	1
06966	Silver	7440-22-4	N.D.	0.288	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0994 J	0.0168	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	42.7	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132731AA	09/30/2013 16:45	Chelsea B Stong	0.97
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/29/2013 00:26	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327232563	09/29/2013 00:26	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:17	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLE026	09/30/2013 15:40	Linda M Hartenstine	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLE026	09/29/2013 06:05	JoElla L Rice	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13273A16A	09/30/2013 21:17	Laura M Krieger	23.99

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: MB1-7-8 Grab Soil
21983

LL Sample # SW 7216882
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 12:50 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB1-7

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:16	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710027A	10/01/2013 18:11	Michele D Hamilton	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710027A	09/29/2013 06:05	JoElla L Rice	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 14:01	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 14:01	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 14:01	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 14:01	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 14:01	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 14:01	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 14:01	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 04:46	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820001B	09/30/2013 19:28	Scott W Freisher	1

Sample Description: MB2-3-4 Grab Soil
21983

LL Sample # SW 7216883
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 13:20 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB2-3

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	0.057		0.009	1.04
10237	Benzene	71-43-2	N.D.		0.0006	1.04
10237	Bromodichloromethane	75-27-4	N.D.		0.001	1.04
10237	Bromoform	75-25-2	N.D.		0.001	1.04
10237	Bromomethane	74-83-9	N.D.		0.003	1.04
10237	2-Butanone	78-93-3	0.006	J	0.005	1.04
10237	Carbon Disulfide	75-15-0	N.D.		0.001	1.04
10237	Carbon Tetrachloride	56-23-5	N.D.		0.001	1.04
10237	Chlorobenzene	108-90-7	N.D.		0.001	1.04
10237	Chloroethane	75-00-3	N.D.		0.003	1.04
10237	Chloroform	67-66-3	N.D.		0.001	1.04
10237	Chloromethane	74-87-3	N.D.		0.003	1.04
10237	Dibromochloromethane	124-48-1	N.D.		0.001	1.04
10237	1,1-Dichloroethane	75-34-3	N.D.		0.001	1.04
10237	1,2-Dichloroethane	107-06-2	N.D.		0.001	1.04
10237	1,1-Dichloroethene	75-35-4	N.D.		0.001	1.04
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.001	1.04
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.001	1.04
10237	1,2-Dichloropropane	78-87-5	N.D.		0.001	1.04
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.001	1.04
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.001	1.04
10237	Ethylbenzene	100-41-4	N.D.		0.001	1.04
10237	2-Hexanone	591-78-6	N.D.		0.004	1.04
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.004	1.04
10237	Methylene Chloride	75-09-2	0.003	J	0.003	1.04
10237	Styrene	100-42-5	N.D.		0.001	1.04
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.001	1.04
10237	Tetrachloroethene	127-18-4	N.D.		0.001	1.04
10237	Toluene	108-88-3	N.D.		0.001	1.04
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.001	1.04
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.001	1.04
10237	Trichloroethene	79-01-6	N.D.		0.001	1.04
10237	Vinyl Chloride	75-01-4	N.D.		0.001	1.04
10237	Xylene (Total)	1330-20-7	N.D.		0.001	1.04
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	0.082		0.004	1
07804	Acenaphthylene	208-96-8	0.009	J	0.004	1
07804	Anthracene	120-12-7	0.13		0.004	1
07804	Benzo(a)anthracene	56-55-3	0.27		0.004	1
07804	Benzo(a)pyrene	50-32-8	0.20		0.004	1
07804	Benzo(b)fluoranthene	205-99-2	0.28		0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	0.17		0.004	1
07804	Benzo(k)fluoranthene	207-08-9	0.094		0.004	1
07804	Chrysene	218-01-9	0.46		0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	0.052		0.004	1
07804	Fluoranthene	206-44-0	0.49		0.004	1
07804	Fluorene	86-73-7	0.080		0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.14		0.004	1
07804	Naphthalene	91-20-3	0.13		0.004	1
07804	Phenanthrene	85-01-8	0.61		0.004	1

Sample Description: MB2-3-4 Grab Soil
21983

LL Sample # SW 7216883
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 13:20 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB2-3

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	0.45	0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	N.D.	2.5	258.26
	Reporting limits were raised due to sample foaming.				
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	1,100	25	5
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	17.9	4.31	5
	Reporting limits for ICP metals were raised due to interference from the sample matrix.				
06946	Barium	7440-39-3	152	0.0406	1
06949	Cadmium	7440-43-9	N.D.	0.468	5
06951	Chromium	7440-47-3	76.9	0.197	1
06955	Lead	7439-92-1	1,010	3.08	5
06936	Selenium	7782-49-2	N.D.	4.93	5
06966	Silver	7440-22-4	1.35 J	1.05	5
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0625 J	0.0118	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	18.8	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132731AA	09/30/2013 13:43	Chelsea B Stong	1.04
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/29/2013 00:26	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327232563	09/29/2013 00:26	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:18	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLE026	09/30/2013 16:04	Linda M Hartenstine	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: MB2-3-4 Grab Soil
21983

LL Sample # SW 7216883
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 13:20 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB2-3

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLE026	09/29/2013	06:05	JoElla L Rice	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13273A16A	09/30/2013	22:33	Laura M Krieger	258.26
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/28/2013	22:20	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710027A	10/01/2013	17:28	Michele D Hamilton	5
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710027A	09/29/2013	06:05	JoElla L Rice	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013	15:50	Katlin N Cataldi	5
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013	14:27	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013	15:50	Katlin N Cataldi	5
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013	14:27	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013	15:50	Katlin N Cataldi	5
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013	15:50	Katlin N Cataldi	5
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013	15:50	Katlin N Cataldi	5
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013	04:57	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013	20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013	22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820001B	09/30/2013	19:28	Scott W Freisher	1

Sample Description: MB2-7-8 Grab Soil
21983

LL Sample # SW 7216884
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 13:25 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB2-7

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	0.043		0.013	1.07
10237	Benzene	71-43-2	N.D.		0.0009	1.07
10237	Bromodichloromethane	75-27-4	N.D.		0.002	1.07
10237	Bromoform	75-25-2	N.D.		0.002	1.07
10237	Bromomethane	74-83-9	N.D.		0.004	1.07
10237	2-Butanone	78-93-3	0.009	J	0.007	1.07
10237	Carbon Disulfide	75-15-0	N.D.		0.002	1.07
10237	Carbon Tetrachloride	56-23-5	N.D.		0.002	1.07
10237	Chlorobenzene	108-90-7	N.D.		0.002	1.07
10237	Chloroethane	75-00-3	N.D.		0.004	1.07
10237	Chloroform	67-66-3	N.D.		0.002	1.07
10237	Chloromethane	74-87-3	N.D.		0.004	1.07
10237	Dibromochloromethane	124-48-1	N.D.		0.002	1.07
10237	1,1-Dichloroethane	75-34-3	N.D.		0.002	1.07
10237	1,2-Dichloroethane	107-06-2	N.D.		0.002	1.07
10237	1,1-Dichloroethene	75-35-4	N.D.		0.002	1.07
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.002	1.07
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.002	1.07
10237	1,2-Dichloropropane	78-87-5	N.D.		0.002	1.07
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.002	1.07
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.002	1.07
10237	Ethylbenzene	100-41-4	N.D.		0.002	1.07
10237	2-Hexanone	591-78-6	N.D.		0.006	1.07
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.006	1.07
10237	Methylene Chloride	75-09-2	0.006	J	0.004	1.07
10237	Styrene	100-42-5	N.D.		0.002	1.07
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.002	1.07
10237	Tetrachloroethene	127-18-4	N.D.		0.002	1.07
10237	Toluene	108-88-3	N.D.		0.002	1.07
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.002	1.07
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.002	1.07
10237	Trichloroethene	79-01-6	N.D.		0.002	1.07
10237	Vinyl Chloride	75-01-4	N.D.		0.002	1.07
10237	Xylene (Total)	1330-20-7	N.D.		0.002	1.07
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	0.028	J	0.006	1
07804	Acenaphthylene	208-96-8	0.097		0.006	1
07804	Anthracene	120-12-7	0.49		0.006	1
07804	Benzo(a)anthracene	56-55-3	2.0		0.006	1
07804	Benzo(a)pyrene	50-32-8	1.6		0.006	1
07804	Benzo(b)fluoranthene	205-99-2	1.8		0.006	1
07804	Benzo(g,h,i)perylene	191-24-2	0.83		0.006	1
07804	Benzo(k)fluoranthene	207-08-9	0.91		0.006	1
07804	Chrysene	218-01-9	1.8		0.006	1
07804	Dibenz(a,h)anthracene	53-70-3	0.30		0.006	1
07804	Fluoranthene	206-44-0	3.2		0.006	1
07804	Fluorene	86-73-7	0.080		0.006	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.87		0.006	1
07804	Naphthalene	91-20-3	0.034		0.006	1
07804	Phenanthrene	85-01-8	1.0		0.006	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: MB2-7-8 Grab Soil
21983

LL Sample # SW 7216884
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 13:25 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB2-7

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene	129-00-0	3.1	0.006	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	N.D.	0.3	25
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	240	6.9	1
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic	7440-38-2	38.8	5.97	5
	Reporting limits were raised due to interference from the sample matrix.				
06946	Barium	7440-39-3	176	0.0563	1
06949	Cadmium	7440-43-9	10.5	0.130	1
06951	Chromium	7440-47-3	31.8	0.273	1
06955	Lead	7439-92-1	1,180	0.854	1
06936	Selenium	7782-49-2	N.D.	1.37	1
06966	Silver	7440-22-4	7.91	0.290	1
	SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.728	0.0166	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	42.0	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132731AA	09/30/2013 17:08	Chelsea B Stong	1.07
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/29/2013 00:26	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327232563	09/29/2013 00:26	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:22	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLE026	09/30/2013 16:27	Linda M Hartenstine	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLE026	09/29/2013 06:05	JoElla L Rice	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13273A16A	09/30/2013 23:11	Laura M Krieger	25

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: MB2-7-8 Grab Soil
21983

LL Sample # SW 7216884
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 13:25 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB2-7

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:22	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710027A	10/01/2013 23:05	Michele D Hamilton	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710027A	09/29/2013 06:05	JoElla L Rice	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 15:54	Katlin N Cataldi	5
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 14:39	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 14:39	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 14:39	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 14:39	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 14:39	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 14:39	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 04:59	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820001B	09/30/2013 19:28	Scott W Freisher	1

Sample Description: MB3-4-5 Grab Soil
21983

LL Sample # SW 7216885
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 13:32 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB3-4

