

# React Environmental Services, Inc.

6901 Kingsessing Avenue, Philadelphia, PA 19142 (800) 326-2439 / Fax (215) 729-1557

PHASE II ENVIRONMENTAL SITE ASSESSMENT 2230-2242 BRIDGE STREET PHILADELPHIA, PENNSYLVANIA 19124

### REACT ENVIRONMENTAL PROJECT NUMBER 5583

**Prepared for:** 

J.D. BYRIDER 2185 BRIDGE ST. PHILADELPHIA, PENNSYLVANIA 19124 Attn: Mr. Ira Melamed

Prepared by:

REACT ENVIRONMENTAL SERVICES, INC. 6901 KINGSESSING AVENUE PHILADELPHIA, PENNSYLVANIA 19142

September 3, 2003

Jason Plucinski Environmental Scientist

**Reviewed By:** 

fon P. Buzan.

Senior Project Manager

E-Mail: ReactEnv@reactenv.com

#### 1.0 INTRODUCTION

React Environmental Services, Inc. (React) was retained by J.D. Byrider to perform a Phase II Environmental Site Assessment (ESA) of the property located at 2230-42 Bridge Street in the City of Philadelphia, Philadelphia County, Pennsylvania. The original scope of work for this investigation was presented in React Proposal No. 03-5058, dated July 2, 2003, and approved by Mr. Ira Melamed July 2, 2003.

The objective of this investigation was to investigate subsurface conditions and evaluate soil quality in areas of previous usage of gasoline, fuel oil, and waste oil underground storage tanks (USTs), gasoline pumping islands and service lines that were identified by The Tyree Organization in their Underground Storage Tank (UST) Closure Report and by React through research at the City of Philadelphia (see Figure 2 - Site Diagram). Specifically, the scope of work performed included geophysical survey, the advancement of fourteen (14) boring, analysis of select samples and comparison to applicable Pennsylvania standards.

#### 2.0 SITE HISTORY

In order to narrow the focus of this assessment and determine which specific areas of the subject property required subsurface investigation, React conducted a review of available historical maps, City permits, and reviewed previous environmental reporting provided by the property owner. Sanborn fire insurance maps were obtained by React for the years of 1920, 1975, and 1981. The 1920 map indicated a small auto service garage located at the corner James St. and Granite St. The current structure did not exist at this time. The 1975 and 1981 Sanborn maps show the site as it appears today. In both maps, the site is listed as a filling station. None of the three Sanborn fire insurance maps indicate the presence or location of any petroleum storage tanks.

React personnel reviewed all available files for the subject property at the City of Philadelphia Department of Licenses and Inspections. Pertinent information included the following:

Date:	Permit/Application:
<b>5/21/</b> 51	Permit filed for installation of a 550-gallon fuel oil UST (location not indicated).
7/8/68	Permit filed for demolition of existing structures to erect a 1-story gasoline service station.
	Owner: Charles Kahn. No specific information regarding tanks was noted.
11/15/70	Permit filed for the installation of a 10,000-gallon gasoline UST. (It is inferred that this
	would be in addition to at least one UST that is already present.)
12/26/84	Permit filed to replace two (2) 10,000-gallon gasoline USTs with same.
4/17/90	Permit filed for the installation of a new 8,000-gallon fiberglass gasoline UST. Owner:
	Getty Oil

Two (2) site maps in the City's file were also reviewed. The first map was provided by Mid-States Equipment Service, and dated 1976. The map depicts two (2) existing 10,000-gallon USTs located at the eastern portion of the property, between the service station building and Bridge St. That map also depicts an existing 550-gallon waste oil UST in the northern portion of the property, immediately outside of the northwest corner of the service station (in front of the western-most garage bay). The map also depicts an existing 1,000-gallon fuel oil UST immediately west of the service station building. The map also depicts a proposed location for an additional 10,000-gallon UST immediately south of the service station building.

The second map was dated 11/8/89 and was provided by the Getty Petroleum Corporation. All four existing USTs from that time are indicated (the two (2) 10,000-gallon gasoline USTs in the eastern portion, the 550-gallon waste oil UST and the 1,000-gallon fuel oil UST), but the UST that was proposed on the 1976 map is not shown. Included is a location of an 8,000-gallon UST at the southeastern portion of the subject property (the fiberglass tank).

Based upon a review of the maps and permits, it appears that the 10,000-gallon UST proposed for the southern portion of the property was never installed. This was confirmed based upon a brief interview with Jim Kahn, the son of the former owner (Charles Kahn), who was employed at the station for a number of years and was familiar with the site history.

Lastly, React reviewed a UST System Closure Report Form prepared by the Tyree Organization Ltd. (Tyree) in June 2000 for Jim Kahn of Kahn & Company. The report details the removal and subsequent soil remediation of the two (2) 10,000-gallon steel USTs and the 8,000-gallon fiberglass UST. During the removal of the three (3) tanks and associated dispensers by Tyree in March 2000, obvious soil contamination was observed in an area beneath one of the dispensers, and remediation was immediately undertaken via excavation of contaminated soils for off-site disposal. Approximately 175 tons of petroleum-impacted soils were transported to Mid-Atlantic Recording Technologies in Vineland, NJ for disposal. Tyree then collected soil samples from beneath the USTs, dispensers, associated piping and the area of over-excavation. Based on the report, all samples were collected in accordance with applicable PADEP closure guidance and analyzed for the applicable petroleum shortlists. Certified laboratory analysis indicated acceptable conditions in soil related to the tank removals and remediation.

#### 3.0 PHYSICAL SITE CHARACTERISTICS

#### 3.1 Site Description

The subject property is a rectangular shaped parcel (21,000 square feet), located at the northwest corner of the intersection of Bridge Street and James Street in the City of Philadelphia, Philadelphia County, Pennsylvania. The subject property is bounded by Bridge Street to the east, James Street to the south, Granite Street to the west, and a commercial property (storage facility) to the north (see Figure 1 – Site Location Map).

Development at the subject property (see Figure 2 - Site Diagram) includes a one-story, slab-on-grade masonry structure, originally constructed in 1949 for use as an automobile service station. The footprint of the building is approximately 2,000 square feet and contains three (3) service bays and a small office area. The remainder of the lot consists of asphalt paved parking area.

#### 3.2 Area Description

The subject property is located in northeast Philadelphia; a densely populated area characterized by a mixture of industrial, commercial, institutional and residential usage dating to before 1900.

#### 3.3 Topography

According to USGS topographic mapping (7.5-minute series, Frankford, PA) the subject property is located at an elevation approximately 25 feet above Mean Sea Level (MSL). Topography at the subject property is generally flat. Local and area topography slopes gradually to the east and south, towards the Delaware River.

#### 3.4 Soils and Geology

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According to the Soil Survey of Bucks and Philadelphia Counties, Pennsylvania (USDA Soil Conservation Service, 1975) the subject property consists of Urban Land. The Soil Survey describes Urban Land as being too developed to make a practical identification of the native soils due to disturbance of the original soil material during construction activities and the addition of overlying fills. Soils observed during React's assessment generally consisted primarily of fill material, sand, mottled brown silt and clay, and weathered mica schist.

According to the Pennsylvania Geologic Survey (PGS) the subject property and its vicinity are located at the landward edge of the Coastal Plain physiographic province. The surficial geology of the province is characterized by a shallow (30 foot) surface layer of alluvium (fine sand, silt and mud), and underlying layers of unconsolidated deposits of gravel, sand, silt and clay that include the Trenton Gravel (to as deep as 80 feet below grade) and the Bridgeton and Raritan Formations. Crystalline bedrock slopes towards the coast to form the basement beneath the coastal plain deposits.

#### 4.0 SUBSURFACE INVESTIGATION

#### 4.1 Geophysical Investigation

A geophysical survey, including the use of ground penetrating radar (GPR) and magnetometer, was performed on July 5, 2003 by Envirophysics, Inc. of Lawrenceville, NJ to determine if any USTs or any of the UST systems associated with the former operations at the subject property were still present. No bulk storage tanks were identified at the property. One small subsurface anomaly was identified via GPR on the eastern edge of the property. According to EnviroPhysics' Subsurface Delineation Report (included in Appendix C) this area contains a cylindrical object approximately 5 feet long, approximately 4 to 5 feet below grade (FBG) under heavily reinforced concrete. Envirophysics stated that this could be attributed to a 275 to 550 gallon UST; however, no fieldwork was performed to confirm or refute this claim. Based on historical research performed and information available, the presence of such a UST is possible, but unlikely in this location. The actual cause of this GPR anomaly is not known. See Figure 2- Site Diagram for the location of this anomaly.

#### 4.2 Soil Boring Advancement

On July 7, 2003 React personnel advanced fourteen (14) soil borings (B-1 thru B-14) at the property. The soil borings were drilled using a Geoprobe<sup>®</sup> direct-push drilling rig and macro sampler, under the direction of a React geologist. Soil boring locations were selected to provide coverage of accessible portions of the property in and around the areas of concern. Areas in the center of the subject property, including the surface beneath the existing structure, were not accessible at the time of the investigation and no soil borings were advanced in that area. Soil boring locations and other site features are shown on Figure 2-Site Diagram. Each soil boring was advanced to 12.0 to 16.0 feet below grade (FBG) or refusal.