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**	**mg/kg**	
10237	Acetone	67-64-1	0.018 J	0.009	0.95
10237	Benzene	71-43-2	N.D.	0.0006	0.95
10237	Bromodichloromethane	75-27-4	N.D.	0.001	0.95
10237	Bromoform	75-25-2	N.D.	0.001	0.95
10237	Bromomethane	74-83-9	N.D.	0.002	0.95
10237	2-Butanone	78-93-3	N.D.	0.005	0.95
10237	Carbon Disulfide	75-15-0	N.D.	0.001	0.95
10237	Carbon Tetrachloride	56-23-5	N.D.	0.001	0.95
10237	Chlorobenzene	108-90-7	N.D.	0.001	0.95
10237	Chloroethane	75-00-3	N.D.	0.002	0.95
10237	Chloroform	67-66-3	N.D.	0.001	0.95
10237	Chloromethane	74-87-3	N.D.	0.002	0.95
10237	Dibromochloromethane	124-48-1	N.D.	0.001	0.95
10237	1,1-Dichloroethane	75-34-3	N.D.	0.001	0.95
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.95
10237	1,1-Dichloroethene	75-35-4	N.D.	0.001	0.95
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.001	0.95
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.001	0.95
10237	1,2-Dichloropropane	78-87-5	N.D.	0.001	0.95
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	0.95
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	0.95
10237	Ethylbenzene	100-41-4	N.D.	0.001	0.95
10237	2-Hexanone	591-78-6	N.D.	0.004	0.95
10237	4-Methyl-2-pentanone	108-10-1	N.D.	0.004	0.95
10237	Methylene Chloride	75-09-2	N.D.	0.002	0.95
10237	Styrene	100-42-5	N.D.	0.001	0.95
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	0.95
10237	Tetrachloroethene	127-18-4	N.D.	0.001	0.95
10237	Toluene	108-88-3	N.D.	0.001	0.95
10237	1,1,1-Trichloroethane	71-55-6	N.D.	0.001	0.95
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.001	0.95
10237	Trichloroethene	79-01-6	N.D.	0.001	0.95
10237	Vinyl Chloride	75-01-4	N.D.	0.001	0.95
10237	Xylene (Total)	1330-20-7	N.D.	0.001	0.95
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Acenaphthene	83-32-9	0.024	0.004	1
07804	Acenaphthylene	208-96-8	0.080	0.004	1
07804	Anthracene	120-12-7	0.15	0.004	1
07804	Benzo(a)anthracene	56-55-3	0.71	0.004	1
07804	Benzo(a)pyrene	50-32-8	0.76	0.004	1
07804	Benzo(b)fluoranthene	205-99-2	0.93	0.004	1
07804	Benzo(g,h,i)perylene	191-24-2	0.51	0.004	1
07804	Benzo(k)fluoranthene	207-08-9	0.37	0.004	1
07804	Chrysene	218-01-9	0.70	0.004	1
07804	Dibenz(a,h)anthracene	53-70-3	0.14	0.004	1
07804	Fluoranthene	206-44-0	1.1	0.004	1
07804	Fluorene	86-73-7	0.031	0.004	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.50	0.004	1
07804	Naphthalene	91-20-3	0.054	0.004	1
07804	Phenanthrene	85-01-8	0.59	0.004	1

Sample Description: MB3-4-5 Grab Soil
21983

LL Sample # SW 7216885
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 13:32 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB3-4

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Pyrene	129-00-0	1.0		0.004	1
GC Volatiles	**SW-846 8015B**		**mg/kg**		**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	N.D.		0.3	24.75
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	9.7	J	5.2	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	
06935	Arsenic	7440-38-2	13.7		0.889	1
06946	Barium	7440-39-3	150		0.0419	1
06949	Cadmium	7440-43-9	0.185	J	0.0965	1
06951	Chromium	7440-47-3	26.9		0.203	1
06955	Lead	7439-92-1	281		0.635	1
06936	Selenium	7782-49-2	N.D.		1.02	1
06966	Silver	7440-22-4	0.447	J	0.216	1
	SW-846 7471A		**mg/kg**		**mg/kg**	
00159	Mercury	7439-97-6	2.24		0.0646	5
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	
00111	Moisture	n.a.	22.8		0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132731AA	09/30/2013 17:31	Chelsea B Stong	0.95
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/29/2013 00:26	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327232563	09/29/2013 00:26	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:27	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLE026	09/30/2013 16:51	Linda M Hartenstine	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLE026	09/29/2013 06:05	JoElla L Rice	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13273A16A	09/30/2013 23:49	Laura M Krieger	24.75

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: MB3-4-5 Grab Soil
21983

LL Sample # SW 7216885
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 13:32 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB3-4

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:26	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710027A	10/01/2013 00:12	Michele D Hamilton	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710027A	09/29/2013 06:05	JoElla L Rice	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 14:43	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 14:43	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 14:43	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 14:43	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 14:43	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 14:43	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 14:43	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 05:42	Damary Valentin	5
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820001B	09/30/2013 19:28	Scott W Freisher	1

Sample Description: MB3-7-8 Grab Soil
21983

LL Sample # SW 7216886
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 13:36 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB3-7

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	0.027	J	0.012	1.08
10237	Benzene	71-43-2	N.D.		0.0009	1.08
10237	Bromodichloromethane	75-27-4	N.D.		0.002	1.08
10237	Bromoform	75-25-2	N.D.		0.002	1.08
10237	Bromomethane	74-83-9	N.D.		0.004	1.08
10237	2-Butanone	78-93-3	N.D.		0.007	1.08
10237	Carbon Disulfide	75-15-0	0.003	J	0.002	1.08
10237	Carbon Tetrachloride	56-23-5	N.D.		0.002	1.08
10237	Chlorobenzene	108-90-7	N.D.		0.002	1.08
10237	Chloroethane	75-00-3	N.D.		0.004	1.08
10237	Chloroform	67-66-3	N.D.		0.002	1.08
10237	Chloromethane	74-87-3	N.D.		0.004	1.08
10237	Dibromochloromethane	124-48-1	N.D.		0.002	1.08
10237	1,1-Dichloroethane	75-34-3	N.D.		0.002	1.08
10237	1,2-Dichloroethane	107-06-2	N.D.		0.002	1.08
10237	1,1-Dichloroethene	75-35-4	N.D.		0.002	1.08
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.002	1.08
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.002	1.08
10237	1,2-Dichloropropane	78-87-5	N.D.		0.002	1.08
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.002	1.08
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.002	1.08
10237	Ethylbenzene	100-41-4	N.D.		0.002	1.08
10237	2-Hexanone	591-78-6	N.D.		0.005	1.08
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.005	1.08
10237	Methylene Chloride	75-09-2	0.006	J	0.004	1.08
10237	Styrene	100-42-5	N.D.		0.002	1.08
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.002	1.08
10237	Tetrachloroethene	127-18-4	N.D.		0.002	1.08
10237	Toluene	108-88-3	N.D.		0.002	1.08
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.002	1.08
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.002	1.08
10237	Trichloroethene	79-01-6	N.D.		0.002	1.08
10237	Vinyl Chloride	75-01-4	N.D.		0.002	1.08
10237	Xylene (Total)	1330-20-7	N.D.		0.002	1.08
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	
07804	Acenaphthene	83-32-9	0.067		0.005	1
07804	Acenaphthylene	208-96-8	0.12		0.005	1
07804	Anthracene	120-12-7	0.31		0.005	1
07804	Benzo(a)anthracene	56-55-3	1.1		0.005	1
07804	Benzo(a)pyrene	50-32-8	1.3		0.005	1
07804	Benzo(b)fluoranthene	205-99-2	1.6		0.005	1
07804	Benzo(g,h,i)perylene	191-24-2	0.87		0.005	1
07804	Benzo(k)fluoranthene	207-08-9	0.50		0.005	1
07804	Chrysene	218-01-9	1.2		0.005	1
07804	Dibenz(a,h)anthracene	53-70-3	0.22		0.005	1
07804	Fluoranthene	206-44-0	1.8		0.005	1
07804	Fluorene	86-73-7	0.11		0.005	1
07804	Indeno(1,2,3-cd)pyrene	193-39-5	0.77		0.005	1
07804	Naphthalene	91-20-3	0.10		0.005	1
07804	Phenanthrene	85-01-8	1.1		0.005	1

Sample Description: MB3-7-8 Grab Soil
21983

LL Sample # SW 7216886
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 13:36 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB3-7

CAT No.	Analysis Name		CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles		**SW-846 8270C**		**mg/kg**	**mg/kg**	
07804	Pyrene		129-00-0	1.9	0.005	1
GC Volatiles		**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10		n.a.	N.D.	0.3	25.69
GC Petroleum Hydrocarbons		**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28		n.a.	78	6.5	1
Metals		**SW-846 6010B**		**mg/kg**	**mg/kg**	
06935	Arsenic		7440-38-2	22.0	1.11	1
06946	Barium		7440-39-3	148	0.0524	1
06949	Cadmium		7440-43-9	0.952	0.121	1
06951	Chromium		7440-47-3	25.7	0.254	1
06955	Lead		7439-92-1	218	0.793	1
06936	Selenium		7782-49-2	N.D.	1.27	1
06966	Silver		7440-22-4	0.679 J	0.270	1
		SW-846 7471A		**mg/kg**	**mg/kg**	
00159	Mercury		7439-97-6	0.734	0.0160	1
Wet Chemistry		**SM 2540 G-1997**		**%**	**%**	
00111	Moisture		n.a.	38.2	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132731AA	09/30/2013 17:53	Chelsea B Stong	1.08
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/29/2013 00:26	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327232563	09/29/2013 00:26	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:29	Scott W Freisher	n.a.
07804	PAHs in Soil by GC/MS	SW-846 8270C	1	13271SLE026	09/30/2013 17:14	Linda M Hartenstine	1
07806	BNA Soil PAH Sonication	SW-846 3550B	1	13271SLE026	09/29/2013 06:05	JoElla L Rice	1
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13273A16A	10/01/2013 00:27	Laura M Krieger	25.69

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: MB3-7-8 Grab Soil
21983

LL Sample # SW 7216886
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 13:36 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

MB3-7

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:28	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710027A	10/01/2013 19:23	Michele D Hamilton	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710027A	09/29/2013 06:05	JoElla L Rice	1
06935	Arsenic	SW-846 6010B	1	132715708001	09/30/2013 14:47	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	132715708001	09/30/2013 14:47	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	132715708001	09/30/2013 14:47	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	132715708001	09/30/2013 14:47	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	132715708001	09/30/2013 14:47	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	132715708001	09/30/2013 14:47	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	132715708001	09/30/2013 14:47	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	132715711001	09/30/2013 05:07	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	132715708001	09/29/2013 20:02	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	132715711001	09/29/2013 22:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13273820001B	09/30/2013 19:28	Scott W Freisher	1

Sample Description: FB3-2-3 Grab Soil
21983

LL Sample # SW 7216887
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 14:15 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

FB3-2

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Herbicides	**SW-846 8151A**		**mg/kg**	**mg/kg**	
10401	2,4-D	94-75-7	N.D.	0.014	1
10401	Dalapon	75-99-0	N.D.	0.076	1
10401	2,4-DB	94-82-6	N.D.	0.0071	1
10401	Dicamba	1918-00-9	N.D.	0.0046	1
10401	Dinoseb	88-85-7	N.D.	0.010	1
	The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method.				
10401	2,4-DP (Dichloroprop)	120-36-5	N.D.	0.010	1
10401	MCPA	94-74-6	N.D.	0.87	1
10401	MCPP (Mecoprop)	93-65-2	N.D.	0.85	1
10401	Pentachlorophenol	87-86-5	N.D.	0.00038	1
10401	2,4,5-T	93-76-5	N.D.	0.00093	1
10401	2,4,5-TP	93-72-1	N.D.	0.00085	1
	Reporting limits were raised due to interference from the sample matrix.				
Pesticides/PCBs	**SW-846 8081A**		**mg/kg**	**mg/kg**	
01363	Aldrin	309-00-2	N.D.	0.00038	1
01363	Alpha BHC	319-84-6	N.D.	0.00019	1
01363	Beta BHC	319-85-7	N.D.	0.00034	1
01363	Gamma BHC - Lindane	58-89-9	N.D.	0.00019	1
01363	Alpha Chlordane	5103-71-9	N.D.	0.00026	1
01363	Gamma Chlordane	5103-74-2	N.D.	0.00055	1
01363	p,p-DDD	72-54-8	N.D.	0.00038	1
01363	p,p-DDE	72-55-9	N.D.	0.00038	1
01363	p,p-DDT	50-29-3	N.D.	0.00038	1
01363	Delta BHC	319-86-8	N.D.	0.00021	1
01363	Dieldrin	60-57-1	N.D.	0.00038	1
01363	Endosulfan I	959-98-8	N.D.	0.00025	1
01363	Endosulfan II	33213-65-9	N.D.	0.00038	1
01363	Endosulfan Sulfate	1031-07-8	N.D.	0.00038	1
01363	Endrin	72-20-8	N.D.	0.00038	1
01363	Endrin Aldehyde	7421-93-4	N.D.	0.00038	1
01363	Endrin Ketone	53494-70-5	N.D.	0.00038	1
01363	Heptachlor	76-44-8	N.D.	0.00034	1
01363	Heptachlor Epoxide	1024-57-3	N.D.	0.00022	1
01363	Methoxychlor	72-43-5	N.D.	0.0019	1
01363	Toxaphene	8001-35-2	N.D.	0.013	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	12.8	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: FB3-2-3 Grab Soil
21983

LL Sample # SW 7216887
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 14:15 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

FB3-2

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10401	Herbicide soils 8151A Master	SW-846 8151A	1	132710026A	10/01/2013 06:28	Melissa McDermott	1
01363	OC Pesticides in Solids	SW-846 8081A	1	132710003A	09/30/2013 21:45	Jamie L Brillhart	1
11134	Pesticide Screen Soils Ext	SW-846 3550B	1	132710003A	09/29/2013 14:00	Wanda F Oswald	1
04181	Herbicide Soil Extraction	SW-846 3550B/SW-846 8151A	1	132710026A	09/29/2013 08:00	Kerrie A Freeburn	1
00111	Moisture	SM 2540 G-1997	1	13273820001B	09/30/2013 19:28	Scott W Freisher	1

Sample Description: FB2-2-3 Grab Soil
21983

LL Sample # SW 7216888
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 14:10 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

FB2-2

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Herbicides	**SW-846 8151A**		**mg/kg**	**mg/kg**	
10401	2,4-D	94-75-7	N.D.	0.014	1
10401	Dalapon	75-99-0	N.D.	0.052	1
10401	2,4-DB	94-82-6	N.D.	0.0073	1
10401	Dicamba	1918-00-9	N.D.	0.0047	1
10401	Dinoseb	88-85-7	N.D.	0.011	1
	The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method.				
10401	2,4-DP (Dichloroprop)	120-36-5	N.D.	0.011	1
10401	MCPA	94-74-6	N.D.	0.90	1
10401	MCPP (Mecoprop)	93-65-2	N.D.	0.89	1
10401	Pentachlorophenol	87-86-5	N.D.	0.00039	1
10401	2,4,5-T	93-76-5	N.D.	0.00097	1
10401	2,4,5-TP	93-72-1	N.D.	0.00089	1
Pesticides/PCBs	**SW-846 8081A**		**mg/kg**	**mg/kg**	
01363	Aldrin	309-00-2	N.D.	0.00039	1
01363	Alpha BHC	319-84-6	N.D.	0.00020	1
01363	Beta BHC	319-85-7	N.D.	0.00036	1
01363	Gamma BHC - Lindane	58-89-9	N.D.	0.00020	1
01363	Alpha Chlordane	5103-71-9	N.D.	0.00027	1
01363	Gamma Chlordane	5103-74-2	N.D.	0.00030	1
01363	p,p-DDD	72-54-8	N.D.	0.00039	1
01363	p,p-DDE	72-55-9	N.D.	0.00039	1
01363	p,p-DDT	50-29-3	N.D.	0.00039	1
01363	Delta BHC	319-86-8	N.D.	0.00021	1
01363	Dieldrin	60-57-1	N.D.	0.00039	1
01363	Endosulfan I	959-98-8	N.D.	0.00026	1
01363	Endosulfan II	33213-65-9	N.D.	0.00039	1
01363	Endosulfan Sulfate	1031-07-8	N.D.	0.00074	1
01363	Endrin	72-20-8	N.D.	0.00039	1
01363	Endrin Aldehyde	7421-93-4	N.D.	0.00039	1
01363	Endrin Ketone	53494-70-5	N.D.	0.00039	1
01363	Heptachlor	76-44-8	N.D.	0.00036	1
01363	Heptachlor Epoxide	1024-57-3	N.D.	0.00023	1
01363	Methoxychlor	72-43-5	0.0034 J	0.0020	1
01363	Toxaphene	8001-35-2	N.D.	0.013	1
	Reporting limits were raised due to interference from the sample matrix.				
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	15.8	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: FB2-2-3 Grab Soil
21983

LL Sample # SW 7216888
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 14:10 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

FB2-2

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10401	Herbicide soils 8151A Master	SW-846 8151A	1	132710026A	10/01/2013 07:48	Melissa McDermott	1
01363	OC Pesticides in Solids	SW-846 8081A	1	132710003A	09/30/2013 22:00	Jamie L Brillhart	1
11134	Pesticide Screen Soils Ext	SW-846 3550B	1	132710003A	09/29/2013 14:00	Wanda F Oswald	1
04181	Herbicide Soil Extraction	SW-846 3550B/SW-846 8151A	1	132710026A	09/29/2013 08:00	Kerrie A Freeburn	1
00111	Moisture	SM 2540 G-1997	1	13273820001B	09/30/2013 19:28	Scott W Freisher	1

Sample Description: FB1-3-4 Grab Soil
21983

LL Sample # SW 7216889
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 14:00 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

FB1-3

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
Herbicides	**SW-846 8151A**		**mg/kg**	**mg/kg**	
10401	2,4-D	94-75-7	N.D.	0.014	1
10401	Dalapon	75-99-0	N.D.	0.26	1
10401	2,4-DB	94-82-6	N.D.	0.0073	1
10401	Dicamba	1918-00-9	N.D.	0.0047	1
10401	Dinoseb	88-85-7	N.D.	0.011	1
	The QC window for dinoseb is advisory due to the erratic performance of the analyte using this method.				
10401	2,4-DP (Dichloroprop)	120-36-5	N.D.	0.011	1
10401	MCPA	94-74-6	N.D.	0.90	1
10401	MCPP (Mecoprop)	93-65-2	N.D.	0.89	1
10401	Pentachlorophenol	87-86-5	N.D.	0.00039	1
10401	2,4,5-T	93-76-5	N.D.	0.00097	1
10401	2,4,5-TP	93-72-1	N.D.	0.00089	1
Pesticides/PCBs	**SW-846 8081A**		**mg/kg**	**mg/kg**	
01363	Aldrin	309-00-2	N.D.	0.00039	1
01363	Alpha BHC	319-84-6	N.D.	0.00020	1
01363	Beta BHC	319-85-7	N.D.	0.00036	1
01363	Gamma BHC - Lindane	58-89-9	N.D.	0.00020	1
01363	Alpha Chlordane	5103-71-9	N.D.	0.00028	1
01363	Gamma Chlordane	5103-74-2	N.D.	0.00030	1
01363	p,p-DDD	72-54-8	N.D.	0.00039	1
01363	p,p-DDE	72-55-9	N.D.	0.00039	1
01363	p,p-DDT	50-29-3	N.D.	0.00039	1
01363	Delta BHC	319-86-8	N.D.	0.00022	1
01363	Dieldrin	60-57-1	N.D.	0.00039	1
01363	Endosulfan I	959-98-8	N.D.	0.00026	1
01363	Endosulfan II	33213-65-9	N.D.	0.00039	1
01363	Endosulfan Sulfate	1031-07-8	N.D.	0.00039	1
01363	Endrin	72-20-8	N.D.	0.00039	1
01363	Endrin Aldehyde	7421-93-4	N.D.	0.00039	1
01363	Endrin Ketone	53494-70-5	N.D.	0.00039	1
01363	Heptachlor	76-44-8	N.D.	0.00036	1
01363	Heptachlor Epoxide	1024-57-3	N.D.	0.00023	1
01363	Methoxychlor	72-43-5	N.D.	0.0020	1
01363	Toxaphene	8001-35-2	N.D.	0.013	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	16.4	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: FB1-3-4 Grab Soil
21983

LL Sample # SW 7216889
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 14:00 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

FB1-3

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10401	Herbicide soils 8151A Master	SW-846 8151A	1	132710026A	10/01/2013 08:14	Melissa McDermott	1
01363	OC Pesticides in Solids	SW-846 8081A	1	132710003A	09/30/2013 22:15	Jamie L Brillhart	1
11134	Pesticide Screen Soils Ext	SW-846 3550B	1	132710003A	09/29/2013 14:00	Wanda F Oswald	1
04181	Herbicide Soil Extraction	SW-846 3550B/SW-846 8151A	1	132710026A	09/29/2013 08:00	Kerrie A Freeburn	1
00111	Moisture	SM 2540 G-1997	1	13273820001B	09/30/2013 19:28	Scott W Freisher	1

Sample Description: B11-7-8 Grab Soil
21983

LL Sample # SW 7216890
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 09:40 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