Soil was collected from each boring with macro core PETG (clear plastic) liners at continuous four-foot intervals. The soil borings were inspected for visual evidence of contamination and monitored for odors. Using a portable Photoionization Detector (PID) with a 10.2 eV lamp, each four-foot section of boring was monitored for the presence of contamination. The PID is capable of detecting a range of potential contaminants including the volatile organic compounds associated with leaded and unleaded gasoline, waste oil and fuel oil. Petroleum odors were noted in borings B-1 at/near the surface, and in B-8 between 7 to 10 FBG. Measurable PID readings were recorded in borings B-1 (several readings were partially due to equipment malfunction), and slightly measurable PID readings were recorded in B-2, B-3, B-5, B-8, B-9, B-11, B-12, B-13 and B-14. No other borings exhibited any noticeable vapors or odors. Field screening results are presented in the soil boring logs included in Appendix A.

J.D. Byrider September 3, 2003

A total of four (4) samples were packaged for laboratory analysis and submitted to GLA Laboratories, Inc. of King of Prussia, PA. Soil sample B-6: 11 (the designation indicates that soil boring B-6 was sampled at 11 feet below grade) was recovered from a location in which the 1976 City of Philadelphia permit map indicated a 10,000-gallon UST was to be installed. The follow-up interviews with persons knowledgeable of historical site usage indicated this proposed UST was never installed at this location. Soil sample B-8:7 was recovered immediately adjacent to an area that historical mapping indicated a 1,000 gallon #2 heating oil UST was formerly located. Soil sample B-10: 6 was collected at a location immediately adjacent to an area that historical mapping existed. Soil sample B-13: 10 was collected at a location immediately adjacent to the subsurface anomaly identified via GPR. Soil borings were also advanced in the former tank field area where remediation was conducted in March 2000. As no indications of residual petroleum were evidenced in these borings, soil sampling analysis was not conducted in this area. Results of sampling analysis are presented in Section 4.0.

Sampling locations were biased toward the areas of greatest anticipated contamination based on location, depth and field observations. Soil samples for volatile organic analysis were collected directly into EnCore<sup>TM</sup> samplers as required by EPA Methods SW 846 8260B and 8270C. React's standard operating procedure for soil sampling is presented with Appendix B.



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#### PRIMARY CHEMISTRY REPORT

#### PROJECT NO.: 5583

**PROJECT NAME: J.D. BYRIDER** AREA OF CONCERN: 2230-42 BRIDGE STREET, PHILADELPHIA, PA.

TABLE 1 : SOIL SAMPLING RESULTS
SAMPI INC PEDIOD: 07/07/2003

SAMPLING PERIOD: 07/07/2003 SAMPLE TYPE: SOIL Page 1 of 2

CONSTITUENT		PADEP SWHS	PADEP SWHS <sup>2</sup>	B-006 B-006:11 07/07/2003 11.00 FBG	B-008 B-008:7 07/07/2003 7.00 FBG	B-010 B-010:6 07/07/2003 6.00 FBG	B-013 B-013:10 07/07/2003 10.00 FBG
1,2-Dichloroethane	(ug/kg)	73000	500	<2	NT	NT	<2
Benzene	(ug/kg)	240000	500	<1	<50	<50	<1
Benzo(a)anthracene	(ug/kg)	19000000	320000	NT	NT	<100	<100
Benzo(a)pyrene	(ug/kg)	19000000	46000	NT	NT	<100	<100
Benzo(b)fluoranthene	(ug/kg)	19000000	170000	NT	NT	<100	<100
Benzo(ghi)perylene	(ug/kg)	19000000	180000	NT	NT	<100	<100
Chrysene	(ug/kg)	19000000	230000	NT	NT	<100	<100
1-2,-Dibromoethane (EDB)	(ug/kg)	8600	5.0	<2	NT	NT	<2
Ethylbenzene	(ug/kg)	10000000	70000	<2	<100	<100	<2
Fluorene	(ug/kg)	19000000	3800000	NT	<100	NT	<100
Indeno(1,2,3-cd)pyrene	(ug/kg)	19000000	28000000	NT	NT	<100	<100
Isopropyl benzene	(ug/kg)	1000000	1600000	<2	<100	<100	<2
Lead	(mg/kg)	190000 1*	450 2 <sup>в</sup>	16	NT	6.2	<5
Naphthalene	(ug/kg)	19000000	25000	<4	<100	<100	<100
Phenanthrene	(ug/kg)	19000000	10000000	NT	<100	NT	<100
Pyrene	(ug/kg)	19000000	2200000	NT	NT	<100	<100
Toluene	(ug/kg)	1000000	100000	<2	<100	<100	<2
Total Solids	(%)			91.1	84	84.1	95.5
Xylene (total)	(ug/kg)	1000000	1000000	<6	NT	NT	<6



- 1^ PADEP Statewide Health Standard: 25 PA Code Chapter 250 Table 4A - Inorganic Regulated Substances in Soil, Direct Contact Numeric Values (Non-Residential, 2-15 feet).
- 2 PADEP Statewide Health Standard: 25 PA Code Chapter 250 Table 3B - Organic Regulated Substances in Soil, Soil to Groundwater Numeric Values (Used Aquifer, Low Dissolved Solids (< 2,500 ppm), Non-Residential).

2<sup>8</sup>

PADEP Statewide Health Standard: 25 PA Code Chapter 250 Table 4B - Inorganic Regulated Substances in Soil, Soil to Groundwater Numeric Values (Used Aquifer, Low Dissolved Solids (< 2,500 ppm), Non-Residential).

J = Estimated Value NT = Not tested for this constituent D=indicates that result was from dilution