B11-7

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**	**mg/kg**	
10237	Acetone	67-64-1	N.D.	1.6	196.08
10237	Benzene	71-43-2	N.D.	0.12	196.08
10237	Bromodichloromethane	75-27-4	N.D.	0.23	196.08
10237	Bromoform	75-25-2	N.D.	0.23	196.08
10237	Bromomethane	74-83-9	N.D.	0.47	196.08
10237	2-Butanone	78-93-3	N.D.	0.93	196.08
10237	Carbon Disulfide	75-15-0	N.D.	0.23	196.08
10237	Carbon Tetrachloride	56-23-5	N.D.	0.23	196.08
10237	Chlorobenzene	108-90-7	N.D.	0.23	196.08
10237	Chloroethane	75-00-3	N.D.	0.47	196.08
10237	Chloroform	67-66-3	N.D.	0.23	196.08
10237	Chloromethane	74-87-3	N.D.	0.47	196.08
10237	Dibromochloromethane	124-48-1	N.D.	0.23	196.08
10237	1,1-Dichloroethane	75-34-3	N.D.	0.23	196.08
10237	1,2-Dichloroethane	107-06-2	N.D.	0.23	196.08
10237	1,1-Dichloroethene	75-35-4	N.D.	0.23	196.08
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.23	196.08
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.23	196.08
10237	1,2-Dichloropropane	78-87-5	N.D.	0.23	196.08
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.23	196.08
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.23	196.08
10237	Ethylbenzene	100-41-4	N.D.	0.23	196.08
10237	2-Hexanone	591-78-6	N.D.	0.70	196.08
10237	4-Methyl-2-pentanone	108-10-1	N.D.	0.70	196.08
10237	Methylene Chloride	75-09-2	N.D.	0.47	196.08
10237	Styrene	100-42-5	N.D.	0.23	196.08
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.23	196.08
10237	Tetrachloroethene	127-18-4	N.D.	0.23	196.08
10237	Toluene	108-88-3	N.D.	0.23	196.08
10237	1,1,1-Trichloroethane	71-55-6	N.D.	0.23	196.08
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.23	196.08
10237	Trichloroethene	79-01-6	N.D.	0.23	196.08
10237	Vinyl Chloride	75-01-4	N.D.	0.23	196.08
10237	Xylene (Total)	1330-20-7	N.D.	0.23	196.08
	Reporting limits were raised due to interference from the sample matrix.				
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	3,300	45	4752.85
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	4,600	48	10
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	16.1	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B11-7-8 Grab Soil
21983

LL Sample # SW 7216890
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 09:40 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

B11-7

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	Q132731AA	09/30/2013 12:06	Lauren C Temple	196.08
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/29/2013 00:26	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327232563	09/29/2013 00:26	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:36	Scott W Freisher	n.a.
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13273A16A	09/30/2013 17:29	Laura M Krieger	4752.85
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:35	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710027A	10/01/2013 16:46	Michele D Hamilton	10
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710027A	09/29/2013 06:05	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997	1	13273820001B	09/30/2013 19:28	Scott W Freisher	1

Sample Description: B12-3-4 Grab Soil
21983

LL Sample # SW 7216891
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 09:50 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

B12-3

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**	**mg/kg**	
10237	Acetone	67-64-1	0.017 J	0.009	1.01
10237	Benzene	71-43-2	N.D.	0.0006	1.01
10237	Bromodichloromethane	75-27-4	N.D.	0.001	1.01
10237	Bromoform	75-25-2	N.D.	0.001	1.01
10237	Bromomethane	74-83-9	N.D.	0.002	1.01
10237	2-Butanone	78-93-3	N.D.	0.005	1.01
10237	Carbon Disulfide	75-15-0	N.D.	0.001	1.01
10237	Carbon Tetrachloride	56-23-5	N.D.	0.001	1.01
10237	Chlorobenzene	108-90-7	N.D.	0.001	1.01
10237	Chloroethane	75-00-3	N.D.	0.002	1.01
10237	Chloroform	67-66-3	N.D.	0.001	1.01
10237	Chloromethane	74-87-3	N.D.	0.002	1.01
10237	Dibromochloromethane	124-48-1	N.D.	0.001	1.01
10237	1,1-Dichloroethane	75-34-3	N.D.	0.001	1.01
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	1.01
10237	1,1-Dichloroethene	75-35-4	N.D.	0.001	1.01
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.001	1.01
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.001	1.01
10237	1,2-Dichloropropane	78-87-5	N.D.	0.001	1.01
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	1.01
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	1.01
10237	Ethylbenzene	100-41-4	N.D.	0.001	1.01
10237	2-Hexanone	591-78-6	N.D.	0.004	1.01
10237	4-Methyl-2-pentanone	108-10-1	N.D.	0.004	1.01
10237	Methylene Chloride	75-09-2	N.D.	0.002	1.01
10237	Styrene	100-42-5	N.D.	0.001	1.01
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	1.01
10237	Tetrachloroethene	127-18-4	N.D.	0.001	1.01
10237	Toluene	108-88-3	N.D.	0.001	1.01
10237	1,1,1-Trichloroethane	71-55-6	N.D.	0.001	1.01
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.001	1.01
10237	Trichloroethene	79-01-6	N.D.	0.001	1.01
10237	Vinyl Chloride	75-01-4	N.D.	0.001	1.01
10237	Xylene (Total)	1330-20-7	N.D.	0.001	1.01
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	0.9 J	0.2	23.9
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	64	4.9	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	18.9	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B12-3-4 Grab Soil
21983

LL Sample # SW 7216891
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 09:50 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

B12-3

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132731AA	09/30/2013 15:59	Chelsea B Stong	1.01
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/29/2013 00:26	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327232563	09/29/2013 00:26	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:37	Scott W Freisher	n.a.
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13273A16A	10/01/2013 01:05	Laura M Krieger	23.9
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:38	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710027A	09/30/2013 23:09	Michele D Hamilton	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710027A	09/29/2013 06:05	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997	1	13273820001B	09/30/2013 19:28	Scott W Freisher	1

Sample Description: B13-4-5 Grab Soil
21983

LL Sample # SW 7216892
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 10:05 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

B13-4

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**	**mg/kg**	
10237	Acetone	67-64-1	N.D.	0.008	0.95
10237	Benzene	71-43-2	N.D.	0.0006	0.95
10237	Bromodichloromethane	75-27-4	N.D.	0.001	0.95
10237	Bromoform	75-25-2	N.D.	0.001	0.95
10237	Bromomethane	74-83-9	N.D.	0.002	0.95
10237	2-Butanone	78-93-3	N.D.	0.004	0.95
10237	Carbon Disulfide	75-15-0	N.D.	0.001	0.95
10237	Carbon Tetrachloride	56-23-5	N.D.	0.001	0.95
10237	Chlorobenzene	108-90-7	N.D.	0.001	0.95
10237	Chloroethane	75-00-3	N.D.	0.002	0.95
10237	Chloroform	67-66-3	N.D.	0.001	0.95
10237	Chloromethane	74-87-3	N.D.	0.002	0.95
10237	Dibromochloromethane	124-48-1	N.D.	0.001	0.95
10237	1,1-Dichloroethane	75-34-3	N.D.	0.001	0.95
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.95
10237	1,1-Dichloroethene	75-35-4	N.D.	0.001	0.95
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.001	0.95
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.001	0.95
10237	1,2-Dichloropropane	78-87-5	N.D.	0.001	0.95
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	0.95
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	0.95
10237	Ethylbenzene	100-41-4	N.D.	0.001	0.95
10237	2-Hexanone	591-78-6	N.D.	0.003	0.95
10237	4-Methyl-2-pentanone	108-10-1	N.D.	0.003	0.95
10237	Methylene Chloride	75-09-2	N.D.	0.002	0.95
10237	Styrene	100-42-5	N.D.	0.001	0.95
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	0.95
10237	Tetrachloroethene	127-18-4	N.D.	0.001	0.95
10237	Toluene	108-88-3	N.D.	0.001	0.95
10237	1,1,1-Trichloroethane	71-55-6	N.D.	0.001	0.95
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.001	0.95
10237	Trichloroethene	79-01-6	N.D.	0.001	0.95
10237	Vinyl Chloride	75-01-4	N.D.	0.001	0.95
10237	Xylene (Total)	1330-20-7	N.D.	0.001	0.95
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	N.D.	0.2	23.56
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	92	4.7	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	15.3	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B13-4-5 Grab Soil
21983

LL Sample # SW 7216892
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 10:05 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

B13-4

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132731AA	09/30/2013 18:16	Chelsea B Stong	0.95
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/29/2013 00:27	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327232563	09/29/2013 00:27	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:43	Scott W Freisher	n.a.
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13273A16A	10/01/2013 01:43	Laura M Krieger	23.56
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:41	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710027A	10/01/2013 17:49	Michele D Hamilton	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710027A	09/29/2013 06:05	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997	1	13273820001B	09/30/2013 19:28	Scott W Freisher	1

Sample Description: B14-6-7 Grab Soil
21983

LL Sample # SW 7216893
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 10:24 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

B14-6

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**	**mg/kg**	
10237	Acetone	67-64-1	N.D.	0.42	50.2
10237	Benzene	71-43-2	N.D.	0.030	50.2
10237	Bromodichloromethane	75-27-4	N.D.	0.061	50.2
10237	Bromoform	75-25-2	N.D.	0.061	50.2
10237	Bromomethane	74-83-9	N.D.	0.12	50.2
10237	2-Butanone	78-93-3	N.D.	0.24	50.2
10237	Carbon Disulfide	75-15-0	N.D.	0.061	50.2
10237	Carbon Tetrachloride	56-23-5	N.D.	0.061	50.2
10237	Chlorobenzene	108-90-7	N.D.	0.061	50.2
10237	Chloroethane	75-00-3	N.D.	0.12	50.2
10237	Chloroform	67-66-3	N.D.	0.061	50.2
10237	Chloromethane	74-87-3	N.D.	0.12	50.2
10237	Dibromochloromethane	124-48-1	N.D.	0.061	50.2
10237	1,1-Dichloroethane	75-34-3	N.D.	0.061	50.2
10237	1,2-Dichloroethane	107-06-2	N.D.	0.061	50.2
10237	1,1-Dichloroethene	75-35-4	N.D.	0.061	50.2
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.061	50.2
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.061	50.2
10237	1,2-Dichloropropane	78-87-5	N.D.	0.061	50.2
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.061	50.2
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.061	50.2
10237	Ethylbenzene	100-41-4	N.D.	0.061	50.2
10237	2-Hexanone	591-78-6	N.D.	0.18	50.2
10237	4-Methyl-2-pentanone	108-10-1	N.D.	0.18	50.2
10237	Methylene Chloride	75-09-2	N.D.	0.12	50.2
10237	Styrene	100-42-5	N.D.	0.061	50.2
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.061	50.2
10237	Tetrachloroethene	127-18-4	N.D.	0.061	50.2
10237	Toluene	108-88-3	N.D.	0.061	50.2
10237	1,1,1-Trichloroethane	71-55-6	N.D.	0.061	50.2
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.061	50.2
10237	Trichloroethene	79-01-6	N.D.	0.061	50.2
10237	Vinyl Chloride	75-01-4	N.D.	0.061	50.2
10237	Xylene (Total)	1330-20-7	N.D.	0.061	50.2
	Reporting limits were raised due to interference from the sample matrix.				
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	170	4.5	469.48
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	760	24	5
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	17.2	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B14-6-7 Grab Soil
21983

LL Sample # SW 7216893
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 10:24 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

B14-6

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	Q132731AA	09/30/2013 10:56	Lauren C Temple	50.2
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/29/2013 00:27	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327232563	09/29/2013 00:27	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:47	Scott W Freisher	n.a.
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13273A16A	09/30/2013 18:07	Laura M Krieger	469.48
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:46	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710027A	10/01/2013 17:07	Michele D Hamilton	5
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710027A	09/29/2013 06:05	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997	1	13273820001B	09/30/2013 19:28	Scott W Freisher	1

Sample Description: B15-7-8 Grab Soil
21983

LL Sample # SW 7216894
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 11:05 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

B15-7

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**	**mg/kg**	
10237	Acetone	67-64-1	N.D.	0.47	54.23
10237	Benzene	71-43-2	N.D.	0.033	54.23
10237	Bromodichloromethane	75-27-4	N.D.	0.066	54.23
10237	Bromoform	75-25-2	N.D.	0.066	54.23
10237	Bromomethane	74-83-9	N.D.	0.13	54.23
10237	2-Butanone	78-93-3	N.D.	0.27	54.23
10237	Carbon Disulfide	75-15-0	N.D.	0.066	54.23
10237	Carbon Tetrachloride	56-23-5	N.D.	0.066	54.23
10237	Chlorobenzene	108-90-7	N.D.	0.066	54.23
10237	Chloroethane	75-00-3	N.D.	0.13	54.23
10237	Chloroform	67-66-3	N.D.	0.066	54.23
10237	Chloromethane	74-87-3	N.D.	0.13	54.23
10237	Dibromochloromethane	124-48-1	N.D.	0.066	54.23
10237	1,1-Dichloroethane	75-34-3	N.D.	0.066	54.23
10237	1,2-Dichloroethane	107-06-2	N.D.	0.066	54.23
10237	1,1-Dichloroethene	75-35-4	N.D.	0.066	54.23
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.066	54.23
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.066	54.23
10237	1,2-Dichloropropane	78-87-5	N.D.	0.066	54.23
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.066	54.23
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.066	54.23
10237	Ethylbenzene	100-41-4	N.D.	0.066	54.23
10237	2-Hexanone	591-78-6	N.D.	0.20	54.23
10237	4-Methyl-2-pentanone	108-10-1	N.D.	0.20	54.23
10237	Methylene Chloride	75-09-2	N.D.	0.13	54.23
10237	Styrene	100-42-5	N.D.	0.066	54.23
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.066	54.23
10237	Tetrachloroethene	127-18-4	N.D.	0.066	54.23
10237	Toluene	108-88-3	N.D.	0.066	54.23
10237	1,1,1-Trichloroethane	71-55-6	N.D.	0.066	54.23
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.066	54.23
10237	Trichloroethene	79-01-6	N.D.	0.066	54.23
10237	Vinyl Chloride	75-01-4	N.D.	0.066	54.23
10237	Xylene (Total)	1330-20-7	N.D.	0.066	54.23
	Reporting limits were raised due to interference from the sample matrix.				
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	190	4.8	492.13
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	450	4.9	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	18.4	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B15-7-8 Grab Soil
21983

LL Sample # SW 7216894
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 11:05 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

B15-7

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	Q132731AA	09/30/2013 11:20	Lauren C Temple	54.23
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/29/2013 00:27	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327232563	09/29/2013 00:27	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:51	Scott W Freisher	n.a.
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13273A16A	09/30/2013 18:45	Laura M Krieger	492.13
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:50	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710027A	09/30/2013 23:30	Michele D Hamilton	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710027A	09/29/2013 06:05	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997	1	13273820001B	09/30/2013 19:28	Scott W Freisher	1

Sample Description: B16-7-8 Grab Soil
21983

LL Sample # SW 7216895
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 11:20 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

B16-7

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**		**mg/kg**	
10237	Acetone	67-64-1	N.D.		0.40	48.08
10237	Benzene	71-43-2	N.D.		0.029	48.08
10237	Bromodichloromethane	75-27-4	N.D.		0.057	48.08
10237	Bromoform	75-25-2	N.D.		0.057	48.08
10237	Bromomethane	74-83-9	N.D.		0.11	48.08
10237	2-Butanone	78-93-3	N.D.		0.23	48.08
10237	Carbon Disulfide	75-15-0	N.D.		0.057	48.08
10237	Carbon Tetrachloride	56-23-5	N.D.		0.057	48.08
10237	Chlorobenzene	108-90-7	N.D.		0.057	48.08
10237	Chloroethane	75-00-3	N.D.		0.11	48.08
10237	Chloroform	67-66-3	N.D.		0.057	48.08
10237	Chloromethane	74-87-3	N.D.		0.11	48.08
10237	Dibromochloromethane	124-48-1	N.D.		0.057	48.08
10237	1,1-Dichloroethane	75-34-3	N.D.		0.057	48.08
10237	1,2-Dichloroethane	107-06-2	N.D.		0.057	48.08
10237	1,1-Dichloroethene	75-35-4	N.D.		0.057	48.08
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		0.057	48.08
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		0.057	48.08
10237	1,2-Dichloropropane	78-87-5	N.D.		0.057	48.08
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.057	48.08
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.057	48.08
10237	Ethylbenzene	100-41-4	N.D.		0.057	48.08
10237	2-Hexanone	591-78-6	0.38	J	0.17	48.08
10237	4-Methyl-2-pentanone	108-10-1	N.D.		0.17	48.08
10237	Methylene Chloride	75-09-2	N.D.		0.11	48.08
10237	Styrene	100-42-5	N.D.		0.057	48.08
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.057	48.08
10237	Tetrachloroethene	127-18-4	N.D.		0.057	48.08
10237	Toluene	108-88-3	N.D.		0.057	48.08
10237	1,1,1-Trichloroethane	71-55-6	N.D.		0.057	48.08
10237	1,1,2-Trichloroethane	79-00-5	N.D.		0.057	48.08
10237	Trichloroethene	79-01-6	N.D.		0.057	48.08
10237	Vinyl Chloride	75-01-4	N.D.		0.057	48.08
10237	Xylene (Total)	1330-20-7	N.D.		0.057	48.08
	Reporting limits were raised due to interference from the sample matrix.					
GC Volatiles	**SW-846 8015B**		**mg/kg**		**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	19		0.9	96.25
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**		**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	63		4.7	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	
00111	Moisture	n.a.	15.7		0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.					

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B16-7-8 Grab Soil
21983

LL Sample # SW 7216895
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 11:20 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

B16-7

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	Q132731AA	09/30/2013 11:42	Lauren C Temple	48.08
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/29/2013 00:27	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327232563	09/29/2013 00:27	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:58	Scott W Freisher	n.a.
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13273A16A	09/30/2013 19:23	Laura M Krieger	96.25
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 22:57	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710027A	09/30/2013 22:27	Michele D Hamilton	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710027A	09/29/2013 06:05	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997	1	13273820001B	09/30/2013 19:28	Scott W Freisher	1

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B17-8-9 Grab Soil
21983

LL Sample # SW 7216896
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 11:32 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

B17-8

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**mg/kg**	**mg/kg**	
10237	Acetone	67-64-1	0.010 J	0.009	1
10237	Benzene	71-43-2	N.D.	0.0006	1
10237	Bromodichloromethane	75-27-4	N.D.	0.001	1
10237	Bromoform	75-25-2	N.D.	0.001	1
10237	Bromomethane	74-83-9	N.D.	0.003	1
10237	2-Butanone	78-93-3	N.D.	0.005	1
10237	Carbon Disulfide	75-15-0	N.D.	0.001	1
10237	Carbon Tetrachloride	56-23-5	N.D.	0.001	1
10237	Chlorobenzene	108-90-7	N.D.	0.001	1
10237	Chloroethane	75-00-3	N.D.	0.003	1
10237	Chloroform	67-66-3	N.D.	0.001	1
10237	Chloromethane	74-87-3	N.D.	0.003	1
10237	Dibromochloromethane	124-48-1	N.D.	0.001	1
10237	1,1-Dichloroethane	75-34-3	N.D.	0.001	1
10237	1,2-Dichloroethane	107-06-2	N.D.	0.001	1
10237	1,1-Dichloroethene	75-35-4	N.D.	0.001	1
10237	cis-1,2-Dichloroethene	156-59-2	N.D.	0.001	1
10237	trans-1,2-Dichloroethene	156-60-5	N.D.	0.001	1
10237	1,2-Dichloropropane	78-87-5	N.D.	0.001	1
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.001	1
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.001	1
10237	Ethylbenzene	100-41-4	N.D.	0.001	1
10237	2-Hexanone	591-78-6	N.D.	0.004	1
10237	4-Methyl-2-pentanone	108-10-1	N.D.	0.004	1
10237	Methylene Chloride	75-09-2	N.D.	0.003	1
10237	Styrene	100-42-5	N.D.	0.001	1
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.001	1
10237	Tetrachloroethene	127-18-4	N.D.	0.001	1
10237	Toluene	108-88-3	N.D.	0.001	1
10237	1,1,1-Trichloroethane	71-55-6	N.D.	0.001	1
10237	1,1,2-Trichloroethane	79-00-5	N.D.	0.001	1
10237	Trichloroethene	79-01-6	N.D.	0.001	1
10237	Vinyl Chloride	75-01-4	N.D.	0.001	1
10237	Xylene (Total)	1330-20-7	N.D.	0.001	1
GC Volatiles	**SW-846 8015B**		**mg/kg**	**mg/kg**	
01637	TPH-GRO soil C6-C10	n.a.	N.D.	0.3	25.13
GC Petroleum Hydrocarbons	**SW-846 8015B**		**mg/kg**	**mg/kg**	
08270	TPH-DRO soil C10-C28	n.a.	N.D.	5.0	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	20.1	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

eurofins
Lancaster Laboratories Environmental
2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: B17-8-9 Grab Soil
21983

LL Sample # SW 7216896
LL Group # 1422318
Account # 05097

Project Name: 21983

Collected: 09/27/2013 11:32 by JH

Submitted: 09/28/2013 09:25
Reported: 10/02/2013 15:20

Engineering Consulting Service
Suite 100
14026 Thunderbolt Place
Chantilly VA 20151