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### APPENDIX A

SOIL BORING LOGS



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					Boring ID: B-001	Project Name: JD Byrider		
					Date(s): 07/07/03 - 07/07/03	Project Number: 5583		
	REACT	<b>P</b>			Total Depth: 14.00'	Location: 2230–42 Bridge St. Philadelphia, PA.	-	
					Borehole Dia.: 2.00in	Geologist: JP		
					Static Water Level:	Purpose: Soil Boring		
			X		Permit No.:	Contractor: EPI		
	SOIL	BORIN	ig lo	G	Permit Date: / /	Drilling Method: Geoprobe		
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. Atio	Depth (ft)	Recovery	Sample No.		10	uterur Description		
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Food	-		A 0-4		.00 to 2.00 fL, Sitty Gravel, Light Gray, D .00 to 3.00 fL, Clayey Sitt, Dark Brown, I	bry, Medium Dense, Medium, Some fill, faint petroleum odor Dry, Medium, no, odor	1100 ppm	
[ [00]	-				.00 to 4.00 ft., Clayey Sit, Dark Brown, I		940 ppm 1099 ppm	
	-		В	From 4	.00 to 5.00 ft., Fill, Brick and Stone, bric	* fragments to 5.5 ft	1200 ppm	
-{-5	5-		B 4-8	From 5	.00 to 7.00 ft., Pavement, Historical Fill,	concrete fragments to 6 ft	22 ppm	
	-			From 7	.00 to 8.00 ft., Clean Sand, Brown, Dry,	Verfam Dense, Verfam	8.3 ppm	
	-	$\geq$			1.00 to 9.00 fL, Gravelly Sand, Brown, Dry		7 ppm 7 ppm	
L	-	-	С 8–12		1.00 to 10.00 ft., Gravelly Sand, Yellow/Or		1.5 ppm	
-{ <sup></sup> 10	10-				0.00 to 11.00 ft., Clean Sand, Light Brow		2 ppm	
	-				2.00 to 12.00 ft., Clean Sand, Light Brow	m, Koist, Medium Dense, Medium, becoming moist at 11 ft m, Koist, Medium Dense, Medium	1.3 ppm	
(insert)	-		D 12—14				1 ppm	
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04-3			
	Boring ID: 8-002	Project Name: JD Byrider	
	Date(s): 07/07/03 - 07/07/03	Project Number: 5583	
	Total Depth: 12.00'	Location: 2230–42 Bridge St. Philadelphia, PA.	
	Borehole Dia.: 2.00in	Geologist: JP	
	Static Water Level:	Purpose: Soil Boring	
	Permit No.:	Contractor: EPI	
SOIL BORING LOC	G Permit Date: / /	Drilling Method: Geoprobe	
Remarks:			
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No.		laterial Description	Build Build Build Notes
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		· · · · · · · · · · · · · · · · · · ·	
- 0-4	From 0.00 to 1.00 ft., Pavement, organic o	aor Gray, Dry, Medium Dense, Medium, Trace Concrete	2 ppm
		Gray, Noist, Medium Dense, Medium, Trace Concrete	16.1 ppm 10.1 ppm
			6 ppm
B -5 5- 4-8	r and a 700 A Damak. Cond Links	Come Maint Madium Dance Madium Torce Concrete	4.2 ppm
ema	From 5.00 to 1.00 ft., Gravely Sand, Light From 7.00 to 11.00 ft., Sandy Gravel, Light	Gray, Moist, Medium Dense, Medium, Trace Concrete Brown, Moist, Medium Dense, Fine/Medium	2 ppm
			1 ppm 0.3 ppm
			0.5 ppm
-10 10-	Emm 11.00 to 12.00 ft Sandy Gravel Lia	nt Brown, Noist, Nedium Dense, Fine/Medium	0.2 ppm
	End of boring at 12 ft		0 ppm
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					Boring ID: B-003	Project Name: JD Byrider		
					Date(s): 07/07/03 - 07/07/03	Project Number: 5583		
	EAC7				Total Depth: 13.00'	Location: 2230-42 Bridge St. Philadelphia, PA.		
					Borehole Dia.: 2.00in	Geologist: JP		
					Static Water Level:	Purpose: Soil Boring	-	
					Permit No.:	Contractor: EPI		
	SOIL	BORIN	ig lo	G	Permit Date: / /	Drilling Method: Geoprobe		
Remork	:5:							
C cc. Ation ()	Depth (ft)	Recovery	Sample No.		Ма	terial Description	PID Reading	Notes
	- 		A 0-4 8 4-8 C 8-12	From From From From	2.00 to 7.00 ft., Clayey Silt, Brown, Dr 7.00 to 10.00 ft., Silty Clay, Yellow/Ord 10.00 to 11.00 ft., Clean Sand, Light I	ange, Dry, Medium	1.4 ppm 2.4 ppm 0.8 ppm 1.2 ppm 0 ppm 0 ppm 0 ppm 0 ppm 0 ppm 0 ppm 0 ppm 0 ppm	
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					Boring ID: B-004	Project Name: JD Byrider		
					Date(s): 07/07/03 - 07/07/03	Project Number: 5583		
	EAC7				Total Depth: 12.00'	Location: 2230-42 Bridge St. Philadelphia, PA.		
					Borehole Dia.: 2.00in	Geologist: JP		
					Static Water Level:	Purpose: Soil Boring		
			<u>N(</u> :		Permit No.:	Contractor: EPI		
	SOIL	BORIN	G LO	<u> </u>	Permit Date: / /	Drilling Method: Geoprobe		
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	3		A 0-4	From	0.00 to 7.00 ft., Silty Gravel, Brown,	, Dry, Medium Dense, Medium	0.000	
<i>4</i> 7777)			• •				0 ppm 0 ppm	
	-						0 ppm	
	- 5-		B 48				0 ppm	
-5	-c		- <b>U</b>				0 ppm 0 ppm	
(	-			From	7.00 to 11.00 ft., Sandy Gravel, Bra	own, Dry, Medium Dense, Medium	0 ppm	
	-		C 8–12				0 ppm	
-10	10-		0-12				0 ppm 0 ppm	
	-					rown, Dry, Medium Dense, Medium, Some Concrete	0 ppm	
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	Boring ID: 9-005	Project Name: JD Byrider	
	Date(s): 07/07/03 - 07/07/03	Project Number: 5583	
	Total Depth: 16.00'	Location: 2230-42 Bridge St. Philadelphia, PA.	
	Borehole Dia.: 2.00in	Geologist: JP	
	Static Water Level:	Purpose: Soil Boring	
	Permit No.:	Contractor: EPI	
SOIL BORING LOG	Permit Date: / /	Drilling Method: Geoprobe	
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				<u>.</u>	Boring ID: B-006	Project Name: JD Byrider		
					Date(s): 07/07/03 - 07/07/03	Project Number: 5583		
	EAC7				Total Depth: 12.00°	Location: 2230-42 Bridge St. Philadelphia, PA.		
					Borehole Dia.: 2.00in	Geologist: JP		
					Static Water Level:	Purpose: Soil Boring		
					Permit No.:	Contractor: EPI		
	SOIL	BORIN	G LO	G	Permit Date: / /	Drilling Method: Geoprobe		
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C:	t)		Š				Reading	
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(m)	-		A 0-4	From	0.00 to 3.00 ft., Pavement, Asphalt		0 ppm	
	-			From	3.00 to 5.00 ft., Silty Gravel, Light Bro	own, Dry, Medium Dense, Medium, with rock fragments	0 ppm	
[Finna]	-	$\angle$	_				0 ppm 0 ppm	
5	5-		B 48	From	5.00 to 10.00 ft., Silty Gravel, Light B	rown, Dry, Nedium Dense, Medium	0 ppm	
	-						0 ppm	
	-	V					0 ppm	
L.	-		C 8-12				0 ppm 0 ppm	
-10	10-			From	10.00 to 11.00 ft., Sitty Sand, Light B		0 ppm	
L	-					Brown, Dry, Medium Dense, Fine/Medium	0 ppm	
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	Boring ID: 8-007	Project Name: JD Byrider	
	Date(s): 07/07/03 - 07/07/03		
	Total Depth: 12.00'	Location: 2230-42 Bridge St. Philadelphia,PA.	
	Borehole Dia.: 2.00in	Geologist: JP	
	Static Water Level:	Purpose: Soil Boring	
	Permit No.:	Contractor: EPI	
SOIL BORING	LOG Permit Date: / /	Driiling Method: Geoprobe	
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	-4 From 0.00 to 4.00 ft., Pavement, aspha	Ħ	0 ppm
			0 ppm
	From 4.00 to 8.00 ft., Silty Clay, Brown	, Dry, Medium	0 ppm 0 ppm
B -5 5- 4	-8		0 ppm
			0 ppm
-	From a co to 0 co # Sith Sand Light	Brown, Dry, Medium Dense, Fine/Medium, Some Gravel	0 ррт
	-12 From 9.00 to 10.00 ft., Silty Sond, Bro	wn, Dry, Medium Dense, Fine/Medium	0 ppm 0 ppm
	From 10.00 to 11.00 ft., Silty Sand, Bk	ack, Dry, Medium Dense, Fine/Medium	0 ppm
	From 11.00 to 12.00 ft., Silty Sand, Ye	llow/Brown, Dry, Medium Dense, Fine/Medium	0 ррт
	End of boring at 12 ft		0 ppm
-25 25-			
			<u></u>
· ·	React Environmental Services, Inc. 6901 Kings	essing Avenue, Philadelphic, PA 19142 (215) 729-322	

ालन								
口屬			調測法		Boring ID: B008	Project Name: JD Byrider		
					Date(s): 07/07/03 - 07/07/03	Project Number: 5583		
	EACI				Total Depth: 12.00'	Location: 2230-42 Bridge St. Philadelphia, PA.		
					Borehole Dia.: 2.00in	Geologist: JP		
		Ň			Static Water Level:	Purpose: Soil Boring		
					Permit No.:	Contractor: EPI		
	SOIL	BORIN	G LO	G	Permit Date: / /	Drilling Method: Geoprobe	-	
Remark	s: Samj	ple colle	cted at	7 FBG				
F.md								
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فشميا								
(							<del></del>	
لس								
LE	t)		ŝ				Reading	M. 1 .
cievotion (ii)	Depth (ft)	Recovery	Sample No.		Ma	teriol Description	PiD Re	Notes
Ē	Dep							
	-		A 0-4	From	0.00 to 3.00 ft., Pavement, Little	Asphalt, some silt	0 ppm	
	-			-	7 op 1. 7 op 4. Cith. Clau. Matti	od Brown Dry Modium Some Gravel	0 ppm	
	-			From	S.00 to 7.00 ft., Silty Cidy, Motu	ed Brown, Dry, Medium, Some Gravel	0 ppm	
-5	5-		B 4-8				0 ppm 0 ppm	
							0 ppm	
اھيم ا	-					n, Dry, Medium, slight petroleum odor	3 ppm	
	-			FLOW	8.00 to 10.00 ft., cidy, ordy, br	y, Medium, Slight Petroleum Odor	30.7 ppm	
-10	- 10-					Gray, Dry, Medium Dense, Medium	0 ppm 1.5 ppm	
	-					Mottled Brown, Dry, Very Dense, Fine/Medium	0.8 ppm	
	-			End a	of boring at 12 ft.		0.2 ppm	
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μ			React	Environ	mental Services, Inc. 6901 Kingsessin	g Avenue, Philadelphia, PA 19142 (215) 729-322		

9	loring ID: B-009	Project Name: JD Byrider
	ate(s): 07/07/03 - 07/07/03	Project Number: 5583
T	otal Depth: 12.00'	Location: 2230-42 Bridge St. Philadelphia, PA.
E F	lorehole Dia.: 2.00in	Geologist: JP
s	itatic Water Level:	Purpose: Soil Boring
P	Permit No.:	Contractor: EPI
ם "	Permit Date: / /	Drilling Method: Geoprobe

Remarks:

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l					<u> </u>			
c Lievation (fr,	Depth (ft)	Recovery	Sample No.	Material Description	PID Reading	Notes		
5			A 0-4 8 4-8	From 0.00 to 1.00 ft., Silty Gravel, Brown, Dry, Medium Dense, Fine From 1.00 to 3.00 ft., Silty Gravel, Brown, Dry, Medium Dense, Medium/Coarse From 3.00 to 6.00 ft., Silty Clay, Dark Brown, Dry, Fine/Medium	0 ppm 0 ppm 0.2 ppm 0 ppm 6.1 ppm			
-[ <sup>100]</sup>	-		C 8–12	From 6.00 to 8.00 ft., Sitty Clay, Dark Brown, Dry, Fine/Medium, Some Gravel From 8.00 to 9.00 ft., Clean Sand, Light Brown, Dry, Medium Dense, Fine/Medium, Some Gravel From 9.00 to 12.00 ft., Clean Sand, Mottled Brown, Dry, Medium Dense, Fine/Medium	1.7 ppm 1.0 ppm 0.3 ppm 0 ppm 0 ppm			
- <sup>700</sup> -15	-			End of boring at 12 ft.	0 ppm 0 ppm			
	- 20-							
25	- 25- -							
<b>65.</b>	React Environmental Services, Inc. 6901 Kingsessing Avenue, Philadelphia, PA 19142 (215) 729-3220							

	No.10	ang din di	in the second	Boring 1D: B-010	Project Name: JD Byrider		
	N			Date(s): 07/07/03 - 07/07/0			
	Location: 2230-42 Bridge St. Philadelphia, PA.						
	5			Static Water Level:	Purpose: Soil Boring Contractor: EPI		
				≝」	Drilling Method: Geoprobe		
_		BORIN					
Remarks: Sample collected at 10 FBG							
f Elevation (rt) <sup>3</sup>	Depth (ft)	Recovery	Sample No.		Material Description	PID Reading	Notes
			A 0-4	From 0.00 to 1.00 ft., Povement		0 ppm	
	-			From 1.00 to 3.00 ft., Sitty Clay, Dark E	Brown, Dry, Fine/Medium, Some Gravel	0.7 ppm	
	-			From 3.00 to 4.00 ft., Silty Clay, Brown, From 4.00 to 7.00 ft. Silty Clay, Brown,	, Dry, Fine/Medium . Dry, Fine/Medium, moist at 6 ft	0 ppm 0 ppm	
-5	- 5-		B 48				
-J	5					0 ppm 0 ppm	
n	-			From 7.00 to 10.00 ft., Silty Gravel, Mo	ttled Brown, Dry, Medium Dense, Fine/Medium, Some Stones	0 ppm	
	-		C 8–12			0 ppm 0 ppm	
<sup>,</sup> -10	10-			From 10.00 to 12.00 ft., Clean Sand, O	range/Brown, Dry, Medium Dense, Fine/Medium	0 ppm	
	-					0 ppm	
	-	/		End of boring at 12 ft.		0 ppm	
	-						
-15	- 15-						
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1.000		
	Boring ID: B-011	Project Name: JD Byrider
	Date(s): 07/07/03 - 07/07/03	Project Number: 5583
	Total Depth: 12.00'	Location: 2230-42 Bridge St. Philadelphia, PA.
	Borehole Dia.: 2.00in	Geologist: JP
	Static Woter Level:	Purpose: Soil Boring
	Permit No.:	Contractor: EPI
SOIL BORING LOG	Permit Date: / /	Drilling Method: Geoprobe

Remarks:

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دگانها (, ا	Depth (ft)	Recovery	Sample No.	Material Description	PID Reading	Notes
20			B         B         B         B         B         C         B         C         B         C         B         C         B         C <thc< th=""> <thc< th=""> <thc< th=""> <thc< th=""></thc<></thc<></thc<></thc<>	From 0.00 to 2.00 ft., Pavement From 2.00 to 3.00 ft., Sitty Clay, Dark Brown, Dry, Fine/Medium, Some Gravel From 3.00 to 5.00 ft., Clay, Brown, Dry, Fine/Medium From 5.00 to 7.00 ft., Sitty Clay, Mottled Brown, Dry, Fine/Medium From 7.00 to 8.00 ft., Sitty Gravel, Brown, Dry, Medium Dense, Fine/Medium From 8.00 to 10.00 ft., Sitty Gravel, Light Brown, Dry, Medium Dense, Fine/Medium, Some Concrete From 10.00 to 11.00 ft., Clean Sand, Orange/Brown, Dry, Medium Dense, Fine/Medium From 11.00 to 12.00 ft., Clean Sand, Light Brown, Dry, Medium Dense, Fine/Medium End of boring at 12 ft.	0 ppm 2.9 ppm 2.3 ppm 0.3 ppm 0 ppm 0 ppm 0 ppm 0 ppm 0 ppm 0 ppm 0 ppm 0 ppm 0 ppm	
	25-		React	Environmental Services, Inc. 6901 Kingsessing Avenue, Philadelphia, PA 19142 (215) 729-3224		

[   											
		卿限			Boring ID: 8-012 Project Name: JD Byrider						
					Dote(s): 07/07/03 - 07/07/03	)3	Project Number: 5583				
					Total Depth: 12.00' Location: 2230-42 Bridge St. Philadelphia, PA.						
					Borehole Dia.: 2.00in Geologist: JP						
					Static Water Level:		Purpose: Soil Boring				
					Permit No.: Contractor: EPI						
	SOIL E	BORIN	G LO	G	Permit Date: / /		Drilling Method: Geoprobe				
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curdion (11)	Depth (ft)	Recovery	Sample No.			Mater	al Description	PID Reading	Notes		
	ő	1									
<i>ा</i> जव	-		0-4		0.00 to 1.00 ft., Pavement	0	Der Medium Deres Eine Medium	0 ppm			
				From	1.00 to 11.00 ft., Sinty Gravel,	, Gray,	Dry, Medium Dense, Fine/Medium	0 ppm			
_			_					7.8 ppm 3.0 ppm			
-{-5	5	/	B 48					0 ppm			
Ĺ	4							0 ppm			
7155								0 ppm			
t			C 8–12					0 ppm 0 ppm			
-{ <sup></sup> -10	10-							0 ppm			
Į	-				11.00 to 12.00 ft., Clean Sand f boring at 12 ft.	nd, Oran	ige/Brown, Dry, Medium Dense, Fine/Medium	0 ppm			
	Í							0 ppm			
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(m.)	. <u> </u>								
Boring ID: B-013						Project Name: JD Byrider			
					Dote(s): 07/07/03 - 07/07/03	Project Number: 5583			
	EACT				Total Depth: 12.00'	Location: 2230-42 Bridge St. Philadelphia, PA.			
					Borehole Dia.: 2.00in	Geologist: JP			
					Static Water Level:	Purpose: Soil Boring			
					Permit No.:	Contractor: EPI			
m <u>S</u>	SOIL E	BORIN	G LO	<u> </u>	Permit Date: / /	Drilling Method: Geoprobe			
Remark	s: Samp	ile colle	cted at	13 FBG					
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cuevation (11,)	ا چ		ę.				Reading		
ation	Depth (ft)	Recovery	Sample No.		м	aterial Description	PID Re	Notes	
Č	Dep	Rec	San						
			A 0-4	From	0.00 to 2.00 ft., Pavement		0 ppm		
الهن	-			From	2.00 to 6.00 ft., Silty Clay, Dark	Brown, Dry, Fine/Medium, Some Aspholt	0 ppm		
_	-						2.9 ppm		
-5	-		B 4-8				1.7 ppm 0.4 ppm		
°-5	5-		ŤŬ	From	6.00 to 7.00 ft., Fill, Some Con	crete, Brick and Stone	0 ppm		
_	-			From	7.00 to 10.00 ft., Sandy Gravel,	Dark Brown, Dry, Medium Dense, Fine/Medium	1.4 ppm		
linid	-		C 8-12				1.4 ppm		
	•		8-12	From	10.00 to 12.00 ft., Clean Sand,	Brown, Dry, Medium Dense, Fine/Medium	1.6 ppm		
<del>∞-</del> 10	10-						1.3 ppm 0.7 ppm		
-	-	$\geq$		End (	of boring at 12 ft.		0.4 ppm		
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	Project Name: JD Byrider				
	Project Number: 5583				
	ion: 2230–42 Bridge St. Philadelphia, PA				
	gist: JP				
	ose: Soil Boring				
	ractor: EPI				
SOIL BORING LOG Permit Date: / / Drillin	g Method: Geoprobe				
Remarks:					
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Provide the second seco	scription Scription				
Depth (ft) National No. Sample No. (ft)	scription 공 Notes				
	Dense, Fine/Wedium, slight organic odor 21 ppm				
From 1.00 to 6.00 ft., Sandy Gravel, Gray, Dry, Medium					
	11.1 ppm				
	2.0 ppm 2.8 ppm				
From 6.00 to 14.00 ft., Sitty Gravel, Gray, Dry, Medium	Dense, Fine/Medium, poor recovery at 10 ft 1.6 ppm				
	1.2 ppm				
C 8-12	1.0 ppm				
	1.0 ppm O ppm				
	0 ppm				
	0 ppm				
From 14.00 to 15.00 ft., Clean Sand, Orange/Brown, Da	rv. Medium Dense, Fine/Medium				
-15 15 From 15.00 to 16.00 fL, Clean Sand, Light Brown, Dry,					
End of boring at 16 ft.					
المسام مسالح					
-25 25-					
React Environmental Services, inc. 6901 Kingsessing Avenue, Philodelphia, PA 19142 (215) 729-3220					

### **APPENDIX B**

SOIL SAMPLING PROTOCOL



#### REACT ENVIRONMENTAL'S SOIL SAMPLING PROTOCOL

#### A. Decontamination Procedures

Non-aqueous matrix field sampling equipment cleaning and decontamination procedures are as follows:

- 1. Laboratory grade glassware detergent and tap water
- scrub to remove visual contamination.
- 2. Generous tap water rinse.
- 3. Distilled and de-ionized water rinse.

All sampling equipment is decontaminated prior to use, and field decontaminated between each separate sampling event.

#### **B.** Soil Sampling

- 1. Bucket Auger (to be used for: BNS, TPH, TOC, Acid Extractables) Procedures for use:
- 1. Remove unnecessary non-soil material from the sampling point.
- 2. Attach the bucket and handle to an extension rod.
- 3. Continue boring until the desired depth is attained.
- 4. Use a second decontaminated auger to collect the sample.
- 5. Wearing new surgical gloves, transfer the sample using a decontaminated hand trowel, into an appropriate, labeled container.
- 6. When collecting samples at depths greater than 12 inches, it is advisable to discard 1/2 inch of material on the top of the auger due to cave in.