B17-8

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	PPL/TCL VOCs - soil	SW-846 8260B	1	B132731AA	09/30/2013 15:37	Chelsea B Stong	1
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/29/2013 00:27	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201327232563	09/29/2013 00:27	Scott W Freisher	n.a.
06646	GC/MS HL Bulk Sample Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 23:02	Scott W Freisher	n.a.
01637	TPH-GRO soil C6-C10	SW-846 8015B	1	13273A16A	10/01/2013 02:21	Laura M Krieger	25.13
01150	GC - Bulk Soil Prep	SW-846 5035A Modified	1	201327232563	09/28/2013 23:01	Scott W Freisher	n.a.
08270	TPH-DRO soil C10-C28	SW-846 8015B	1	132710027A	09/30/2013 22:05	Michele D Hamilton	1
07004	Extraction - DRO (Soils)	SW-846 3550B	1	132710027A	09/29/2013 06:05	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997	1	13273820001B	09/30/2013 19:28	Scott W Freisher	1

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422318
Reported: 10/02/13 at 03:20 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: B132731AA	Sample number(s): 7216881-7216886,7216891-7216892,7216896							
Acetone	N.D.	0.007	mg/kg	103	119	23-171	14	30
Benzene	N.D.	0.0005	mg/kg	97	102	80-120	5	30
Bromodichloromethane	N.D.	0.001	mg/kg	94	98	75-120	4	30
Bromoform	N.D.	0.001	mg/kg	94	102	70-120	9	30
Bromomethane	N.D.	0.002	mg/kg	106	111	32-162	5	30
2-Butanone	N.D.	0.004	mg/kg	87	91	38-146	5	30
Carbon Disulfide	N.D.	0.001	mg/kg	102	105	63-128	3	30
Carbon Tetrachloride	N.D.	0.001	mg/kg	102	106	69-122	4	30
Chlorobenzene	N.D.	0.001	mg/kg	92	96	80-120	5	30
Chloroethane	N.D.	0.002	mg/kg	102	108	17-171	6	30
Chloroform	N.D.	0.001	mg/kg	99	103	80-120	4	30
Chloromethane	N.D.	0.002	mg/kg	106	110	56-120	3	30
Dibromochloromethane	N.D.	0.001	mg/kg	93	99	77-120	7	30
1,1-Dichloroethane	N.D.	0.001	mg/kg	97	103	80-120	6	30
1,2-Dichloroethane	N.D.	0.001	mg/kg	99	104	72-126	5	30
1,1-Dichloroethene	N.D.	0.001	mg/kg	105	109	73-129	4	30
cis-1,2-Dichloroethene	N.D.	0.001	mg/kg	98	104	80-120	6	30
trans-1,2-Dichloroethene	N.D.	0.001	mg/kg	104	109	79-120	4	30
1,2-Dichloropropane	N.D.	0.001	mg/kg	96	102	77-120	6	30
cis-1,3-Dichloropropene	N.D.	0.001	mg/kg	94	100	74-120	6	30
trans-1,3-Dichloropropene	N.D.	0.001	mg/kg	84	89	77-120	6	30
Ethylbenzene	N.D.	0.001	mg/kg	88	94	80-120	7	30
2-Hexanone	N.D.	0.003	mg/kg	67	72	40-129	7	30
4-Methyl-2-pentanone	N.D.	0.003	mg/kg	73	77	52-125	6	30
Methylene Chloride	N.D.	0.002	mg/kg	105	111	80-124	6	30
Styrene	N.D.	0.001	mg/kg	89	95	76-120	6	30
1,1,2,2-Tetrachloroethane	N.D.	0.001	mg/kg	83	82	71-123	1	30
Tetrachloroethene	N.D.	0.001	mg/kg	94	99	78-126	5	30
Toluene	N.D.	0.001	mg/kg	91	98	80-120	7	30
1,1,1-Trichloroethane	N.D.	0.001	mg/kg	89	92	71-125	3	30
1,1,2-Trichloroethane	N.D.	0.001	mg/kg	89	95	80-120	7	30
Trichloroethene	N.D.	0.001	mg/kg	96	102	80-120	6	30
Vinyl Chloride	N.D.	0.001	mg/kg	107	111	53-120	3	30
Xylene (Total)	N.D.	0.001	mg/kg	89	96	80-120	8	30
Batch number: Q132731AA	Sample number(s): 7216890,7216893-7216895							
Acetone	N.D.	0.35	mg/kg	70	79	23-171	12	30
Benzene	N.D.	0.025	mg/kg	94	91	80-120	3	30
Bromodichloromethane	N.D.	0.050	mg/kg	81	81	75-120	0	30
Bromoform	N.D.	0.050	mg/kg	92	92	70-120	0	30
Bromomethane	N.D.	0.10	mg/kg	128	127	32-162	1	30
2-Butanone	N.D.	0.20	mg/kg	69	71	38-146	3	30
Carbon Disulfide	N.D.	0.050	mg/kg	90	88	63-128	2	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422318
Reported: 10/02/13 at 03:20 PM

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Carbon Tetrachloride	N.D.	0.050	mg/kg	89	86	69-122	2	30
Chlorobenzene	N.D.	0.050	mg/kg	95	94	80-120	1	30
Chloroethane	N.D.	0.10	mg/kg	100	102	17-171	1	30
Chloroform	N.D.	0.050	mg/kg	89	88	80-120	2	30
Chloromethane	N.D.	0.10	mg/kg	81	80	56-120	1	30
Dibromochloromethane	N.D.	0.050	mg/kg	85	85	77-120	0	30
1,1-Dichloroethane	N.D.	0.050	mg/kg	90	87	80-120	4	30
1,2-Dichloroethane	N.D.	0.050	mg/kg	84	83	72-126	1	30
1,1-Dichloroethene	N.D.	0.050	mg/kg	97	93	73-129	4	30
cis-1,2-Dichloroethene	N.D.	0.050	mg/kg	93	91	80-120	2	30
trans-1,2-Dichloroethene	N.D.	0.050	mg/kg	99	95	79-120	3	30
1,2-Dichloropropane	N.D.	0.050	mg/kg	93	92	77-120	2	30
cis-1,3-Dichloropropene	N.D.	0.050	mg/kg	91	90	74-120	1	30
trans-1,3-Dichloropropene	N.D.	0.050	mg/kg	86	84	77-120	2	30
Ethylbenzene	N.D.	0.050	mg/kg	90	89	80-120	1	30
2-Hexanone	N.D.	0.15	mg/kg	66	67	40-129	2	30
4-Methyl-2-pentanone	N.D.	0.15	mg/kg	74	72	52-125	3	30
Methylene Chloride	N.D.	0.10	mg/kg	99	95	80-124	4	30
Styrene	N.D.	0.050	mg/kg	88	88	76-120	1	30
1,1,2,2-Tetrachloroethane	N.D.	0.050	mg/kg	86	89	71-123	4	30
Tetrachloroethene	N.D.	0.050	mg/kg	99	97	78-126	2	30
Toluene	N.D.	0.050	mg/kg	94	93	80-120	1	30
1,1,1-Trichloroethane	N.D.	0.050	mg/kg	94	91	71-125	3	30
1,1,2-Trichloroethane	N.D.	0.050	mg/kg	95	92	80-120	3	30
Trichloroethene	N.D.	0.050	mg/kg	94	92	80-120	2	30
Vinyl Chloride	N.D.	0.050	mg/kg	84	83	53-120	2	30
Xylene (Total)	N.D.	0.050	mg/kg	92	92	80-120	0	30

Batch number: T132731AA Sample number(s): 7216880

Acetone	N.D.	6.	ug/l	109	38-157
Benzene	N.D.	0.5	ug/l	99	78-120
Bromodichloromethane	N.D.	1.	ug/l	79	73-120
Bromoform	N.D.	1.	ug/l	79	61-120
Bromomethane	N.D.	1.	ug/l	93	51-120
2-Butanone	N.D.	3.	ug/l	91	58-126
Carbon Disulfide	N.D.	1.	ug/l	89	58-126
Carbon Tetrachloride	N.D.	1.	ug/l	99	74-130
Chlorobenzene	N.D.	0.8	ug/l	102	80-120
Chloroethane	N.D.	1.	ug/l	90	45-120
Chloroform	N.D.	0.8	ug/l	101	77-122
Chloromethane	N.D.	1.	ug/l	91	55-120
Dibromochloromethane	N.D.	1.	ug/l	79	72-120
1,1-Dichloroethane	N.D.	1.	ug/l	102	80-120
1,2-Dichloroethane	N.D.	1.	ug/l	99	71-130
1,1-Dichloroethene	N.D.	0.8	ug/l	108	76-124
cis-1,2-Dichloroethene	N.D.	0.8	ug/l	105	80-120
trans-1,2-Dichloroethene	N.D.	0.8	ug/l	108	80-120
1,2-Dichloropropane	N.D.	1.	ug/l	101	80-120
cis-1,3-Dichloropropene	N.D.	1.	ug/l	88	80-120
trans-1,3-Dichloropropene	N.D.	1.	ug/l	78	69-120
Ethylbenzene	N.D.	0.8	ug/l	97	79-120
2-Hexanone	N.D.	3.	ug/l	81	59-125
4-Methyl-2-pentanone	N.D.	3.	ug/l	77	59-120
Methylene Chloride	N.D.	2.	ug/l	108	80-120
Styrene	N.D.	1.	ug/l	98	80-120
1,1,2,2-Tetrachloroethane	N.D.	1.	ug/l	93	70-120

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422318
Reported: 10/02/13 at 03:20 PM

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Tetrachloroethene	N.D.	0.8	ug/l	106		80-120		
Toluene	N.D.	0.7	ug/l	97		80-120		
1,1,1-Trichloroethane	N.D.	0.8	ug/l	100		66-126		
1,1,2-Trichloroethane	N.D.	0.8	ug/l	103		80-120		
Trichloroethene	N.D.	1.	ug/l	104		80-120		
Vinyl Chloride	N.D.	1.	ug/l	95		63-120		
Xylene (Total)	N.D.	0.8	ug/l	98		80-120		
Batch number: 13271SLE026	Sample number(s): 7216881-7216886							
Acenaphthene	N.D.	0.003	mg/kg	96		81-111		
Acenaphthylene	N.D.	0.003	mg/kg	103		82-121		
Anthracene	N.D.	0.003	mg/kg	102		73-121		
Benzo(a)anthracene	N.D.	0.003	mg/kg	94		79-115		
Benzo(a)pyrene	N.D.	0.003	mg/kg	99		82-117		
Benzo(b)fluoranthene	N.D.	0.003	mg/kg	91		79-130		
Benzo(g,h,i)perylene	N.D.	0.003	mg/kg	96		69-118		
Benzo(k)fluoranthene	N.D.	0.003	mg/kg	98		78-119		
Chrysene	N.D.	0.003	mg/kg	93		75-114		
Dibenz(a,h)anthracene	N.D.	0.003	mg/kg	100		79-118		
Fluoranthene	N.D.	0.003	mg/kg	97		78-116		
Fluorene	N.D.	0.003	mg/kg	96		84-117		
Indeno(1,2,3-cd)pyrene	N.D.	0.003	mg/kg	99		78-122		
Naphthalene	N.D.	0.003	mg/kg	93		80-109		
Phenanthrene	N.D.	0.003	mg/kg	96		70-116		
Pyrene	N.D.	0.003	mg/kg	96		84-113		
Batch number: 13271WAK026	Sample number(s): 7216880							
Acenaphthene	N.D.	0.1	ug/l	100	99	69-122	1	30
Acenaphthylene	N.D.	0.1	ug/l	106	108	84-125	1	30
Anthracene	N.D.	0.1	ug/l	103	102	82-116	0	30
Benzo(a)anthracene	N.D.	0.1	ug/l	100	101	84-121	0	30
Benzo(a)pyrene	N.D.	0.1	ug/l	104	101	82-116	2	30
Benzo(b)fluoranthene	N.D.	0.1	ug/l	103	108	82-121	5	30
Benzo(g,h,i)perylene	N.D.	0.1	ug/l	108	108	81-121	0	30
Benzo(k)fluoranthene	N.D.	0.1	ug/l	103	94	81-122	9	30
Chrysene	N.D.	0.1	ug/l	98	99	81-120	0	30
Dibenz(a,h)anthracene	N.D.	0.1	ug/l	111	109	83-124	2	30
Fluoranthene	N.D.	0.1	ug/l	100	101	71-129	0	30
Fluorene	N.D.	0.1	ug/l	99	100	71-126	1	30
Indeno(1,2,3-cd)pyrene	N.D.	0.1	ug/l	111	109	83-121	2	30
Naphthalene	N.D.	0.1	ug/l	97	97	75-108	0	30
Phenanthrene	N.D.	0.1	ug/l	98	99	68-127	1	30
Pyrene	N.D.	0.1	ug/l	100	99	81-112	1	30
Batch number: 13273A16A	Sample number(s): 7216881-7216886,7216890-7216896							
TPH-GRO soil C6-C10	N.D.	0.2	mg/kg	85	83	67-120	3	30
Batch number: 13273A53A	Sample number(s): 7216880							
TPH-GRO water C6-C10	N.D.	20.	ug/l	102	100	75-135	1	30
Batch number: 132710026A	Sample number(s): 7216887-7216889							
2,4-D	N.D.	0.012	mg/kg	120		59-122		
Dalapon	N.D.	0.044	mg/kg	73		25-100		
2,4-DB	N.D.	0.0062	mg/kg	114		54-131		
Dicamba	N.D.	0.0040	mg/kg	98		55-138		
Dinoseb	N.D.	0.0090	mg/kg	33		10-56		

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422318
Reported: 10/02/13 at 03:20 PM

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2,4-DP (Dichloroprop)	N.D.	0.0090	mg/kg	144		65-158		
MCPA	N.D.	0.76	mg/kg	86		56-133		
MCPP (Mecoprop)	N.D.	0.75	mg/kg	88		54-134		
Pentachlorophenol	N.D.	0.00033	mg/kg	108		59-137		
2,4,5-T	N.D.	0.00082	mg/kg	126		58-135		
2,4,5-TP	N.D.	0.00075	mg/kg	109		63-130		
Batch number: 132710003A	Sample number(s): 7216887-7216889							
Aldrin	N.D.	0.00033	mg/kg	81		60-118		
Alpha BHC	N.D.	0.00017	mg/kg	90		62-128		
Beta BHC	N.D.	0.00030	mg/kg	86		69-121		
Gamma BHC - Lindane	N.D.	0.00017	mg/kg	83		64-130		
Alpha Chlordane	N.D.	0.00023	mg/kg	88		71-124		
Gamma Chlordane	N.D.	0.00025	mg/kg	87		66-137		
p,p-DDD	N.D.	0.00033	mg/kg	86		69-141		
p,p-DDE	N.D.	0.00033	mg/kg	88		69-130		
p,p-DDT	N.D.	0.00033	mg/kg	87		64-139		
Delta BHC	N.D.	0.00018	mg/kg	87		51-141		
Dieldrin	N.D.	0.00033	mg/kg	90		73-135		
Endosulfan I	N.D.	0.00022	mg/kg	80		64-130		
Endosulfan II	N.D.	0.00033	mg/kg	89		63-127		
Endosulfan Sulfate	N.D.	0.00033	mg/kg	95		71-132		
Endrin	N.D.	0.00033	mg/kg	86		70-132		
Endrin Aldehyde	N.D.	0.00033	mg/kg	90		60-120		
Endrin Ketone	N.D.	0.00033	mg/kg	89		69-139		
Heptachlor	N.D.	0.00030	mg/kg	83		62-127		
Heptachlor Epoxide	N.D.	0.00019	mg/kg	87		69-125		
Methoxychlor	N.D.	0.0017	mg/kg	88		67-136		
Toxaphene	N.D.	0.011	mg/kg					
Batch number: 132710027A	Sample number(s): 7216881-7216886,7216890-7216896							
TPH-DRO soil C10-C28	N.D.	4.0	mg/kg	102		76-120		
Batch number: 132710028A	Sample number(s): 7216880							
DRO C10-C28	N.D.	45.	ug/l	90	96	56-122	7	20
Batch number: 132711848001	Sample number(s): 7216880							
Arsenic	N.D.	0.0068	mg/l	95		90-113		
Barium	N.D.	0.00033	mg/l	101		90-110		
Cadmium	N.D.	0.00076	mg/l	98		90-112		
Chromium	N.D.	0.0016	mg/l	99		90-110		
Lead	N.D.	0.0047	mg/l	96		88-110		
Selenium	N.D.	0.0084	mg/l	93		80-120		
Silver	N.D.	0.0021	mg/l	111		80-120		
Batch number: 132715708001	Sample number(s): 7216881-7216886							
Arsenic	N.D.	0.700	mg/kg	98		80-120		
Barium	N.D.	0.0330	mg/kg	99		80-120		
Cadmium	N.D.	0.0760	mg/kg	98		80-120		
Chromium	N.D.	0.160	mg/kg	102		80-120		
Lead	N.D.	0.500	mg/kg	97		80-120		
Selenium	N.D.	0.800	mg/kg	101		80-120		
Silver	N.D.	0.170	mg/kg	110		80-120		
Batch number: 132715711001	Sample number(s): 7216881-7216886							
Mercury	N.D.	0.0100	mg/kg	112		80-120		

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422318
Reported: 10/02/13 at 03:20 PM

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 132735713001	Sample number(s): 7216880							
Mercury	N.D.	0.000060	mg/l	95		80-120		
Batch number: 13273820001B	Sample number(s): 7216881-7216896							
Moisture				100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: T132731AA	Sample number(s): 7216880 UNSPK: P216766								
Acetone	96	96	35-144	0	30				
Benzene	104	106	72-134	2	30				
Bromodichloromethane	81	86	38-137	6	30				
Bromoform	80	81	48-118	2	30				
Bromomethane	96	95	47-129	2	30				
2-Butanone	92	90	53-124	2	30				
Carbon Disulfide	94	97	53-149	3	30				
Carbon Tetrachloride	107	109	72-135	2	30				
Chlorobenzene	107	108	87-124	1	30				
Chloroethane	95	91	51-145	5	30				
Chloroform	105	107	81-134	2	30				
Chloromethane	94	92	50-131	3	30				
Dibromochloromethane	79	83	74-116	5	30				
1,1-Dichloroethane	105	107	84-129	2	30				
1,2-Dichloroethane	101	100	68-131	0	30				
1,1-Dichloroethene	112	114	75-155	1	30				
cis-1,2-Dichloroethene	107	109	80-141	1	30				
trans-1,2-Dichloroethene	110	112	81-142	2	30				
1,2-Dichloropropane	104	108	83-124	4	30				
cis-1,3-Dichloropropene	91	92	70-116	2	30				
trans-1,3-Dichloropropene	78	82	74-119	5	30				
Ethylbenzene	104	105	71-134	0	30				
2-Hexanone	87	86	55-127	1	30				
4-Methyl-2-pentanone	84	84	63-123	1	30				
Methylene Chloride	106	109	78-133	3	30				
Styrene	100	103	78-125	3	30				
1,1,2,2-Tetrachloroethane	97	94	72-128	3	30				
Tetrachloroethene	108	113	80-128	4	30				
Toluene	104	105	80-125	1	30				
1,1,1-Trichloroethane	106	111	69-140	4	30				
1,1,2-Trichloroethane	104	106	71-141	2	30				
Trichloroethene	111	111	88-133	1	30				
Vinyl Chloride	101	99	66-133	2	30				
Xylene (Total)	103	103	79-125	0	30				
Batch number: 13271SLE026	Sample number(s): 7216881-7216886 UNSPK: 7216881								
Acenaphthene	-349	-364	72-110	14	30				

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422318
Reported: 10/02/13 at 03:20 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
	(2)	(2)							
Acenaphthylene	99	103	73-125	3	30				
Anthracene	-706	-736	58-129	23	30				
	(2)	(2)							
Benzo(a)anthracene	-956	-1002	77-105	32*	30				
	(2)	(2)							
Benzo(a)pyrene	-904	-940	57-126	26	30				
	(2)	(2)							
Benzo(b)fluoranthene	-1018	-1084	73-132	43*	30				
	(2)	(2)							
Benzo(g,h,i)perylene	-548	-580	59-127	26	30				
	(2)	(2)							
Benzo(k)fluoranthene	-453	-473	75-124	17	30				
	(2)	(2)							
Chrysene	-902	-953	74-100	35*	30				
	(2)	(2)							
Dibenz(a,h)anthracene	-15*	-30*	65-125	14	30				
Fluoranthene	-2758	-2889	73-112	60*	30				
	(2)	(2)							
Fluorene	-294	-311	68-116	15	30				
	(2)	(2)							
Indeno(1,2,3-cd)pyrene	-484	-505	61-126	17	30				
	(2)	(2)							
Naphthalene	-369	-389	49-133	18	30				
	(2)	(2)							
Phenanthrene	-2585	-2704	86-111	59*	30				
	(2)	(2)							
Pyrene	-1943	-2051	82-112	55*	30				
	(2)	(2)							
Batch number: 132710026A	Sample number(s): 7216887-7216889 UNSPK: 7216887								
2,4-D	121	134	42-143	12	35				
Dalapon	52	54	16-98	3	50				
2,4-DB	113	133	10-179	17	50				
Dicamba	91	101	55-133	12	50				
Dinoseb	61*	66*	10-52	10	35				
2,4-DP (Dichloroprop)	139	154	32-171	12	50				
MCPA	87	99	23-169	14	50				
MCPP (Mecoprop)	84	93	24-164	12	50				
Pentachlorophenol	114	124	11-143	10	30				
2,4,5-T	108	124	12-172	15	35				
2,4,5-TP	104	114	10-142	10	35				
Batch number: 132710003A	Sample number(s): 7216887-7216889 UNSPK: P212163								
Aldrin	73	68	16-126	7	50				
Alpha BHC	73	68	10-129	7	50				
Beta BHC	76	71	42-133	5	50				
Gamma BHC - Lindane	75	70	10-140	6	50				
Alpha Chlordane	73	69	10-162	5	50				
Gamma Chlordane	81	77	18-153	5	50				
p,p-DDD	62	59	16-163	4	50				
p,p-DDE	77	72	35-152	5	50				