2. Soil Corer (to be used for Volatile Organics) Procedures for use:

- 1. Insert collection tube into the sampler
- 2. Remove unnecessary non-soil material from the sampling point.
- 3. Attach the corer and handle to an extension rod.
- 4. Continue boring until the desired depth is attained.
- 5. Wearing new surgical gloves, remove the collection tube. Follow procedures for the use of EnCore samplers.
- 3. Hand Trowel

Procedures for use:

- 1. Clear surface debris
- 2. Collect sample from 0-6 inches using a decontaminated hand trowel
- 3. Wearing new surgical gloves, transfer the sample to the container

#### REACT ENVIRONMENTAL'S SOIL SAMPLING PROTOCOL

#### B. Soil Sampling (continued)

- 4. Backhoe Sampling Procedures for use:
- 1. Begin with a steam cleaned backhoe
- 2. Operate the backhoe in a deliberate fashion removing <6 inches of soil per scoop
- 3. Once selected depth is attained, steam clean backhoe bucket
- 4. Excavate sample into bucket
- 5. Wearing new surgical gloves, remove a sample, using a decontaminated hand trowel. The sample is obtained from the front of the bucket, in an area not in contact with the machinery surface.
- 6. Place the sample into a decontaminated stainless steel bucket, and mix the sample to homogenize it.
- 7. Place the homogenized sample into an appropriate, labeled sampling container.
- 5. Split Spoon Sampling Procedures for use:
- 1. Begin with decontaminated stainless steel split spoon sampler
- 2. Advance Split Spoon to desired depth
- 3. Wearing new surgical gloves, retrieve the sampler
- 4. Split the sampler and retrieve the soil core
- 5. Place the undisturbed soil core into an appropriate, labeled sampling container. If samples are to be collected for volatile organics, see procedures for the use of EnCore samplers.
- 6. EnCore<sup>™</sup> Samplers

Procedures for use:

- 1. Using T-handle, push sampler into soil until coring body is completely full. Remove sampler from soil and wipe excess soil from coring body exterior.
- 2. Cap coring body while it is still on T-handle. Push and twist cap over bottom until grooves on locking arms seat over ridge on coring body. Cap must be seated to seal sampler.
- 3. Remove the capped sampler from T-handle and lock plunger by rotating plunger rod counter clockwise until wings rest firmly against tab.
- 4. Attach completed label to cap on coring body and return encore to zipper bag. Seal bag and put on ice.

#### REACT ENVIRONMENTAL'S SOIL SAMPLING PROTOCOL

#### C. Sample Preservation and Transport

- 1. Samples will be transferred from sampling devices to appropriately preserved and labeled sampling containers.
- 2. After they are packaged, samples will be placed into a cooler and maintained at 4<sup>°</sup>C immediately.
- 3. Samples will be delivered, within allowable holding times, with an appropriate chain of custody, to a state certified laboratory for analysis.

#### APPENDIX B REACT ENVIRONMENTAL'S SOIL SAMPLING PROTOCOL

#### A. Field Screening Procedures

Field screening procedures consist of analyzing the headspace for orgainic vapors. A Hnu Systems Model PI-101 photoionizing detector (PID) equipped with a 10.2 eV probe and an analog readout is used. Field screening procedures are as follows:

- 1. Sample collection in a sealed container.
- 2. Vigorously agitate the sample. Allow sample to accumulate vapors for at least 10 minutes.
- 3. Quickly insert instrument probe.
- 4. Record the maximum value registered by the meter.

**APPENDIX C** 

### ENVIROPHYSICS, INC. SUBSURFACE DELINEATION REPORT



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# EnviroPhysics, Inc. Subsurface Delineation Report

Client React Environmental Date 07/03/2003 Location Geophysicist 2243 James St. Philip Duran, P.G. Philadelphia, NJ MetroTech 9890 pipeline tracer, Fisher TW-6 metal detector, Schoenstadt GA72CD fluxgate magnetometer, GSSI SIR-2000 radar system with 500 mhz antenna Equipment used: 50 FT **Stree**( 5 6 5 ames 3 Potential orening an detection anomalies tank Sidewalk **Bridge Street** 

Metal detection data was collected throughout the exterior portion of this site in an effort to detect buried steel fuel tanks. Four areas of buried metal large enough to be due to buried tanks were detected and marked with spray paint as shown above. Radar data was collected across each of the four areas, but only one (area 4) showed any evidence of a cylindrical object buried below it. The other areas of buried metal only showed the presence of steel-reinforced concrete as a source for the metal detection response.

The radar data collected across area 4 showed what appeared to be a cylindrical object approximately 5 feet long and 4 to 5 feet deep under heavily reinforced concrete. Due to the presence of the concrete, the radar image was not as clear as is normally the case where tanks are being imaged, but the data was consistent over numerous passes with the radar. This suggests the possible presence there of a 275 to 550 gallon tank.

NOTICE: The methods used at this site have been used successfully at many sites to locate buried targets. There can be no guarantee, however, that every target will be detected at a particular site. Sub-surface conditions may prevent some or all geophysical methods from detecting a particular buried target. This is particularly true for areas paved with steelreinforced concrete. Target locations should be considered accurate to one foot on each side for targets defined by radar, and two feet per end for targets defined by other means.

## EnviroPhysics, Inc. 546 Keefe Rd. Lawrenceville, NJ 08648 609 844-9844 Fax 844-9845

**APPENDIX D** 

### LABORATORY ANALYTICAL REPORT



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AD July 2003

#### EACT ENVIRONMENTAL SERVICES

Jason Plucinski P901 Kingsessing Ave hiladelphia, PA 19142

RE: J.D. Byrider # 5583

inclosed are the results of analyses for samples received by the laboratory on 07/08/03 12:45. If you have any questions concerning this report, please feel free to contact me.

incerely,

1

Andrea Speck Project Manager


1008 W. Ninth Avenue • King of Prussia, Pennsylvania 19406 (610) 337-9992 FAX (610) 337-9939

[	REACT ENVIRONMENTAL SERVICES	Project: J.D. Byrider # 5583	
	6901 Kingsessing Ave	Project Number: 365353	Reported:
<b>1</b> 00	Philadelphia PA, 19142	Project Manager: Jason Plucinski	07/10/03 16:44

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-6(11)	K307129-01	Soil	07/07/03 11:05	07/08/03 12:45
🕅 B - 8 (7)	K307129-02	Soil	07/07/03 11:55	07/08/03 12:45
B - 10 (6)	K307129-03	Soil	07/07/03 13:35	07/08/03 12:45
ртадар В - 13 (10)	K307129-04	Soil	07/07/03 14:20	07/08/03 12:45

GLA Laboratorios

Andrea Speck, Project Manager



1008 W. Ninth Avenue • King of Prussia, Pennsylvania 19406 (610) 337-9992 FAX (610) 337-9939

REACT ENVIRONMENTAL SERVICES 6901 Kingsessing Ave Philadelphia PA, 19142	P Pi	<b>Reported:</b> 07/10/03 16	Reported: 07/10/03 16:44						
<u> </u>		В	- 6 (11)						
f <sup>700</sup>		K3071	129-01 (Soi	il)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	_	GLA I	Laboratori	es					
Total Metals by EPA 6000/7000 Series Me									
Lead	16	5.0	mg/kg dry	1	3070903	07/09/03	07/09/03	EPA 6010B	
Volatile Organic Compounds by EPA Met	hod <u>5035/8</u>	260B							
mmgBenzene	ND	1.0	ug/kg dry	1	3070909	07/09/03	07/10/03	EPA 5035/8260B	
1,2-Dibromoethane	ND	2.0	n		"	M	*		
1,2-Dichloroethane	ND	2.0		•	*	•		ta 1	
/™Ethylbenzene	ND	2.0	67	•	м			-	
Isopropylbenzene	ND	2.0	44	*	"	44	61	ы	
Naphthalene	ND	4.0		•	"		**	\$P	
Toluene	ND	2.0		*	n	"	**	**	
Xylenes (total)	ND	6.0	*	H	"	M	**	*	
Surrogate: Dibromofluoromethane		106 %	60-14	0	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		119%	60-14	0	#	**	"	**	
Surrogate: Toluene-d8		97.2 %	60-14	0	"	*	"	P	
Surrogate: 4-Bromofluorobenzene		96.4 %	60-14	0	"	"	•	и	
Physical Parameters by APHA/ASTM/EP.	A Methods								
% Solids	91.1	0.01	% by Weight	1	3070901	07/09/03	07/09/03	EPA 160.3	