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422318
Reported: 10/02/13 at 03:20 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
p,p-DDT	75	72	10-176	4	50				
Delta BHC	74	70	23-140	4	50				
Dieldrin	77	72	41-153	6	50				
Endosulfan I	70	66	26-146	7	50				
Endosulfan II	73	68	34-141	6	50				
Endosulfan Sulfate	78	74	21-160	4	50				
Endrin	75	71	11-149	5	50				
Endrin Aldehyde	65	64	23-138	1	35				
Endrin Ketone	73	71	30-148	3	50				
Heptachlor	75	69	13-126	7	50				
Heptachlor Epoxide	74	70	33-144	5	50				
Methoxychlor	83	78	41-161	6	50				
Batch number: 132710027A	Sample number(s): 7216881-7216886,7216890-7216896 UNSPK: 7216881 BKG: 7216881								
TPH-DRO soil C10-C28	74		30-159			39	7.6 J	135* (1)	20
Batch number: 132711848001	Sample number(s): 7216880 UNSPK: P216490 BKG: P216490								
Arsenic	102	101	81-123	1	20	0.0134 J	0.0145 J	8 (1)	20
Barium	105	106	78-118	1	20	0.275	0.272	1	20
Cadmium	100	99	83-116	1	20	0.0027 J	0.0029 J	6 (1)	20
Chromium	101	102	76-120	1	20	0.0198	0.0179	10 (1)	20
Lead	108	105	75-125	1	20	0.516	0.518	0	20
Selenium	99	94	75-125	5	20	N.D.	N.D.	0 (1)	20
Silver	116	116	75-125	0	20	N.D.	N.D.	0 (1)	20
Batch number: 132715708001	Sample number(s): 7216881-7216886 UNSPK: 7216882 BKG: 7216882								
Arsenic	87	93	75-125	5	20	4.51	4.28	5 (1)	20
Barium	107	111	75-125	2	20	87.0	107	21*	20
Cadmium	91	93	75-125	2	20	0.109 J	N.D.	200* (1)	20
Chromium	120	114	75-125	3	20	15.6	15.0	4	20
Lead	-2476 (2)	-1526 (2)	75-125	114*	20	412	27.7	175*	20
Selenium	94	94	75-125	0	20	N.D.	N.D.	0 (1)	20
Silver	111	112	75-125	1	20	N.D.	N.D.	0 (1)	20
Batch number: 132715711001	Sample number(s): 7216881-7216886 UNSPK: 7216882 BKG: 7216882								
Mercury	113	105	80-120	7	20	0.0570 J	0.0728 J	24* (1)	20
Batch number: 132735713001	Sample number(s): 7216880 UNSPK: P216492 BKG: P216492								
Mercury	30 (2)	56 (2)	80-120	4	20	0.0060	0.0057	5	20
Batch number: 13273820001B	Sample number(s): 7216881-7216896 BKG: P206648								
Moisture						15.2	15.9	5	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422318
Reported: 10/02/13 at 03:20 PM

Surrogate Quality Control

Analysis Name: PPL/TCL VOCs - soil
Batch number: B132731AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7216881	103	98	100	88
7216882	104	101	106	84
7216883	105	105	103	89
7216884	103	95	109	82
7216885	105	102	102	97
7216886	104	96	108	80
7216891	103	101	103	95
7216892	103	102	98	95
7216896	102	97	98	91
Blank	102	101	97	93
LCS	102	102	98	97
LCSD	101	102	99	100
Limits:	50-141	54-135	52-141	50-131

Analysis Name: PPL/TCL VOCs - soil
Batch number: Q132731AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7216890	75	80	403*	386*
7216893	80	86	81	85
7216894	78	85	80	88
7216895	76	81	77	74
Blank	91	100	92	82
LCS	91	96	93	84
LCSD	93	98	96	89
Limits:	50-141	54-135	52-141	50-131

Analysis Name: PPL/TCL VOCs - water
Batch number: T132731AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7216880	97	98	100	103
Blank	97	100	101	101
LCS	98	100	100	102
MS	98	98	99	103
MSD	99	101	101	103
Limits:	80-116	77-113	80-113	78-113

Analysis Name: PAHs in Soil by GC/MS
Batch number: 13271SLE026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7216881	93	97	108
7216882	90	98	102
7216883	92	99	97
7216884	92	99	107
7216885	85	91	102
7216886	86	95	102
Blank	92	93	104

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422318
Reported: 10/02/13 at 03:20 PM

Surrogate Quality Control

LCS	92	96	101
MS	89	91	106
MSD	91	97	105
Limits:	51-120	56-126	45-158

Analysis Name: PAHs in Water by GC/MS
Batch number: 13271WAK026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7216880	86	89	79
Blank	94	95	105
LCS	96	99	104
LCSD	95	98	105
Limits:	60-123	63-121	47-146

Analysis Name: TPH-GRO soil C6-C10
Batch number: 13273A16A

	Trifluorotoluene-F
7216881	82
7216882	76
7216883	88
7216884	70
7216885	76
7216886	75
7216890	221*
7216891	78
7216892	77
7216893	90
7216894	90
7216895	88
7216896	75
Blank	97
LCS	97
LCSD	92
Limits:	50-142

Analysis Name: TPH-GRO water C6-C10
Batch number: 13273A53A

	Trifluorotoluene-F
7216880	71
Blank	70
LCS	78
LCSD	78
Limits:	63-135

Analysis Name: OC Pesticides in Solids
Batch number: 132710003A

	Tetrachloro-m-xylene	Decachlorobiphenyl
7216887	83	92

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422318
Reported: 10/02/13 at 03:20 PM

Surrogate Quality Control

7216888	76	81
7216889	88	106
Blank	77	91
LCS	84	97
MS	77	86
MSD	70	83
Limits:	37-135	32-161

Analysis Name: Herbicide soils 8151A Master
Batch number: 132710026A

	2,4-Dichlorophenylacetic acid
7216887	87
7216888	82
7216889	89
Blank	86
LCS	95
MS	88
MSD	99
Limits:	37-144

Analysis Name: TPH-DRO soil C10-C28
Batch number: 132710027A

	Orthoterphenyl
7216881	112
7216882	112
7216883	96
7216884	97
7216885	95
7216886	98
7216890	110
7216891	98
7216892	92
7216893	91
7216894	102
7216895	94
7216896	100
Blank	104
DUP	98
LCS	108
MS	110
Limits:	52-136

Analysis Name: TPH-DRO Water C20-C28
Batch number: 132710028A

	Orthoterphenyl
7216880	80
Blank	102
LCS	100
LCSD	105

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Engineering Consulting Service Group Number: 1422318
Reported: 10/02/13 at 03:20 PM

Surrogate Quality Control

Limits: 50-150

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # HO5097 JH 9/28/13 | For Eurofins Lancaster Laboratories Environmental use only Group # 1423318 Sample # 7216880-96
Instructions on reverse side correspond with circled numbers.

COC # 335116

1 Client Information

Client: ECS Mid-Atlantic
Acct. #:
Project Name/#: 21983
PWSID #:
Project Manager: Mike Johnson
P.O. #:
Sampler: Jon Horner
Quote #:
Name of state where samples were collected: VA

For Lab Use Only
FSC:
SCR#: 145368

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

2 Sample Identification | **3 Collected** (Date, Time) | Grab | Composite | **4 Matrix**: Sediment, Soil, Water (Ground, Potable, Surface, NPDES), Other | Total # of Containers | **5 Analysis Requested** (Preservation Codes) | **6 Remarks**

Sample Identification	Date	Time	Grab	Composite	Sediment	Soil	Water	Other	Total # of Containers	6120	VOCs	D20	PAHs	Metals	Herbicides	Pesticides	Remarks
MBW-1	9/27/13	1310	X				Water		10	X	X	X	X	X			use extra water in Amber for metals
MB1-3-4		1247				X			3	X	X	X	X	X			
MB1-7-8		1250				X			3	X	X	X	X	X			
MB2-3-4		1320				X			3	X	X	X	X	X			
MB2-7-8		1325				X			3	X	X	X	X	X			
MB3-4-5		1332				X			3	X	X	X	X	X			
MB3-7-8		1336				X			3	X	X	X	X	X			
~~MB4~~ FB3-2-3		1415				X			2						X	X	
~~MB4~~ FB2-2-3		1410				X			2						X	X	
FB1-3-4	9/27	1400				X			2						X	X	

7 Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: ~~10/10~~ 10/01/13

E-mail address: mjohnson@ecslimited.com

8 Data Package Options (circle if required)
Type I (Validation/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) TX TRRP-13
Type IV (CLP SOW) MA MCP CT RCP

9

Relinquished by	Date	Time	Received by	Date	Time
Angela S. Montgomery	9/13/13	1503			
[signature]	9/27/13	1700			
			[signature]	9/28/13	925

EDD Required? Yes No
If yes, format:
Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____
Temperature upon receipt 2.1 °C

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 5097 For Eurofins Lancaster Laboratories Environmental use only Group # 1422318 Sample # 7216880-96
Instructions on reverse side correspond with circled numbers.

COC # 335117

1 Client Information

Client: SAME AS
Acct. #:
Project Name/#:
PWSID #:
Project Manager: lst
P.O. #:
Sampler:
Quote #:
Name of state where samples were collected:

4 Matrix: Sediment ☐ Soil ☐ Water: Ground ☐ Potable ☐ Surface ☐ NPDES ☐ Other: ____

5 Analysis Requested / Preservation Codes

For Lab Use Only
FSC:
SCR#: 145368

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

6 Remarks

2 Sample Identification	Collected Date	Collected Time	3 Grab	Composite	Soil	Water	Other	Total # of Containers	DRO	GRO	VOCs
B11-7-8	9/27	0940	x		x			3	x	x	x
B12-3-4		0950	x		x			3	x	x	x
B13-4-5		1005	x		x			3	x	x	x
B14-6-7		1014	x		x			2	x	x	x
B15-7-8		1105	x		x			2	x	x	x
B16-7-8		1120	x		x			2	x	x	x
B17-8-9	9/27	1132	x		x			2	x	x	x

7 Turnaround Time (TAT) Requested (please circle)
Standard Rush 2 day
(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: 10/1/13

E-mail address: mjohnson@ecslimited.com

8 Data Package Options (circle if required)
Type I (Validation/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) TX TRRP-13
Type IV (CLP SOW) MA MCP CT RCP

9

Relinquished by	Date	Time	Received by	Date	Time
Angela S. Montgomery	9/13/13	1503			
[signature]	9/27/13	1700			
			[signature]	9/28/13	925

EDD Required? Yes No
If yes, format: ____

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 2.1 °C

eurofins | Lancaster Laboratories Environmental

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.