GLA Laboratories



I	Reported: 07/10/03 16:44							
	E	8 - 8 (7)						
	<b>K307</b>	129-02 (So	il)					
Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	GLA	Laborator	ies					
Method 5035/	8260B							
ND		ug/kg dry	50	3070909	07/09/03	07/10/03	EPA 5035/8260B	
ND	100	н	"	"		ч	**	
ND	100	н		"	"	*	*	
ND	100	"	*	**	"	*	*	
	101 %	60-1	40		*	"	-	
	109 %	60-1	40	*			~	
	98.8 %	60-1	40		~	-	"	
PA Method 8	270 <u>C</u>							
ND		ug/kg dry	1	3070820	07/09/03	07/10/03	EPA 8270C	
ND	100	11	н	H	H	н	94	
ND	100	11	8		4	н		
	67.9 %	23-1	20	"		"	"	
	77.0 %	30-1	15	"	ų	"	"	
	77.6 %	18-1	37	"	"	"	н	
EPA Method	s							
84.0	0.01	% by Weight	١	3070901	07/09/03	07/09/03	EPA 160.3	
	Result Method 5035// ND ND ND ND ND ND ND ND ND	E K307: Result Limit GLA 1 Method 5035/8260B ND 50 ND 100 ND 100 ND 100 ND 100 101 % 109 % 98.8 % PA Method 8270C ND 100 ND 100 ND 100 07.9 % 77.0 % 77.6 %	B - 8 (7)           K307129-02 (So           Reporting Limit Units           GLA Laborator           Method 5035/8260B           ND         50 ug/kg dry           ND         100         "           PA Method 8270C         ND         100         "           ND         100         "         67.9 %         23-1           77.0 %         30-1         77.6 %         18-1           (EPA Methods           84.0         0.01         % by	K307129-02 (Soil)           Reporting Limit         Units         Dilution           GLA Laboratories           Method 5035/8260B         50         ug/kg dry         50           ND         50         ug/kg dry         50           ND         100         "         "           101 %         60-140         98.8 %         60-140           98.8 %         60-140         98.8 %         60-140           98.8 %         60-140         98.8 %         60-140           98.8 %         60-140         98.8 %         60-140           98.8 %         60-140         98.8 %         60-140      90 100         "         "         "         1           100         100         ug/kg dry         1         1           67.9 %         23-120         1         1           77.0 %         30-115         7         1           77.6 %         18-137         1	B - 8 (7) K307129-02 (Soil)           Reporting Limit         Units         Dilution         Batch           GLA Laboratories           Method 5035/8260B           ND         50         ug/kg dry         50         3070909           ND         100         "         "         "           MD         100         "         "         "           ND         100         "         "         "           IO1 %         60-140         "         "           PA Method 8270C         "         "         "           ND         100         ug/kg dry         1         3070820           ND         100         "         "         "           MD         100         "         "         "           67.9 %         23-120 <th< td=""><td>B - 8 (7) K307129-02 (Soil)           Result         Reporting Limit         Dilution         Batch         Prepared           GLA Laboratories           Method 5035/8260B            ND         50         ug/kg dry         50         3070909         07/09/03           ND         100         "         "         "         "           PA Method 8270C         ND         1         3070820         07/09/03           ND         100         "         "         "         "           MD         100         "         "         "         "            "         "         &lt;</td><td>B - 8 (7) K307129-02 (Soil)           Result         Reporting Limit         Units         Dilution         Batch         Prepared         Analyzed           GLA Laboratories           Method 5035/8260B        </td><td>B - 8 (7) K307129-02 (Soil)           Result         Reporting Limit         Units         Dilution         Batch         Prepared         Analyzed         Method           GLA Laboratories           Method 5035/8260B         S0         units         Dilution         Batch         Prepared         Analyzed         Method           ND         50         ug/kg dry         50         3070909         07/09/03         07/10/03         EPA 5035/8260B           ND         100         "&lt;</td></th<>	B - 8 (7) K307129-02 (Soil)           Result         Reporting Limit         Dilution         Batch         Prepared           GLA Laboratories           Method 5035/8260B            ND         50         ug/kg dry         50         3070909         07/09/03           ND         100         "         "         "         "           PA Method 8270C         ND         1         3070820         07/09/03           ND         100         "         "         "         "           MD         100         "         "         "         "            "         "         <	B - 8 (7) K307129-02 (Soil)           Result         Reporting Limit         Units         Dilution         Batch         Prepared         Analyzed           GLA Laboratories           Method 5035/8260B	B - 8 (7) K307129-02 (Soil)           Result         Reporting Limit         Units         Dilution         Batch         Prepared         Analyzed         Method           GLA Laboratories           Method 5035/8260B         S0         units         Dilution         Batch         Prepared         Analyzed         Method           ND         50         ug/kg dry         50         3070909         07/09/03         07/10/03         EPA 5035/8260B           ND         100         "<

GLA Laboratories



	Project Num						Reported: 07/10/03 16:	44				
	В	- 10 (6)										
	K3071	29-03 (So	il)									
Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not				
	GLA I	Laborator	ies									
Methods												
6.2	5.0	mg/kg dry	1	3070903	07/09/03	07/09/03	EPA 6010B					
Method 5035	/8260B											
ND		ug/kg dry	50	3070909	07/09/03	07/10/03	EPA 5035/8260B					
ND	100	11	4	11	*1	**	**					
ND	100	н	"		41	**	"					
ND	100		11	#	99 	60	*	_				
	102 %	60-1-	40	"	"	"	"					
	109 %	60-1-	40	"	"	41	"					
	98.0 %	60-1	40	"	"	"	"					
PA Method	8270C											
		ug/kg drv	1	3070820	07/09/03	07/10/03	EPA 8270C					
		""	*1	n	"	19	**					
		**	*1	**	*	н	**					
	100	•		*	•	P	**					
	100	n				n	**					
ND	100	FI			u	"	*					
ND	100	"	4		"	**						
ND	100	61	**	н	"	H	"					
···	74.5 %	23-1	20	11	"	"						
	80.6 %	30-1	15	17	*	ø	"					
	86.7 %	18-1	37	п	*	"						
/EPA Method	is											
84.1	0.01	% by Weight	1	3070901	07/09/03	07/09/03	EPA 160.3					
		Weight										
	Result Methods 6.2 Method 5035 ND ND ND ND ND ND ND ND ND ND	Project Mana           B           K3071           Reporting           Limit           GLA I           Methods           6.2         5.0           Method 5035/8260B           ND         50           ND         100           ND         100     <	Project Manager: Jason P           B - 10 (6)           K307129-03 (So           Reporting Result           Clat Laborator           Methods           6.2         5.0 mg/kg dry           Method 5035/8260B         MD           ND         100         "           ND         100         " <t< td=""><td>K307129-03 (Soil)           Reporting Limit         Units         Dilution           GLA Laboratories           Methods         6.2         5.0 mg/kg dry         1           Method 5035/8260B         "           ND         50         ug/kg dry         50           ND         100         "           ND         100         "           ND         100         "           ND         100         "           ND         102 %         60-140           ND         102 %         60-140           IO2 %         60-140           IO2 %         60-140           IO2 %         60-140           IO3 %         "           PA Method 8270C         "           ND         100         "           ND         100         "           ND         100         "           ND         100         "</td><td>Project Manager: Jason Plucinski           B - 10 (6)           K307129-03 (Soil)           Result         Dilution         Batch           CLA Laboratories           Methods           6.2         5.0 mg/kg dry         1         3070903           Method 5035/8260B           ND         50         3070909           ND         100         "         "         "           ND         100         ug/kg dry         1         3070820           ND         100         "         "         "           ND         100         "         "         "           ND         100</td><td>Project Manager: Jason Plucinski           B - 10 (6)           K307129-03 (Soil)           Result         Dilution         Batch         Prepared           Methods         Of CLA Laboratories           Methods         Of COS           Method 5035/8260B           ND         50         3070903         O7/09/03           Method 5035/8260B         "           ND         100         "           MD         100            Method 8270C&lt;</td><td>Project Manager: Jason Plucinski           B - 10 (6) K307129-03 (Soil)           Reporting Limit Units Dilution Batch Prepared Analyzed           GLA Laboratories           Methods           6.2         5.0 mg/kg dry         1         3070903         07/09/03           Methods           %           %         %           ND         50         3070909         07/09/03         07/10/03           MD         100         "</td><td>O7/10/03 16         Project Manager: Jason Plucinski       O7/10/03 16         B - 10 (6)         K307129-03 (Soil)         Reporting Result       Project Manager: Jason Plucinski         Reporting CLA Laboratories         Methods         GLA Laboratories         Method 5035/8260B       Prepared       Analyzed       Method         MD       50 ug/kg dry       1       3070900       07/10/03       EPA 6010B         Method 5035/8260B       "       "         ND       50 ug/kg dry       50 3070900       07/10/03       EPA 6010B         Method 5035/8260B       "       "         ND       100       "       "         ND       100       "       "         ND       100 ug/kg dry       1       3070820       07/10/03       EPA 8270C         ND       100 ug/kg dry       1       3070820       <th <="" colspan="4" td=""></th></td></t<>	K307129-03 (Soil)           Reporting Limit         Units         Dilution           GLA Laboratories           Methods         6.2         5.0 mg/kg dry         1           Method 5035/8260B         "           ND         50         ug/kg dry         50           ND         100         "           ND         100         "           ND         100         "           ND         100         "           ND         102 %         60-140           ND         102 %         60-140           IO2 %         60-140           IO2 %         60-140           IO2 %         60-140           IO3 %         "           PA Method 8270C         "           ND         100         "           ND         100         "           ND         100         "           ND         100         "	Project Manager: Jason Plucinski           B - 10 (6)           K307129-03 (Soil)           Result         Dilution         Batch           CLA Laboratories           Methods           6.2         5.0 mg/kg dry         1         3070903           Method 5035/8260B           ND         50         3070909           ND         100         "         "         "           ND         100         ug/kg dry         1         3070820           ND         100         "         "         "           ND         100         "         "         "           ND         100	Project Manager: Jason Plucinski           B - 10 (6)           K307129-03 (Soil)           Result         Dilution         Batch         Prepared           Methods         Of CLA Laboratories           Methods         Of COS           Method 5035/8260B           ND         50         3070903         O7/09/03           Method 5035/8260B         "           ND         100         "           MD         100            Method 8270C<	Project Manager: Jason Plucinski           B - 10 (6) K307129-03 (Soil)           Reporting Limit Units Dilution Batch Prepared Analyzed           GLA Laboratories           Methods           6.2         5.0 mg/kg dry         1         3070903         07/09/03           Methods           %           %         %           ND         50         3070909         07/09/03         07/10/03           MD         100         "	O7/10/03 16         Project Manager: Jason Plucinski       O7/10/03 16         B - 10 (6)         K307129-03 (Soil)         Reporting Result       Project Manager: Jason Plucinski         Reporting CLA Laboratories         Methods         GLA Laboratories         Method 5035/8260B       Prepared       Analyzed       Method         MD       50 ug/kg dry       1       3070900       07/10/03       EPA 6010B         Method 5035/8260B       "       "         ND       50 ug/kg dry       50 3070900       07/10/03       EPA 6010B         Method 5035/8260B       "       "         ND       100       "       "         ND       100       "       "         ND       100 ug/kg dry       1       3070820       07/10/03       EPA 8270C         ND       100 ug/kg dry       1       3070820 <th <="" colspan="4" td=""></th>				

GLA Laboratories



1008 W. Ninth Avenue • King of Prussia, Pennsylvania 19406 (610) 337-9992 FAX (610) 337-9939

REACT ENVIRONMENTAL SERVICES 6901 Kingsessing Ave Philadelphia PA, 19142		Proj Project Num Project Mana			583			Reported: 07/10/03 16:44			
		В	- 13 (10)								
ฑ		K307	129-04 (So	il)							
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not		
		GLA	Laborator	ies							
Total Metals by EPA 6000/7000 Series N											
PLead	ND	5.0	mg/kg dry	1	3070903	07/09/03	07/09/03	EPA 6010B			
Volatile Organic Compounds by EPA M	ethod 503	5/8260B									
Benzene	ND		ug/kg dry	1	3070909	07/09/03	07/10/03	EPA 5035/8260B			
1,2-Dibromoethane	ND	2.0	40	•		**		**			
1,2-Dichloroethane	ND	2.0	Ħ	•		11	**	**			
Ethylbenzene	ND	2.0	11	49	н	10	"	**			
lsopropylbenzene	ND	2.0	#	Η	n	F8		58			
Naphthalene	ND	4.0	41	м		F8	"	**			
Toluene	ND	2.0	9	м		11	*	•			
Xylenes (total)	ND	6.0	ti	*	64	11	n	**			
Surrogate: Dibromofluoromethane		106 %	60-1	40	u	"	Ħ	17			
Surrogate: 1,2-Dichloroethane-d4		119 %	60-1	40		"	e7	"			
Surrogate: Toluene-d8		96.8 %	60-1	40	"	"	N	"			
Surrogate: 4-Bromofluorobenzene		92.4 %	60-1	40	"	ţi	"	н			
Semivolatile Organic Compounds by EF	A Metho	1 8270C									
Fluorene	ND		ug/kg dry	1	3070820	07/09/03	07/10/03	EPA 8270C			
Phenanthrene	ND	100	a	12	+	*		**			
Benzo (a) anthracene	ND	100			*	н		**			
Benzo (a) pyrene	ND	100	•	-	"		"	**			
Benzo (b) fluoranthene	ND	100	**	-	*	88	"	++			
Benzo (g,h,i) perylene	ND	100	17		*			**			
Chrysene	ND	100	**		Ħ	19	•	"			
Indeno (1,2,3-cd) pyrene	ND	100	41	n	*	69		**			
Naphthalene	ND	100	47	-	*	*		•1			
Pyrene	ND	100	**	n	"	#	"				
Surrogate: Nitrobenzene-d5		58.0 %	23-1	20	"	"	"	*			
Surrogate: 2-Fluorobiphenyl		67.2 %	30-1	15	p	"	"	"			
Surrogate: Terphenyl-d14		79.9 %	18-1	37	*	"	"	"			

GLA Laboratories



REACT ENVIRONMENTAL SERVICES 6901 Kingsessing Ave Philadelphia PA, 19142		Proje Project Num Project Mana;			583			<b>Reported:</b> 07/10/03 16:4	4
			- 13 (10) 29-04 (So	il)					
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
n			Laborator	ies					
<u>Physical Parameters by APHA/ASTM/E</u> % Solids	<u>PA Method</u> 95.5	s0.01	% by Weight	1	3070901	07/09/03	07/09/03	EPA 160.3	
1									
GLA Laboratories								accordance with the ed in its entirety.	chain c

Andrea Speck, Project Manager

ι



REACT ENVIRONMENTAL SERVICES

**Relative Percent Difference** 

6901 Kingsessing Ave

Philadelphia PA, 19142

Project: J.D. Byrider # 5583 Project Number: 365353 Project Manager: Jason Plucinski

Reported: 07/10/03 16:44

#### **Notes and Definitions**

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
m NR	Not Reported
dry	Sample results reported on a dry weight basis

\_\_ RPD

100

Andrea Speck, Project Manager

GLA Laboratories

P			RK ORDER	Printed: 7/8/2003 2:48:44F
			307129	
a		GLA	Laboratories	
Client: REACT ENVIRON Project: J.D. Byrider # 5583	MENTAL SERVICES	ł	Project Manager: Project Number:	Andrea Speck 365353
Report To:			Invoice To:	
REACT ENVIRONMENTAL	, SERVICES		REACT ENVIRO	ONMENTAL SERVICES
Jason Plucinski			Andrew-Collings	•
6901 Kingsessing Ave			6901 Kingsessing	
Philadelphia, PA 19142			Philadelphia, PA	
Phone: (215) 729-3220 Fax: (215) 729-1557			Phone :(215) 729 Fax: (215) 729-1:	
Received By: Dominic Ch	2:00 (2 day TAT)		Date Received:	07/08/03 12:45
•	nonem		Date Logged In:	07/08/03 12:43
Logged In By: Jake Zanck			Date Luggeu In:	0//06/03 14:42
Samples Received at:     3°C       Custody Seals     No     Received (       Containers Intact     Yes       COC/Labels Agree     Yes       Preservation Confir     Yes	On Ice Yes		Sample B-13 is to be Encores were preserv	analyzed for PA LG FO#2 and Used MO per Jason. JZ 7/8/03 ed @ login.
Analysis	Due	TAT	Expires	Comments
K307129-01 B - 6 (11) [Soil	Sampled 07/07/03 11	1:05 Easter	'n	
• • • •				
PADEP LG Soil	07/10/03 15:00	2	07/12/03 11:05	
PADEP LG Soil Solids, Dry Weight	07/10/03 15:00 07/10/03 15:00	2 2	07/12/03 11:05 08/06/03 11:05	
Solids, Dry Weight	07/10/03 15:00	2	08/06/03 11:05	· · · · · · · · · · · · · · · · · · ·
Solids, Dry Weight K307129-02 B - 8 (7) [Soil]	07/10/03 15:00 Sampled 07/07/03 11:	2 :55 Eastern	08/06/03 11:05	
Solids, Dry Weight <b>K307129-02 B - 8 (7) [Soil]</b> PADEP Fuel Oil #1,2	07/10/03 15:00 Sampled 07/07/03 11: 07/10/03 15:00	2 :55 Eastern 2	08/06/03 11:05 07/21/03 11:55	· · · · · · · · · · · · · · · · · · ·
Solids, Dry Weight K307129-02 B - 8 (7) [Soil]	07/10/03 15:00 Sampled 07/07/03 11:	2 :55 Eastern	08/06/03 11:05	
Solids, Dry Weight K307129-02 B - 8 (7) [Soil] PADEP Fuel Oil #1,2 Solids, Dry Weight	07/10/03 15:00 Sampled 07/07/03 11: 07/10/03 15:00 07/10/03 15:00	2 :55 Eastern 2 2	08/06/03 11:05 07/21/03 11:55 08/06/03 11:55	
Solids, Dry Weight K307129-02 B - 8 (7) [Soil] PADEP Fuel Oil #1,2 Solids, Dry Weight K307129-03 B - 10 (6) [Soil	07/10/03 15:00 Sampled 07/07/03 11: 07/10/03 15:00 07/10/03 15:00	2 :55 Eastern 2 2	08/06/03 11:05 07/21/03 11:55 08/06/03 11:55	
Solids, Dry Weight K307129-02 B - 8 (7) [Soil] PADEP Fuel Oil #1,2 Solids, Dry Weight K307129-03 B - 10 (6) [Soil PADEP MO Soil	07/10/03 15:00 Sampled 07/07/03 11: 07/10/03 15:00 07/10/03 15:00 I] Sampled 07/07/03 13:	2 :55 Eastern 2 2 3:35 Easter	08/06/03 11:05 07/21/03 11:55 08/06/03 11:55	
Solids, Dry Weight K307129-02 B - 8 (7) [Soil] PADEP Fuel Oil #1,2 Solids, Dry Weight K307129-03 B - 10 (6) [Soil PADEP MO Soil Solids, Dry Weight	07/10/03 15:00 Sampled 07/07/03 11: 07/10/03 15:00 07/10/03 15:00 I] Sampled 07/07/03 13: 07/10/03 15:00 07/10/03 15:00	2 <b>55 Eastern</b> 2 2 <b>3:35 Easter</b> 2 2 1	08/06/03 11:05 07/21/03 11:55 08/06/03 11:55 m 07/12/03 13:35 08/06/03 13:35	
Solids, Dry Weight K307129-02 B - 8 (7) [Soil] PADEP Fuel Oil #1,2 Solids, Dry Weight K307129-03 B - 10 (6) [Soil PADEP MO Soil Solids, Dry Weight K307129-04 B - 12 (10) [So	07/10/03 15:00 Sampled 07/07/03 11: 07/10/03 15:00 07/10/03 15:00 I] Sampled 07/07/03 13: 07/10/03 15:00 07/10/03 15:00 ii] Sampled 07/07/03 13:	2 55 Eastern 2 2 3:35 Easter 2 2 1020 13:35 Easter	08/06/03 11:05 07/21/03 11:55 08/06/03 11:55 08/06/03 13:35 08/06/03 13:35 08/06/03 13:35	Include Fluorine and Phenantherine
Solids, Dry Weight K307129-02 B - 8 (7) [Soil] PADEP Fuel Oil #1,2 Solids, Dry Weight K307129-03 B - 10 (6) [Soil PADEP MO Soil Solids, Dry Weight K307129-04 B - 12 (10) [So 8270 PADEP MO	07/10/03 15:00 Sampled 07/07/03 11: 07/10/03 15:00 07/10/03 15:00 I] Sampled 07/07/03 13: 07/10/03 15:00 07/10/03 15:00 I] Sampled 07/07/03 13: 07/10/03 15:00	2 55 Eastern 2 2 3:35 Easter 2 2 jup20 13:35 Easter 2 2	08/06/03 11:05 07/21/03 11:55 08/06/03 11:55 08/06/03 13:35 08/06/03 13:35 ern 07/21/03 13:35	Include Fluorine and Phenantheripe
Solids, Dry Weight K307129-02 B - 8 (7) [Soil] PADEP Fuel Oil #1,2 Solids, Dry Weight K307129-03 B - 10 (6) [Soil PADEP MO Soil Solids, Dry Weight K307129-04 B - 12 (10) [So 8270 PADEP MO PADEP LG Soil	07/10/03 15:00 Sampled 07/07/03 11: 07/10/03 15:00 07/10/03 15:00 I] Sampled 07/07/03 13: 07/10/03 15:00 07/10/03 15:00 ii] Sampled 07/07/03 13:	2 55 Eastern 2 2 3:35 Easter 2 2 1020 13:35 Easter	08/06/03 11:05 07/21/03 11:55 08/06/03 11:55 08/06/03 13:35 08/06/03 13:35 08/06/03 13:35	Include Fluorine and Phenantheripe
Solids, Dry Weight K307129-02 B - 8 (7) [Soil] PADEP Fuel Oil #1,2 Solids, Dry Weight K307129-03 B - 10 (6) [Soil PADEP MO Soil Solids, Dry Weight K307129-04 B - 12 (10) [So 8270 PADEP MO PADEP LG Soil	07/10/03 15:00 Sampled 07/07/03 11: 07/10/03 15:00 07/10/03 15:00 I] Sampled 07/07/03 13: 07/10/03 15:00 07/10/03 15:00 07/10/03 15:00 07/10/03 15:00	2 2 3:35 Easter 2 2 3:35 Easter 2 2 1 1 2 2 2 2 2 2 2 2 2 2 2	08/06/03 11:05 07/21/03 11:55 08/06/03 11:55 08/06/03 13:35 08/06/03 13:35 ern 07/21/03 13:35 07/12/03 13:35	
Solids, Dry Weight K307129-02 B - 8 (7) [Soil] PADEP Fuel Oil #1,2 Solids, Dry Weight K307129-03 B - 10 (6) [Soil PADEP MO Soil Solids, Dry Weight K307129-04 B - 12 (10) [So 8270 PADEP MO PADEP LG Soil Solids, Dry Weight	07/10/03 15:00 Sampled 07/07/03 11: 07/10/03 15:00 07/10/03 15:00 I] Sampled 07/07/03 13: 07/10/03 15:00 07/10/03 15:00 07/10/03 15:00 07/10/03 15:00 07/10/03 15:00	2 2 3:35 Easter 2 2 3:35 Easter 2 2 1 1 2 2 2 2 2 2 2 2 2 2 2	08/06/03 11:05 07/21/03 11:55 08/06/03 11:55 08/06/03 13:35 08/06/03 13:35 ern 07/21/03 13:35 07/12/03 13:35	
Solids, Dry Weight K307129-02 B - 8 (7) [Soil] PADEP Fuel Oil #1,2 Solids, Dry Weight K307129-03 B - 10 (6) [Soil PADEP MO Soil Solids, Dry Weight K307129-04 B - 12 (10) [So 8270 PADEP MO PADEP LG Soil Solids, Dry Weight Analysis groups included in this	07/10/03 15:00 Sampled 07/07/03 11: 07/10/03 15:00 07/10/03 15:00 I] Sampled 07/07/03 13: 07/10/03 15:00 07/10/03 15:00 07/10/03 15:00 07/10/03 15:00 07/10/03 15:00	2 2 3:35 Easter 2 2 3:35 Easter 2 2 1 1 2 2 2 2 2 2 2 2 2 2 2	08/06/03 11:05 07/21/03 11:55 08/06/03 11:55 08/06/03 13:35 08/06/03 13:35 ern 07/21/03 13:35 07/12/03 13:35	
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TYREE ORGANIZATION

# The Tyree Organization, Ltd.

Delaware Valley Branch

1350 S. U.S. Highway 130, Burlington, NJ 08016 Fax: 609-239-0030 Phone: 609-239-0033

December 1, 2000

Mr. Jim Kahn

RE: Former Getty Service Station #67616 2243 James Street Philadelphia, Philadelphia County, Pennsylvania Facility ID# 51-43217

Dear Mr. Kahn:

This correspondence has been prepared by the Tyree Organization, LTD., on behalf of Getty Petroleum Marketing, Inc. (Getty), to address issues relative to the above referenced site in our telephone conversation today. As you know, Tyree, on behalf of Getty, removed the unleaded gasoline underground storage tanks (UST), product piping, and product dispensers from the site between March 7 and 13, 2000.

Upon completion of the UST, product piping, and product dispenser removals, fifteen post-excavation soil samples (ST1-1 through ST1-3, ST2-1 through ST2-3, FT-1 through FT-3, L-1, D-1, D-2, D-4, D-5, and D-6) were obtained from beneath the unleaded gasoline USTs, product piping, and five of the six product dispensers as per the Pennsylvania Department of Environmental Protection's Confirmatory Sampling Protocol for Tank Removals (Groundwater Not Encountered) (PADEP, 1998). These soil samples were analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tert-butyl ether (MTBE), cumene, and naphthalene via EPA Method 8260B. Laboratory analytical results for these post-excavation soil samples did not identify any targeted compounds above the PADEP's Standards/Action Levels for Confirmatory Samples Collected at Closure Site Assessments – No Water Encountered, Non-Residential (Standards) (PADEP, 1997).

Presumed petroleum impacted soil was detected beneath former dispenser D-3. Therefore, Tyree, on behalf of Getty, excavated approximately 175-tons of presumed petroleum impacted soil. This soil was staged on-site for proper waste classification and later transported for proper disposal by Electo Environmental Technologies (Hicksville, PA).

Upon completion of the overexcavation activities performed in the vicinity of former dispenser D-3, Tyree collected five post-excavation soil samples from this area of concern (AOC). Four post-excavation soil samples (D-3A through D-3D) were collected from the sidewalls of the excavation, and one post-excavation soil sample D-3E) was collected from the bottom of the excavation. These post-excavation soil samples were analyzed for BTEX, MTBE, cumene, and naphthalene via EPA Method 8260B. All



targeted compound concentrations were detected below Standards at each sample location.

Soil samples collected from within the overexcavated area in vicinity of former dispenser D-3 were collected in accordance with the PADEP's Proposed Rule Making correspondence covered under PA Bulletin, Doc. No. 00-1322. This proposed rule states that post-excavation soil sampling for attainment demonstration purposes shall be collected from "the bottom and sidewalls of the excavation in a biased fashion that concentrates on areas where any remaining contamination above the Statewide Health Standard would most likely be found. The samples shall be taken from these suspect areas based on visual observation and the use of field instruments". This document further states that "for 250 cubic yards or less of excavated contaminated soil, five samples shall be collected".

The UST Closure Report Form for this site was submitted to the PADEP on June 12, 2000. To date, Tyree nor Getty have received a response from the PADEP with regards to any additional remedial investigation and/or subsequent remedial action requirements. If and when a response is received from the PADEP, Tyree, on behalf of Getty, will forward a copy to your attention.

If you have any questions or require any additional information, please do not hesitate to contact me at (609) 239-0033.

Very truly yours,

### THE TYREE ORGANIZATION, LTD.

Gregory C. Carr

Environmental Scientist III

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cc: Dale Holden, Getty Petroleum Marketing, Inc.



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# FIGURES

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Figure 2	Soil Boring Location Map

# APPENDICES

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Appendix B	Standard Operating Procedures
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Appendix D	Laboratory Analytical Report